

urban transition politics

How struggles for sustainability
are (re)making urban spaces

Shivant Jhagroe

urban transition politics

How struggles for sustainability
are (re)making urban spaces

Shivant Jhagroe

Urban Transition Politics

How struggles for sustainability are (re)making urban spaces

Stedelijke transitiepolitiek

Hoe de strijd voor duurzaamheid stedelijke ruimtes (trans)formeert

Proefschrift

ter verkrijging van de graad van doctor aan de

Erasmus Universiteit Rotterdam

op gezag van de

rector magnificus

Prof.dr. H.A.P. Pols

en volgens besluit van het College voor Promoties.

De openbare verdediging zal plaatsvinden op

vrijdag 7 oktober 2016 om 13.30 uur

door

Shivant Sandesh Jhagroe

geboren te

's-Gravenhage, Nederland

Promotiecommissie

Promotoren: Prof.dr. D.A. Loorbach
Prof.dr.ir. J. Rotmans

Overige leden: Prof.dr. W. Schinkel
Prof.dr. M.J.W. van Twist
Prof.dr. R. Kemp

The research resulting in this thesis was financially supported by the Dutch Ministry of Infrastructure and the Environment (Rijkswaterstaat).

Copyright © 2016 Shivant Jhagroe

All rights reserved. No part of this thesis may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanically, by photocopying, by recording, or otherwise, without prior permission of the author.

ISBN	978-94-92332-12-7
Cover design and layout	Esther Ris, www.proefschriftomslag.nl
Printing	Ridderprint B.V.

Acknowledgements

All phenomena stretch in time and space. Their conditions of possibility are often created by distant voices and forces. The same holds for this doctoral thesis. Even though my name is on the front cover, writing this book was made possible by many people, organisations, things and events. Here, I would like express my gratitude to them.

In line with my critical understanding of academic practice, I would first like to thank some unconventional voices and forces that created the conditions for writing this thesis. I am grateful to the university's cleaners, the ICT support staff, Dutch taxpayers, public transportation personnel, printing machines, trees that enabled printing jobs, coffee farmers, catering efforts and countless other human and non-human forces that made it possible for me to work properly. Needless to say, countless dead (and living) philosophers and scholars inspired me to develop my own intellectual methods and paths. Additionally, and more mundane, numerous PhD students and senior scholars I met during workshops, conferences and informal meetings enabled interesting discussions and useful insights.

I would like to extend my gratitude to all respondents I interviewed and for the opportunities I was offered to participate 'in the field' and consult archival records. My research could simply not have been completed without the support of all people involved in my field work and archival work. The wit, enthusiasm and warmth of many 'interviewees' and 'field actors' was uplifting. Perhaps, the most interesting insights did not come from books and scholars, but from professionals, business and policy entrepreneurs, politicians and activists. I would also like to thank the archivists working at the *Stadsarchief Rotterdam* for being so patient and instructive whenever I needed assistance.

My supervisors deserve a special appreciation. Both supervisors have been commendable. They allowed me to address new challenges and develop my own academic style, despite (or perhaps because of) their own intellectual legacies and authorities. I am thankful to Derk Loorbach for his intellectual flexibility and open-mindedness. It is praiseworthy how he combines professorship with playfulness. I would also like to express my gratitude to Jan Rotmans. Initially, we needed more time to establish a common ground, but it did not take long before we were having fruitful discussions and light-hearted jokes with a drink in our hands. I am grateful for the support and trust of both of you. You allowed me to write a DRIFT-dissertation, despite my inclination towards using 'Jhagroe-ian' prose.

I am especially thankful for the academic environment in which I worked as a PhD student: the Dutch Research Institute For Transitions (DRIFT). DRIFT is an exceptional and exemplary space that fosters intellectual and creative work in contemporary

academia. My DRIFT colleagues have been fun-crazy, inspirational and open-minded. In Foucaultian terms, DRIFT is a heterotopia where counter-knowledge can develop and circulate. It enabled me to thrive. All DRIFT-ers have special powers. I would like to thank Matthew Bach, P.J. Beers, Rick Bosman, Katharina Hölscher, Marleen Lodder, Antonia Proka, Marijke de Pous, Chris Roorda, Roel van Raak, Frederic Sanders, Giorgia Silvestri and Marieke Verhagen. Thank you Niki Frantzeskaki, your support and academic enthusiasm knows no boundaries. I owe thanks to Flor Avelino, Katinka Wijsman and Julia Wittmayer for their insights and for co-creating a comfort zone to do transition research as a critical social scientist. A special thanks to my DRIFT-comrades and fellow *schijstrijders*: Frank van Steenberg and Roebin Lijnis Huffenreuter. The struggle is real and is here to stay! I could not have asked for a more inspirational working environment.

Over the years, I also enjoyed discussions with and learned from more 'remote' colleague-scholars. The Graduate School of the Erasmus University put 'slow academics' into practice by creating an intellectual culture for junior scholars. I am thankful to the coordinators of the Book Club Sessions: Lela Moseghvlishvili and Irene van Oorschot. Furthermore, I enjoyed the fruitful philosophy sessions with Gijs van Oenen, Rodney Ramdas, Christian van der Veeke, Dora Timmers and Elke Müller. These discussions taught me about the limitations and advantages of both social science and philosophy. I would also like to thank my 'Lancaster friends' Jessica and Jasmijn. Your thorough anthropological knowledge and critical comments have been a great inspiration. More importantly, I always enjoyed our occasional drinks and animated discussions. Thanks to Friso van Houdt, whose insights and feedback sharpened my theoretical focus. A special credit to Darin Wahl, for assisting me in editing this dissertation text.

I owe thanks to the Department of Public Administration, where I was first acquainted with the remarkable world of academia. Prof. dr. Walter Kickert and Prof. dr. Kees van Paridon deserve a special thanks, who trusted in my capacities to flourish as a social scientist. Many (former) PhD students, tutors and senior colleagues at the Department of Public Administration made the university a great and fun place to work. I especially thank Jan-Pieter Beetz, Ewald de Bruijn, Jurian Edelenbos, Lasse Gerrits, Ingmar van Meerkerk, Wouter Spekking, Geert Teisman and Stefan Verweij. Sharing insights with you enabled me to understand how governance issues, social complexity and epistemological assumptions are related. I would like to thank Mark van Ostaijen in particular, who has been inspirational and a partner in crime at Public Administration. It is always a pleasure to discuss intellectual challenges and socio-political issues with you. I would also like to thank Willem Schinkel and Mark van Twist for their valuable comments during my research, especially at the initial stage. You showed me that scholarship can and should be a creative and imaginative practice.

Last but not least, I would like to thank my friends and loved ones. Thank you to my closest friends Josip, Gökhan and Ceyhun for inspiring me to combine different life-worlds and play with life itself. I am blessed to have such amazing and multi-talented friends. I am grateful to my close relatives, who - for years - had to cope with me, while I slowly transformed into this peculiar academic creature. I reserve a final word of gratitude to Anima. Your support has been extraordinary and made this journey special. At times, my quasi-random mumbling must have been worrisome. I apologise for making those critical and theoretical remarks when we shop or watch television. Thankfully, we marvel at the world together. I could not wish for a more loving and supportive tower of strength.

Contents

Prelude	17
Glossary	19
Interlude 0: Breaking the fourth wall?	25

PART I – WHAT’S THE MATTER?

Chapter 1. Introduction: The problematic of urban transition politics	35
1.1 Introduction	37
1.2 Discourses on sustainability and societal transitions	38
Sustainability transition theories and practices	38
Transition, what’s in a name?	39
1.3 Where are the conflicts? Depoliticised transition politics	40
Depoliticisation #1: Westphalian transition politics	42
Depoliticisation #2: (Neo-)liberalist transition politics	42
Depoliticisation #3: Anthropocentric transition politics	43
Reframing transition politics	44
1.4 What do cities have to do with transition politics? Everything!	45
The urban materiality of sustainability transitions	46
Transformation and urban politics	47
The urban in transition research	48
1.5 Bringing transition politics and urban space together: A new problematic	51
A research question: Examining transition politics of sustainable urban spaces	53
1.6 Outline of the dissertation: Four parts, eight chapters	54
Part I: Introductory part (Chapter 1 & 2)	54
Part II: Conceptual part (Chapter 3 & 4)	54
Part III: Empirical part (Chapter 5 & 6)	55
Part IV: Reflexive part (Chapter 7 & 8)	56
Chapter 2. Using hammers and tweezers: Methodology and methods	59
2.1 Introduction	61
2.2 Transition research and critical constructivism	62
The limits of traditional methodologies for this study	62
Critical constructivism: An alternative methodology	65
A spatio-conflictual ontology for urban transitions	68
2.3 Research design: The research process, transition analytics and remaining scientific	71

The research process: Surprises and focus	71
A strategy for critical analysis: A transition analytics	74
Scientific qualities: Being accountable as a critical constructivism	76
2.4 Collecting and reconstructing empirical materials	81
Understanding cases as spatio-historical contexts	81
Selecting the cases	83
Collecting empirical materials	85
2.5 Analysing the materials: Coding between empirics and theory	94
Analysing the cases and coding methods	95
Points of contact: Paradigmatic case analyses	100
Post-coding, text work and reading work	101
2.6 Methodological postscript: Re-producing the world differently	102
 Interlude 1: Raw food	 105

PART II – CONCEPTUAL MATTER

Chapter 3. Fighting the system?

Politics and the urban challenge in transition research	111
3.1 Introduction	113
3.2 The birth of transition knowledge	114
Dominant transition approaches: A simplified introduction	117
The socio-technical innovation approach (STIA)	118
The complex-reflexive steering approach (CORSA)	120
Urban(isation) politics as a blind spot in STIA and CORSA	122
3.3 Sustainability transitions and their (post-)political tenets	123
Post-political sustainability transitions?	125
Frame #1: Westphalian politics	127
Frame #2: (Neo-)liberal politics	128
Frame #3: Anthropocentric politics	129
3.4 Spatialising transition politics: The urban as a spatio-historical setting	130
The urban nature of sustainability transitions	131
Complex cities and socio-technical networks	132
The political in urban sustainability transitions	134
3.5 Re-politicising transitions through the urban	136
Spatiality in sustainability transitions	138
Antagonisms in sustainability transitions	139
The post-human in sustainability transitions	140

3.6	Conclusion: Advancing transition research	141
-----	---	-----

Chapter 4. Politics of urban space-making:

	Conceptualising a transition analytics of urban spaces	145
4.1	Introduction	147
4.2	Politicising (un)sustainable cities: Transitions and radical urban politics	148
	Transitions and radical politics	148
	Urbanising radical politics	151
	Politicising urban socio-environments	153
	Multiple conflicts and splintered urban spaces	156
4.3	Governing urban spaces and city life: Urban governmentality	157
	Exploring a governmentality approach	157
	Dean's analytics of government	159
	Governmentality in context	161
	Taking governmentality to the city: Governing urban spaces	163
	Urban governmentality and (un)sustainability	166
4.4	Connecting the dots: Transition analytics of urban spaces	168
	Linking transitions, radical urban politics and urban governmentality	168
	A transition analytics of urban spaces: Genealogy + governmentality + contingency	169
	Four ways to establish sustainable urban spaces	174
4.5	Ethics of transition analytics: Democratising urban spaces	178
4.6	Conclusion: Reframing transition politics and (un)sustainable spaces	181
	Interlude 2: Transition ethics	185

PART III – EMPIRICAL MATTER

Chapter 5. Muscles, vessels and boulevards:

	Making Rotterdam's waterfront sustainable	191
5.1	Introduction	193
5.2	Welcome to Rotterdam's port-city nexus...	195
	Opening fragment: Experiencing a Floating Pavilion	195
	Stadshavens and waterfront regeneration in the 21st century	197
	Floating communities, waterfronts and contemporary port cities	199
	'Back then': Pre-19th century waterfront developments	201
	Genealogical episode I: The bio-industrial waterfront (1860s-1960s)	204
5.3	Waterfront modernisation and urbanisation misery in the 19th century	204
	The smell of modernity: Rotterdam's modern waterfront challenges	205

Modern waterfront plans and trying to improve urban life	207
5.4 High-modern city making and displacing waterfront concerns	210
The bigger the better? Managing discontent around Rotterdam's waterfront	213
Post-war optimism and waterfront re-modernisation	215
Conclusion genealogical episode I: The bio-industrial waterfront	218
Genealogical episode II: The neo-industrial waterfront (1960s-2000s)	219
5.5 Remapping the city and waterfront displacements	219
Reconfiguring the waterfront	221
Urban critique and Rotterdam's post-industrial waterfront	223
Alternative voices and democratic urbanisation?	225
5.6 The old ports are dead...long live the old ports!	226
The boulevardisation of Rotterdam's waterfront	228
Conclusion genealogical episode II: The neo-industrial waterfront	231
Genealogical episode III: The neoliberal eco-waterfront? (2000s-...)	232
5.7 Regenerating Rotterdam's waterfront:	
Old and new struggles in the 21st century	232
Spatialising synergies and compromises	235
Future waterfront plans	238
5.8 Imagining a sustainable waterfront: Rotterdam's City Ports Programme	240
Re-inventing Rotterdam's city-port nexus	241
5.9 A blue revolution: The Floating Communities strategy	244
Maashaven-Rijnhaven: Some first experiments	248
RDM-Heijplaat area: Revitalising economic life and recreating a work force	253
Merwehaven-Vierhavens/Waalhaven-Eemhaven:	
Open source urbanism and industrialism	256
5.10 So, where did the port go?	259
Urban entanglements and the techno-waterfront	260
Displaced struggles: A deconstructing city	262
5.11 Analytical reflection: New waterfront regimes and new struggles	264
Visibilities of the neoliberal eco-waterfront	265
Epistemologies of the neoliberal eco-waterfront	267
Technologies of the neoliberal eco-waterfront	268
Subject formation through the neoliberal eco-waterfront	269
Contingencies of the neo-liberal eco-waterfront	270
Chapter 6. Gardens, cars and urban revolt:	
Greening Rotterdam and The Hague from below	277
6.1 Introduction	279
6.2 Welcome to Transition Towns...	281

Ethnographic fragment: Experiencing Deep Ecology	281
Transition Towns: A glocal trend	284
Transition Towns and eco-cities in the 21st century	287
'Back then': Pre-19th century eco-developments in Rotterdam and The Hague	288
Genealogical episode I: The industrial eco-city (1850s-1960s)	292
6.3 Industry-ecology linkages and improving lives	292
'Modernising' the city	294
From saving lives to improving lives	296
6.4 Chained cities and modernist eco-urbanisation	300
New imaginaries and modernist planning	303
Re-modernising the city: Negotiating urban livelihoods	305
Conclusion genealogical episode I: The industrial eco-city	307
Genealogical episode II: The techno-capitalist eco-city (1960s-2000s)	308
6.5 Urban critique and crafting a new oikos?	308
A new dawn, a new city?	308
Recurring critique and new concerns	310
6.6 Re-administering the ecological and hypermodern cities	312
Acceleration and new urban lifestyles	317
Conclusion genealogical episode II: The techno-capitalist eco-city	318
Genealogical episode III: The neo-communitarian eco-city? (2000s-...)	320
6.7 Transition Town Rotterdam	320
Introducing the Gandhi-Garden	322
The decentred (eco-)activities of the Gandhi-garden	325
Suffering, protests and democratic activism	325
Urban farming, alternative food and an edible city	327
Philosophy, embodied spirituality and inspirational sources	330
Soil, materiality and being post-human	331
Planning and everyday support systems	333
Law, the green state and bottom up citizenship	334
Money, sharing and alternative economics	336
New communities, glocalism and flexible networking	338
6.8 Transition Town Den Haag, a.k.a. DHIT	339
The decentred (eco-)events of DHIT	342
Politicising The Hague and criticising systems	342
Organisational concerns, working groups and a flexible structure	345
Joy, optimism and activist events	347
Alternative food, health and new collectives	349
Exchanging services and alternative economics	351
Eco-policing, climate change and energy	354

Connecting and upscaling initiatives	356
6.9 Analytical reflection: New urbanities and new eco-struggles	360
Visibilities of neo-communitarian eco-spaces	360
Epistemologies of neo-communitarian eco-spaces	361
Technologies of neo-communitarian eco-spaces	362
Subject formation through neo-communitarian eco-spaces	363
Contingencies of neo-communitarian eco-spaces	364
 Interlude 3: The catastrophic	 369

PART IV – REFLEXIVE MATTER

Chapter 7. The good, the bad and the city:

Reflecting on the empirical cases	375
7.1 Introduction	377
7.2 Genealogical points of contact: Eco-industrialisation and the will to urbanise	379
Episode 0 (14th-mid-19th century): An age of commercial-sovereign eco-urbanism	380
Episode I (1850s-1960s): An age of eco-industrial urban spaces	380
Episode II (1960s-2000s): An age of techno-capitalist urban eco-spaces	386
Case genealogies: Explaining the creation of post-liberal urban eco-spaces	391
7.3 Points of contact in governmentality:	
Normalising spaces through eco-rationalities	391
Episode III (2000s- ...): An age of post-liberal urban eco-spaces	392
Visibilities of post-liberal urban eco-spaces	393
Epistemologies of post-liberal urban eco-spaces	394
Technologies of post-liberal urban eco-spaces	395
Subject formation through post-liberal urban eco-spaces	396
7.4 Contingent points of contact: Contesting dominant urban eco-spaces	397
Technical contingencies	397
Radical contingencies	399
Urban space-making as transition politics: Eco-gentrification and heterotopia	401
Shifting governmentalities and recurring phenomena	405
7.5 Extending the analytics: Five ways to create urban eco-spaces	406
7.6 Conclusion: Empirical reflections and new terminologies	409

Chapter 8. Rebel cities and green revolts? Conclusions and discussions

8.1 Introduction	413
8.2 Back to the research questions	415

Reflecting on sub-question 1: Problematizing research on urban transition politics	415
Reflecting on sub-question 2: Conceptual grounding of transition analytics	416
Reflecting on sub-question 3: Genealogical shifts and new eco-mentalities	418
Reflecting on sub-question 4: Democratizing space and transition ethics	420
‘Answering’ the central research question	421
8.3 General reflections and contributions: Fruits and food for thought	423
Transition analytics and reframing transition discourse	423
Transition politics and transition ethics	427
Critical constructivism: Linking words, matter and critique	428
Everyday assemblages and socio-spatial transitions	429
Historical unsustainably and ecological humans	430
Urban transitions in the age of green techno-capitalism	432
Radical transformation and patient subjectivity	433
8.4 What is to be done? Ethical contributions and new eco-vanguards	433
Moving beyond sustainability: The significance of justice and solidarity	434
Accommodating the commons through transnational institutions	435
Politicising dominant theories and concepts	436
Connecting eco-rebels to green technocrats	437
Experimenting with discourse	438
Countering hyper-fluidity and transitionism	438
8.5 Limitations and future research: Towards critical transition scholarship	439
Conceptualising spatio-political transition dynamics	441
New methods and degrees of transition scientivism	442
Critical projects and offering democratic services	443
Neo-classism? Complexity and class analysis	443
Grasping sustainability via biopolitical practices	444
Democratic materialism of transitions	445
Post-capitalist transition discourse	446
Planetary citizenship	447
Transitions and ‘the Global South’?	447
8.6 Some afterthoughts: (Un)sustainability politics and urban transitions	448
Political sustainability and the open city?	448
Transition discourses and new urban commons?	449
Bibliography	457
Appendix The coding process: Coding empirical materials and cases	493
Summary	501
Nederlandse samenvatting	513
About the author	527

Prelude

For centuries, Man has striven to improve his condition. With his ideas, technologies and cities, he sought to manufacture safe, healthy and comfortable cocoons. However, the modern promise of continuous progress turned out to be Janus-faced. The ideas and actions of Man have created lasting socio-economic and ecological problems. Despite this awareness, the tragi-comical mantra of economic growth, individual liberty and enlightened technocracy persists. Who could have guessed that Man's ontological bubble would crack by its own realisation? Is this an apocalyptic story about the end of the world? Should this image be accompanied by a naive - albeit genuine - pessimism about a bleak future?

If *Urban Transition Politics* is about one thing, it is about the deconstruction of city life. It is a story of poison and remedy. It is about suffering and hope. Suffering of the less-than-human-beings that are objectified and used as 'material resources' to fuel industrial civilisation. Suffering of humans that lose their work, health and livelihood resulting from the perils of industrial civilisation. Suffering and despair, however, has an important potential. It creates the conditions for courage and hope. Sometimes, despair and hope strangely merge. A cocktail of exciting ideas, resisting bodies and unprecedented practices push the transition from darkness to hope. Today, optimism is omnipresent. It can be read in the actions of grassroots movements and heard in the stories of professionals and policy makers. It can be traced in the assumptions of activist scholars and witnessed in the aspiration of architects and engineers.

The story of this manuscript is lived and experienced in hundreds of cities and thousands of projects. These symbolic and material efforts illustrate that Man pursues different cities and worlds. He transforms his dwelling spaces, his heart's passions and his self. It is not simply the case that Man is now being erased like a face drawn in sand at the edge of the sea, as Foucault put it. Rather, Man is infinitely re-inscribed in the world. Man is reinvented and occupying thousands of new socio-environmental positions in relation to the earth and his economies. Changing ourselves in the Anthropocene is by no means a smooth transition. There are countless struggles over pathways, directions, intensities and priorities. We have no well-defined picture of the future....what a blessing. What thrilling times we live in!

Glossary

Social science is primarily a discursive practice. It assumes and uses all kinds of technical jargon, most of which many readers are unfamiliar with. Concepts or notions can mean different things, especially when combining different academic disciplines and vocabularies. This glossary is an attempt to present and define the most important concepts and notions used in this study as straightforwardly as possible. I suggest that the reader first goes through this glossary before actually reading the dissertation.

Academic transition discourse: A reflexive way of understanding long-term transformations, often based on certain transition theoretical approaches (e.g. CORSA or STIA).

Assemblage: A decentred network of socio-material phenomena and flows. Assemblages are organised hierarchically and unfold through resistance and contingencies.

Antagonism: A radical socio-historical tension between opposites. Social antagonisms are expressed in struggles between opposing ideas, groups and/or practices.

Boulevardisation: A process through which urban areas are 'developed' by turning them into shopping streets, restaurant sites, green lanes and cultural events.

Complex-Reflexive Steering Approach (CORSA): A transition theoretical approach that mainly draws on complex systems theory, reflexive governance, resilience theories, scenario methodologies and action research.

Critical constructivism: A methodological position combining epistemology, ontology and ethics. Its critical potential refers to doing academic work by challenging hegemonic knowledge and pursuing democratic change.

Critical transition scholarship: Transition research that deploys insights from critical theory tradition and pursues ethical and just social change (also see 'Transition ethics').

Democratisation: A process through which marginalised groups and voices are foregrounded and gain equal access to living conditions (water, food, housing, space, etc.).

Depoliticisation: A process in which social conflicts and antagonisms are downplayed and considered as technical, managerial, cooperative concerns.

DHIT (Den Haag In Transitie, or Transition Town The Hague): A Transition Town initiative that covers the urban region of The Hague.

Eco-governmentality (or eco-mentality): A Foucaultian concept referring to the variety of ways in which ecological and environmental concerns and livelihoods are rendered visible, knowable and governable.

Eco-spaces: A material-discursive reality expressing the spatial nature of ecological and socio-economic relations and lives.

Ethical transition: A long-term transformation that privileges marginalised voices and groups.

Floating Communities Strategy: A strategy that seeks to sustainably develop parts of Rotterdam's waterfront by planning and realising floating offices and living environments. This strategy is part of the broader Stadshavens programme.

Gandhi-garden: An urban community garden located in Rotterdam. This garden is part of the Transition Towns (Rotterdam) movement.

Genealogy: A methodology that historicises specific concerns of the present, highlighting its preceding knowledge regimes, relations of power and everyday practices. A genealogy seeks to understand current phenomena as struggle-based and historically contingent.

Genealogical episode: Part of a genealogical narrative, referring to a period with relatively stable regimes and practices.

Gentrification: An uneven geographical and spatial distribution of social wins and losses. Gentrification expresses itself inside urban areas and between urban areas.

Governmentality: A complex and decentred political rationality that problematises specific aspects of social life. It employs fine-grained and technical means to render visible, knowable and governable bodies, populations and spaces.

Green gentrification: An uneven geographical and spatial distribution of socio-ecological wins and losses.

Green techno-capitalism: A set of socio-economic discourses and practices that relies on technological tools and technocratic means to advance environmental goals and projects.

Ideological transition: A long-term transformation that privileges dominant voices and groups.

Material-discursive entanglement: The interlinkage of discursive and material phenomena and practices.

Neo-communitarian eco-mentality: A political rationality that renders visible knowable and governable eco-friendly conduct and spaces, particularly through flexible and transnational communal ties.

Neo-liberal eco-mentality: A political rationality that renders visible, knowable and governable eco-friendly conduct and spaces, particularly through market models and 'alternative' lifestyles.

Paradigmatic logic: A rationality that links phenomena, discourses and practices in different times and spaces. In this study, a paradigmatic logic is used methodologically to avoid law-like or contextualist analyses and to address political rationalities and points of contact between empirical cases.

Politicisation: A set of discursive and material practices that turns a phenomenon into a social conflict and an antagonistic struggle.

Post-liberal eco-mentality: A political rationality that renders visible knowable and governable eco-friendly conduct and spaces, particularly through new communities, markets and technologies.

Problematization: A set of discursive and material practices that makes a phenomenon an object for moral concern, conceptual reflection, political strategy, medical attention, etc.

Space: A set of decentred material-discursive processes that includes hierarchies and resistance. My understanding of space is mostly informed by assemblage thinking (see also 'Assemblage').

Spatio-political rationality: A political rationality that - by technical means - renders visible, knowable and governable particular spaces and forms of life (see also 'Governmentality').

Socio-Technical Innovation Approach (STIA): A transition theoretical approach that mainly draws on innovation studies, science and technology studies, neo-institutional theory and evolutionary economics.

Stadshavens programme (City Ports): A set of projects and strategies, backed by the Rotterdam municipality and other actors, to sustainably regenerate Rotterdam's waterfront.

Sustainability discourse: A specific way of knowing how to balance or mix social, economic and environmental ambitions and practices.

Sustainability transition: A long-term transformation informed by and drawing on sustainability discourse.

Sustainability transition discourse: A specific way of knowing long-term transformations aimed at balancing or mixing social, economic and environmental ambitions and practices.

Transition: The creation and normalisation of specific (heterogeneous) regimes and practices at the expense of other (heterogeneous) regimes and practices.

Transition ethics: A political horizon that advances transitions by foregrounding marginalised voices and groups.

Transition discourse: A specific way of knowing long-term transformations (possibly informed by CORSA or STIA).

Transition research: A specific field of inquiry, concerns, concepts and texts that problematises, analyses and reflects on transitions (see also 'Academic transition discourse').

Transition analytics of urban spaces: An analytical method to describe, explain and criticise the rise of particular urban spaces. This analytics consists of three dialectically related building blocks: the genealogy, governmentality and contingencies of urban spaces.

Transition politics: All struggles associated with the creation, normalisation and contestation of specific regimes and practices.

Transition Towns: A global grassroots movement that problematises carbon-based economy and ecological deprivation, while pursuing alternative modes of economic and socio-ecological life.

Urban assemblage: A decentred network of socio-material phenomena and flows that creates and recreates 'the urban'. Urban assemblages are organised hierarchically and unfold through resistance and contingencies.

Urban governmentality: A complex and decentred political rationality that problematises specific aspects of urban life. It employs fine-grained and technical means to render visible, knowable and governable urban bodies, populations and spaces.

Urban eco-governmentality (or eco-mentality): A Foucaultian concept referring to the variety of ways in which urban ecological concerns and livelihoods are rendered visible, knowable and governable.

Urban space: A set of decentred material-discursive urbanisation processes that includes hierarchies and resistance. My understanding of urban space is mostly informed by assemblage thinking (see also 'Urban assemblage').

Urban sustainability discourse: A specific way of knowing how to balance or mix social, economic and environmental ambitions in urban settings.

Urban transition: The creation and normalisation of (heterogeneous) urban regimes and practices at the expense of other (heterogeneous) urban regimes and practices.

Urban transition politics: All struggles associated with the creation, normalisation and contestation of urban regimes and practices.

Interlude 0: Breaking the fourth wall?

When a child tries to learn magic tricks, the word “*Abracadabra*” plays a crucial role. This sacred formula offers a magician’s audience a bridge between reality as we observe it and the supernatural. The incantation “*Abracadabra*” has the power to defy our everyday experience and theatrically seduce our common sense. Scientists are not magicians, but they also have specific methods and means to create something special¹. Instead of using enchanting words like “*Abracadabra*”, they have a different set of tools and skills. Scientists have ‘scientific methods’, they reason ‘logically’, they go into ‘the field’ and discuss their ‘findings’ with peers. Scientists produce scientific facts. However, this image of magicians and scientist is only one part of the story. Magicians create magic by ‘tricking’ their audience, for example, while talking and making hand gestures while preparing the moment of magic. Most of such preparations are done before the show. Magicians want certain aspects to be visible and noticeable, and others to be invisible and unnoticeable. I do not suggest that scientists also trick us. However, many scientists would rather not believe or want to hear that in the everyday and institutionalised production of scientific facts, a similar principle is working.

Academic front stage and back stage

In their seminal work *Laboratory Life: The Social Construction of Scientific Facts* (1979), the French anthropologist Bruno Latour and the British sociologist Steve Woolgar present an interesting narrative about this schizophrenic logic. They show that in the production of scientific facts in a laboratory, a set of practices shape the way in which science is done and comes into being (e.g. writing, rewriting, coding). The scientists they studied highlighted some aspects as ‘scientifically relevant’, while downplaying others. Latour and Woolgar show the complex process through which scientific facts and knowledge are manufactured. This is not new. Scientists know that each and every letter or word of a research question frames the rest of the study (method, analysis, type of conclusion). The same holds for choosing a particular methodological or theoretical approach. It determines how you view the world and understand your object of analysis. In order to safeguard scientific quality, scientists have many tools at their disposal to justify their study as being rigorous (e.g. validity, representativeness, control variables, peer reviews). So, on the one hand we have real ‘scientific facts’ or ‘statements’, and on the other hand a set of practices

¹ For the sake of argument, I use the term “scientist” without differentiating different types of scientists (e.g. in the natural sciences or social sciences).

that tries to create the actual ‘scientificness’ or ‘objectivity’ of these facts and statements. This distinction can be understood as the boundary between what Erving Goffman called *front stage* and *backstage* (Goffman, 1959). In his dramaturgic analysis, Goffman used insights from theatre performances to understand how human beings behave in face-to-face interactions. One of Goffman’s arguments is that people present themselves in society, worrying about their impression and how they perform in the eyes of others. This is the place where visibility and noticeability matters. One wants to present oneself as expected and behave properly (‘impression management’). However, one can behave or talk differently or even contradictory on the so-called ‘back stage’. This is the place where one is less or not observable and is able to fine-tune one’s ‘front stage performance’.

Breaking the ‘fourth wall’

In September 2010, I began my PhD at the Dutch Research Institute For Transitions (DRIFT), connected to the Erasmus University Rotterdam. In 2011, I took a PhD course called ‘General Methodology’, organised by the Netherlands Institute of Government. During this course, Prof. dr. Yanow talked about the so-called ‘fourth wall’ in the context of academia. She argued that one of the most sacred rules in academia is to never break this imaginary fourth wall. The notion of a fourth wall was introduced by French philosopher Denis Diderot (1713 – 1784). Diderot called the imaginary filter between actors and audience the fourth wall, referring to the invisible wall besides the three actual walls on the stage (left, right, and back). The imaginary fourth wall can be used for artistic purposes (e.g. interacting with audience, for humour). However, the fourth wall should never be brought down. Violating this rule could result in the disintegration of the stable boundary between audience and actors, their symbolic roles and theatrical norms. Analogically, the fourth wall in academia is a symbolic fiction that creates and stabilises scientists and their audiences. A clear distinction should be made between the front stage of the ‘academic theatre’ (e.g. presenting one’s research question, method, analytical framework and results) and its backstage (e.g. a research question being influenced by a funding organisation, prior methodological preferences, normative biases that impacts choice of words). It is as if one should bracket one’s non-scientific life. It seems as if researchers imagine themselves as scientific researchers in order to be scientific. The backstage is often taboo. In fact, if one talks publicly about the backstage, thereby breaking the fourth wall, one runs the risk of being ‘unscientific’ and losing credibility and one’s role as ‘a scientist’. A scientist and his/her work is often expected to be anonymous, impersonal and factual. Any trace of personal preferences or political statements in scientific work can be harmful. To be honest, I do portray a simplistic and provocative image of academia, particularly of its realist-

positivist strands (see Chapter 2). But it should be stressed that scientific studies and academia in general *do* have a front stage and a backstage. The symbolic roles of professorship and academic scholarship are to be presented according to certain rules and norms in scientific journals, conference papers, books, policy recommendations and media performances.

My aim here is not to bash scientists or academic work. On the contrary, the dynamic interplay between front stage and backstage is present in virtually all types of social interaction. It is virtually impossible to have the one without the other. What I do mean to say, however, is that in producing and presenting scientific texts, the fourth wall often obscures how science is actually created and practiced. That is to say, presenting and explicating certain aspects of the back stage can help create a more honest and complete picture of how a scientific study emerged, how it was conducted and how personal interests and 'biases' help shape the outcome of scientific inquiry². Even though I present myself as a social scientist and this issue is often obscured across many social scientific disciplines, it also applies to the natural sciences. Social science has tried to imitate natural science language and methods to count as 'scientific'. This has been both an act of despair and self-rejection. Social science in particular needs to understand how 'the social' is deeply embedded in knowing the world and the role of knowledge production. Too often, junior and senior scholars try to mask their back stage, as if scientists are not born and grown up in distinctive conditions, in a specific period and part of the world. As if scientists do not have a personal and professional biography that informs part of why and how they conduct scientific research. As if scientists do not have bodies and live in specific material (often highly privileged) settings. As if scientists are not (increasingly) directed by dominant research programmes and funding schemes.

Based on my knowledge of how science is understood by most people, and my experiences in Dutch academia so far (which perhaps counts for some non-Dutch contexts as well), it is safe to say that most scientists and non-scientists expect scientists to be a-personal, a-moral, a-political, a-emotional and situated a-bodily, a-historically and a-spatially (Schwartz-Shea & Yanow, 2011: 151-158). I think upholding this assumption is upholding the imaginary fourth wall and does not do justice to the fascinating everyday practice of scientific inquiry³. To put it candidly, preserving this trickery is a sham.

² For example, if some readers have doubts about the 'scientificness' of this dissertation, it says something about this text, but it also exposes the hegemonic methodological position of these readers.

³ Disclaimer: This interlude can be read as a justification of an 'anything goes' attitude. That it is not the case. Even though the epistemology underlying this study is not positivist-realist, criteria and procedures were used that safeguard its status as a social scientific inquiry. Please read Chapter 2 for more elaboration on the methodology and methods of this study.

Tearing some holes in this wall

Instead of attaching a nice CV at the end of this text - leaving readers puzzled about implicit linkages between my biographical info and the scientific study - I will try to explicate possible linkages. I do not present any 'causal relationships', but merely convey basic information that often remains tacit or invisible, even though it might be relevant for readers and interpretations. Therefore, I aim at breaking the fourth wall and showing how the back stage of this study might have shaped the front stage, and vice versa. Even though the fourth wall cannot (and arguably should not) be 'demolished' altogether, I believe that tearing some nice holes in the fourth wall will be helpful in understanding why and how I undertook this study, other than formal front stage criteria and justifications (the well-known 'context of justification', Popper, 1959 [1934]). Below, I briefly present some 'background' information about myself and this dissertation. These nuggets of information can be read as playful and concise fragments that present my academic genealogy. Importantly, I do not explicate linkages with the choices I made in this dissertation. Many of the linkages are mentioned in the thesis itself, others are perhaps irrelevant or can be interpreted by the reader.

Our Zeitgeist

One of the most important issues that appears whenever we attempt to smack the façade of the fourth wall is our current social order. My personal biases and methodological preferences are perhaps less important and interesting than the social and cultural fabric within which this text is produced and read. What is this *Zeitgeist* that shapes the thick background of the fourth wall and the gaze of the reader? I believe it is the age of eco-reflexive modernisation, techno-capitalism and the neoliberal hegemony over our everyday experience. Quoting Foucault, "wherever there is power, there is resistance". This period is not only shaped by the powers that be, but also by a multiplicity of resistances and deconstructions of our ideas, texts and material activities. This text is a way of making sense of this world, as a response to a number of socio-environmental and economic concerns in our streets and cities. Fortunately, many university departments and scholars focus on topical challenges such as economic deprivation, ecological destructions and social unrest.

Socio-historical subject positions

Genealogically, my body and social identity are as heterogeneous as anyone else's. This information is neither biographic nor demographic, but rather socio-historical. I was born in 1983 in a region of the Global North: the city of The Hague, the Netherlands. I am genealogically tied to Indian-Surinamese flows of quasi-slaves or low-paid workers. I am a self-identified male, growing up rather peacefully in

the 1980s and 1990s in the environs of The Hague. Even though my parents and grandparents had much more difficult lives in a Dutch colony (Surinam), my youth was less troublesome. I have a Dutch passport and I have never lived outside the Netherlands (besides holidays and an internship). I finished high school and pre-university education (in Dutch: VWO) in Rijswijk, near The Hague. Even though I never actually planned to go to university, I was fascinated with social issues and more philosophical ideas. Occasionally, my brother and cousins and I had long discussions about Western and Indian philosophical issues, music and art.

Tacit knowledge and scholarly preferences

I studied Public Administration (PA) at Erasmus University Rotterdam. I expected that this study was concerned with social and public issues, while being multi-disciplinary. Even though I did not enjoy all courses equally, I did like the study. During my second year (late 2005), I was asked to work as a student assistant for a university professor. This was my first encounter with academic research projects and educational programmes. Since then, I have been working at a university. During my study in PA I noticed that I wanted more (perhaps the well-known ‘thirst for knowledge’). I choose to follow a second study: History. In 2007, I graduated from PA, after which I was also invited to apply for a job as a tutor and junior researcher. However, many of the orthodox and commonly used concepts, theories and methods my colleagues used did not do the trick for me. During these years, next to my formal and institutional education, I auto-didactically read works in political theories, complexity theory, qualitative research methods, governance studies, philosophy, discourse analysis, social theories and critical thought. Some of the scholars and philosophers that inspired me at that time were Niklas Luhmann, Paul Cilliers, Jacques Derrida, Michel Foucault, Gilles Deleuze, Slavoj Žižek amongst others. It seemed I was not able to fit one or two disciplinary boundaries, but became a scholarly nomad engaging in more critical and philosophical literature. Over the years, I became more comfortable with academic jargon and life at the university. These readings shaped the fundamentals of my epistemic horizon for the years to come. Being a nomad in academia has always suited me.

Luck, PhD funding and DRIFT

Experiencing how interesting and fun research can be triggered me to pursue a PhD project. Unfortunately, since the late 2000s, it has been quite hard to find proper funding, especially with a more reflexive, critical and philosophical academic mind-set. This is part of a broader change in funding schemes at Dutch Universities, moving from stable autonomous university budgets to national or European competition-based funds and cooperating with businesses or other ‘investors’.

Fortunately, after some failed attempts since 2008, I was able to do an interesting research project at the (socially engaged) research institute DRIFT. DRIFT has a very specific position within academia, explicitly combining theoretical work with practical project work. The focus on social challenges instead of disciplinary boundaries offered fertile ground to explore how transition research sits in relation to some critical theories⁴.

Academic 'struggles' (from 5pm to 9am)

Before starting as a PhD candidate, I heard some 'horror stories' about existential questions and why on earth one actually pursued a PhD. This made me laugh at the time, but during the years as a PhD candidate, I got more acquainted with this sentiment. I noticed that the difference between my 'work hours' (9am - 5pm) slowly evaporated and weaved into my 'private hours' (5pm - 9am). Especially in the first two years, I constantly reflected upon my research topic, the conceptual field, formulating my research question, potential case studies, etc. I noticed that there were few moments I did not actually engage in 'being a PhD student', namely while sleeping, playing music, being with family and loved ones. I made scribbles and notes on my smartphone at night and in my car while driving. I started analysing social life and micro-dynamics in supermarkets, while doing fitness and watching television. Parallel to these years of academic soul searching and framing my project, I read many books and articles, wrote conference papers and had many discussions with peers. I would not consider these experiences as existential problems per se, but rather symptomatic of dedicating a big part of my life to academia and social science.

Social engagements

Since my years as a teenager, I wanted to help those in need. Therefore I volunteered at Oxfam Novib for recruitment activities and 'getting the message across' during festivals. I also became a volunteer at a district governing board at Red Cross in the Netherlands. Since my life as a PhD student, I also joined two think tanks or e-zines that advance critical and progressive readings about current affairs (in Amsterdam and Rotterdam).

Fourth wall as necessary illusions?

This playful interlude is an attempt to show that researchers wear a mask like everyone else. This mask and the associated academic rituals and practices are part of a broader theatrical staging of scholarship and their audiences. However,

⁴ The terms *transition* research and *transitions* research are both used in 'the literature'. In this dissertation, I use the term transition research.

breaking down a fourth wall does not unmask ‘the true person’ behind the academic mask. It does not create transparency and unmediated openness. I believe that the value of tearing down the fourth wall lies in explicating what implicit assumptions and blind spots might circulate in an academic work. Now that I explicated some of the issues that might play a role ‘behind the scenes’, it is more clear for readers to situate and understand some of my conceptual explorations, critiques, analytical tools and stylistic choices. Nevertheless, as Oscar Wilde put it “Man is least himself when he talks in his own person. Give him a mask, and he will tell you the truth”.

This doctoral thesis, therefore could not be crafted and presented without the rich historical and subtle practices associated with academic masks and role playing. This makes the fourth wall not obsolete, but crucial to understand the socio-historical and bio-demographic complexities related to ‘the author’ and his/her ‘contributions’. Therefore, I invite peer scholars to reframe their short ‘bio’ or ‘background information’ in terms of breaking the fourth wall. It does not make sense if only a few scholars would do this, it should become normal, just like presenting your methods and empirical data. So, Mr. Scholar, tear some holes
in that fourth wall!

PART I - WHAT'S THE MATTER?

*“The world is not a solid continent of facts sprinkled by a few lakes of uncertainties,
but a vast ocean of uncertainties speckled by a few islands of calibrated
and stabilized forms”.*

Bruno Latour



Chapter 1

Introduction

The problematic of urban transition politics

Chapter 1. Introduction: The problematic of urban transition politics

“Perhaps the chief sin of the twentieth century was that urbanization happened and nobody much either cared or noticed in relation to the other issues of the day judged more important. It would be an egregious error to enter upon the twenty-first century making the same mistake”.

David Harvey

*“There are decades where nothing happens;
and there are weeks where decades happen”.*

Lenin

*“If you have built castles in the air, your work needs not be lost;
that is where they should be. Now put the foundations under them”.*

Henry David Thoreau

1.1 Introduction

For millennia, fragile human bodies have dwelled upon this planet. Through unbelievably creative and unprecedented imaginations, the human species created economies of food and water, resulting in settlements and administrative systems (Sloterdijk, 2004; Koerse, 2007). The organisational form that enabled human beings to survive against all odds is often referred to as *the city*. However, the idea that cities have created security, welfare, food, warmth and comfort for everyone is a myth. Cities are occupied by bankers and well-fed middle-classes, but also by beggars and road kills. Cities are mythical places where Good and Evil meet, where the strong and the weak live and die together. Cities have been the bedrock of hope and human civilisation, while also being the symbol of violence and despair (Kaika, 2005). This was the case for the first settlements, agricultural societies, and medieval walled cities, but also for modern industrial cities and contemporary techno-cities. Cities have always been dynamic sites full of struggles and shifting power relations. Whenever cities transform, the distribution of urban ‘goods’ and ‘bads’ enters a new

phase. Again, the beginning of the 21st century marks such a phase.

This dissertation focuses on the amazing ways in which we seek to transform ourselves institutionally and ecologically. Creative reinventions occur through urban guerrilla gardening tactics, but also by multimillion-euro contracts for urban development. This thesis is about the inherent *political* nature of city (re)making. It is about battles and shifting norms and techniques that govern our streets and urban experiences. These questions are approached with a specific focus on the politics of a so-called ‘transition’ towards ‘sustainable cities’. The first scene of our story begins in the second half of the 20th century.

1.2 Discourses on sustainability and societal transitions

In 1972, a group of scientists and decision-makers, known as ‘the Club of Rome’, published a report called *Limits to Growth*. In this report, they argued that global population growth and growth-based economies were facing problems of limited resources and pollution. In 1987, the United Nation’s Brundtland report addressed similar problems, calling on growth-based societies to move towards a more sustainable path of economic development, overcoming environmental degradation and global poverty. The global character of these reports suggests that the very stability and existence of human and non-human systems are at stake (Brand, 2010). Since the 1990s, businesses, governments, knowledge institutes and NGOs have approached such economic, ecological and social issues in terms of ‘sustainable development’ or ‘sustainability’ (Wals & Jickling, 2002; Dyllick & Hockerts, 2002; Gibson & Hassan, Holtz, Tansey & Whitelaw, 2005; Doppelt, 2009). Increasingly, people have started saving water, buying organic food, driving electric cars, installing solar panels, investing in clean technologies, and building sustainable houses or eco-villages (e.g. Barr & Gilg, 2006).

Sustainability transition theories and practices

Against this background, a set discourses and practices emerged under the banner of *sustainability transitions*. These discourses try to develop knowledge about current social transformations and conceptual tools to advance a ‘sustainable society’. Since the end of the 1990s, a group of scholars started working on conceptual approaches to understand societal changes and system innovations around issues such as energy, biomass, agriculture, transport and spatial planning (Rotmans, Kemp & Van Asselt, 2001; Kemp & Rotmans, 2005; Loorbach, 2007; Kern and Smith, 2008; Rotmans and Loorbach, 2010; Avelino, 2011: 5). Confronted by ‘wicked’ problems and the consequent difficulties of intervention and governance, these conceptual approaches

were discovered by Dutch national policy makers in the early 2000s. The broader science-policy interface that emerged from the relationship between scholars and policy makers worked on 37 research programmes⁵ “to further develop this knowledge [system innovation and transitions, SJ] and put their ideas into practice with the aim of promoting transitions to a sustainable society”⁶.

‘Transition management’ was one of the concepts developed by the KSI network. One of the appealing aspects of transition management is that it provides policy makers with ideas and tools that enable authorities to operate in fluid governmental spaces when confronted with complex problems that involve multiple actors, levels and knowledge claims (I must admit, when I first familiarised myself with transition management, it also provided me with a sense of ‘understanding complexity’, an oxymoron if there ever was one). Since then, a great number of transition programmes and projects emerged at the intersection of policy networks and scientific reflection. Through KSI and a growing international network, a field called ‘transition studies’ emerged. This new academic space refers to a heterogeneous discipline trying to understand contemporary (sustainability) challenges, and social and technological transformations. Even though there is not ‘one field’ as different scholars use different ontologies, concepts, levels of analysis, methodologies and empirical objects, it is safe to say that a group of ‘transition scholars’ organised themselves around certain academic questions associated with transformative change (or transitions).

Transition, what’s in a name?

What transition approaches do is try to understand and, at the same time (sometimes explicitly), support contemporary fundamental changes towards sustainable forms of social and economic life⁷. Transitional dynamics are addressed in many domains, e.g. finance and economics, water, energy, mobility, health, and ecology. Transitions, then, can be understood as “complex processes taking place in complex systems, large-scale, long-term processes in which societal systems radically change the way they are composed and function” (De Haan, 2010: iiiii). Avelino and Rotmans (2009: 544) state that “a transition occurs when a societal system moves from one dynamic state of equilibrium to another through a sequence of alternating phases of relatively fast and slow dynamics, which form a non-linear pattern”. Geels and Schot (2010: 11) highlight what exactly changes in transitions, stating: “transitions are radical shifts from one system or configuration to another. (...) The term radical refers to the *scope of change*, not its speed. Radical innovations may be sudden and lead to creative

⁵ The overall programme was subsidised with 800 million euro. A small portion of this programme was assigned to a 10 million euro project KSI (Knowledge Network for System Innovation and Transitions).

⁶ See: <http://www.ksinetwork.nl/what-is-ksi/about-ksi>.

⁷ Hence the phrase ‘sustainability transitions’.

destruction, but they can also be slow or proceed in a step-wise fashion". In this way, actors that pursue transitions can be said to interrogate and confront the very fundamentals of 'a system', the underlying causes of 'systemic problems', and aim at exploring and proposing alternatives. Often, transition scholars employ a multi-level, multi-actor, multi-phase, and multi-pattern approach to grasp the complex dynamics of transitions (to be honest, I often get sceptical when a framework includes multiple 'multi-x's', it becomes highly abstract and all-inclusive).

Despite these abstract notions and multi-level models, such complex processes do not exclude agency and strategic intervention. In fact, strategic agency is key in transition thinking. The role of action and agency has been understood in various terms, e.g. as 'transition management', 'transition governance' or 'transition policies' (Loorbach, 2007, 2010; Paredis, 2013; Van Raak, 2016) or as the 'strategic management' of socio-technical niches such as electric cars and solar panels (Caniëls & Romijn, 2008). Transition management, for example, tries to "influence the societal system into a more sustainable direction, ultimately resolving the persistent problem(s) involved" (Grin, Rotmans & Schot, 108: 2010). Managing or governing transitions involves a set of practices at different levels in which envisioning, problem structuration, experimentation, tactical network formation, reflexivity and monitoring are crucial (Loorbach, 2007, 2010).

1.3 Where are the conflicts? Depoliticised transition politics

One of the most debated concerns related to sustainability transitions and their management refers to their legitimacy and politics. Addressing politics heads on, Smith and Stirling state that it is "unclear how transition management processes sit in relation to prevailing policy institutions and political activities" (Smith & Stirling, 2010: 9). Shove and Walker argue that "there is a politics to transition management, a playing out of power of when and how to decide and when and how to intervene, which cannot be hidden beneath the temporary illusion of 'post-political' common interest claims of sustainability (Swyngedouw 2006)" (2007: 5). And as Kern argues: "If transitions are to a large degree political processes resulting from decisions by multiple actors, then political dimensions should be at the heart of the analysis" (2009: 26). Similarly, the unclear meaning of the political aspects of sustainability transitions and their management is articulated by Verbong and Loorbach, stating that experiments related to transition management, strategic niche management, and transition monitoring innovation systems "raise questions about and prompt debate in the scientific arena (for example related to normative orientation of researchers, legitimacy of interventions and lack of attention to power and politics), and in turn

lead to adapted and new strategies” (Verbong & Loorbach, 2012: 16).

The emphasis on creative network strategies and win-win-win constructions embedded in many transition frameworks takes away fundamental conflicts that seems to have disappeared in Western public spheres in the last decades (Kenis, Bono & Mathijs, 2016). This broader historical phenomenon has been captured by for example Fukuyama’s ‘end of history’ (1992) and Lyotard’s ‘end of grand narratives’ (1984). Allegedly, there are no ideological conflicts underlying western democratic societies anymore. What remains are technical and local adjustments and transformations to improve and adapt to new circumstances. Critics have diagnosed this contemporary tendency to downplay fundamental political conflicts and social antagonisms as ‘post-politicisation’ or ‘de-politicisation’ (e.g. Ranci re, 2004; Badiou, 2007; izek, 1999, 2010; Swyngedouw, 2009). For such scholars, there is a radical difference between ‘politics’ (located in institutions and based on certain procedures and norms) and ‘the political’ (radically challenging societal regimes and structures). The gap between politics and the political has the potential to undermine social frameworks and entire institutions (Torfing, 1999; Newman, 2004). Dominant transition frameworks seem to rely on vocabularies of rational decision-making, evolutionary dynamics, deep and fixed structures, interpreting actors, functional systems or relationalities (Geels, 2010). This is not to say that politics is not addressed (Shove & Walker, 2007, 2008; Smith & Stirling, 2010; Grin & Hendriks, 2009; Avelino, 2011; Jhagroe & Loorbach, 2015; Coenen, 2015; Avelino, Grin, Pel & Jhagroe, forthcoming). Interestingly, transitions discourses assume radical change and systemic innovations. This is indeed refreshing in an alleged post-ideological academia and society (indeed, I find it an exciting academic and social discourse). But, how is politics actually defined in relation to transformative change in transition research⁸?

I argue that transition scholars address politics through frames that resonate with very specific political traditions and imaginations. These frames seem to downplay certain forms of *the political* and thus of what transition politics might actually entail. We can observe three ‘transition depoliticisations’, based on specific political frames: 1) an institutionalist frame; 2) a (neo-)liberalist frame; and 3) an anthropocentric frame. All frames obscure an adequate way to address and understand transition politics.

⁸ A number of interventions tried to highlight and grasp specific political dynamics associated with transitions, e.g. in terms of democratic legitimacy of transition management (Hendriks, 2009), selective and normative orientations (Shove and Walker, 2007), the politics of reflexively governing transitions (Grin and Hendriks, 2007; Grin, 2012), selective participation and legitimacy of socio-technical systems (Vo, Smith & Grin, 2009) and its politics of drawing boundaries (Meadowcroft, 2009). Many of the definitions of politics and underlying ‘conflict ontologies’ are based on pragmatic consensus-building and strategic agency.

Depoliticisation #1: Westphalian transition politics

The first problem emerges whenever an institutionalist frame is deployed. This frame of 'institutionalised transition politics' defines politics as *institutionalised struggle and negotiation*. Relying on political notions and the early modern conceptions of the sovereign power of the State and modernist legal scholarship (e.g. 1648 Westphalian peace, Leviathan of Hobbes, Weberian bureaucracy), politics is actually understood as striving for legitimacy through well-defined institutionalised procedures and practices. Transition politics as the struggle for transformative change, in this frame, is understood as tactical and reflexive negotiations vis-à-vis such institutionalised practices (Loorbach, 2007, 2010; Hendriks, 2009; Grin, 2012). A clear example of an institutionalised frame of transition politics is expressed by Voß, Smith and Grin (2009: 282) who state that: “[p]olitics refers to the challenge of securing democratic legitimacy for the process and ensuring that learning-oriented governance arrangements are not captured and attenuated by powerful interests”. Even though this definition seems quite progressive, the main premise of this frame is that sustainable technologies and alternative policy networks are protected through such procedures, as they safeguard procedural protection and institutional legitimation. However, many accounts in transition studies seem to take for granted the *radically contingent and ideological character* of political institutions and policy networks themselves. The combination of ‘both revolution and evolution’ (Rotmans et al., 2001) indeed assumes that evolutionary dynamics of transitions depend on institutionalised politics. However, if the conditions and criteria for institutionalised politics are already given (legal procedures, public or parliamentary debate, etc.), is transformative change possible at all? Do these procedures and institutional codes not have to be challenged themselves? Therefore, should we not move beyond institutionalised political topologies and ontologies?

Depoliticisation #2: (Neo-)liberalist transition politics

The second problem of transition politics is the liberalist (sometimes neo-liberalist) frame. Liberal transition politics is related to the institutionalised frame, but highlights the *freedom from institutions and sovereign authority*. Liberal politics highlights the freedom of all individuals and the autonomy everyone should enjoy in everyday life⁹. Liberal politics assumes that political actors are free individuals and are equal when entering political life and public debate. In many instances, this non-state emphasis is also specified in market terms. Technological innovation, for example, is often considered as an issue of complex market dynamics, in which certain alternative technologies and their niche markets require mainstreaming (Schot & Geels, 2008;

⁹ Such liberal frames are often grounded on Euro-modernist ideals of equal capacities, access and input in institutionalised politics (referring to ‘liberal classics’ such as Locke, Rawls, Habermas and Giddens (cf. Newey, 2001; Swyngedouw, 2010; Berglez & Olausson, 2014).

Smith & Raven, 2012). These types of struggles and negotiations add ‘neo’ to liberal politics. Such ‘niche market politics’ is neoliberal because it privileges market dynamics and economic procedures over political disagreements as the terrain of struggle. It should be noted that some strands of transition research circumvent this neoliberal logic of market-based sustainability transitions, but still employ liberal vocabularies such as ‘bottom-up’, ‘civil society’, ‘self-organisation’ and ‘citizen participation’. To put it differently, (neo-)liberal transition politics refers to a broader paradigm of pragmatic policy-making, and horizontal and deliberative (socio-economic) negotiations for transitions. (Neo-)liberal transition politics emerges in a world where antagonistic struggles and opposing ideologies are translated into the co-evolution of complex systems and social actors operating equally in (socio-technical) networks¹⁰. A crucial problem with this frame is that too often the inherent political and power-laden nature of life outside institutions and state authorities is downplayed (e.g. in language, cultural scripts, technologies, bodily practices, etc.). Radical ruptures and societal shifts require some degree of non-liberal force to opt for one direction (e.g. sustainable energy) instead of another (Shove & Walker, 2007). (Neo-)liberal politics assumes that individuals should have the liberty to choose for a transformation themselves, no matter the intensity of the societal conflict (climate change, economic crisis, food shortage). So, this frame perceives markets and economic (or non-state) actors as the necessary ‘rules of the game’ through which large scale changes and sustainability transitions unfold. But, are social and economic spheres free of unequal power relations? If market dynamics are deemed problematic but necessary for transitions, is choosing between having a transition via markets and having no transitions without markets not a false choice? And, if the economic realm is already assumed before political questions emerge (even as institutional politics, see above), can we even speak of *political* considerations regarding transitions?

Depoliticisation #3: Anthropocentric transition politics

The third problem is grounded in an anthropocentric frame. Anthropocentric transition politics relies on the tradition of political thought and culture where every form of *politics* is understood in human-centric terms (*anthropos* means ‘man’ or ‘human being’). From ancient Greece to current political thought, practically all frames of politics have foregrounded humans and human societies. Modernity and the romanticism of the 18th century foregrounded particular mentalities and ethical

¹⁰ As noted by Loorbach (2010: 162): “[T]here seems to be an increasing degree of consensus in governance research that both top-down steering by government (“the extent to which social change can be effected by government policies”) and the liberal free market approach (“the extent to which social change can be brought about by market forces”) are outmoded as effective management mechanisms to generate sustainable solutions at the societal level by themselves, but it is at the same time impossible to govern societal change without them (Jessop 1997; Meadowcroft 2005; Pierre 2000; Scharpf 1999)”.

cultures that centre-staged human agency and human values. The underlying assumption in such approaches is that human beings are fundamentally different from (and often superior to) animals, plants, cars, buildings and other materials. This so-called 'human supremacy' often remains unquestioned. This human privilege is sustained by violent boundaries between nature and culture, between social systems and physical systems. In a sense, both institutional and (neo-)liberal politics are about politics *inside* human populations and societies. Virtually all institutions are framed for and by human beings and their conflicts. Similarly, (neo-)liberal politics is about human conflicts and disagreements. The specific problem of anthropocentric transition politics refers to the non-human embeddedness and dependency of social life and systemic change (Lawhon & Murphy, 2012). However, does transformative change not also involve shifts in how we relate to the built environment? Should the meaning of nature and eco-systems not be part and parcel of our political frames? If we want to understand transformative change, should we not also address our animal condition and deep entanglement with (organic) matter and technologies (iPhones, laptops, buildings, highways, food)?

Reframing transition politics

These frames resonate with different emphases in transition research and discourse. Nevertheless, they are not totally isolated. The institutional frame and (neo-)liberal frame (as 'ideal types' in a Weberian sense) are considered as opposed, but also overlap. Institutional procedures and policy networks operate in relation to liberal traditions, as they allegedly safeguard free inquiry and free deliberation (e.g. Habermas' free speech ideal). The anthropocentric frame covers the institutional and liberal frame, as both privilege human society and human beings. Nevertheless, the problems of all frames are pertinent. I follow Michel Foucault in his view that contemporary political theory is still based on centralised forms of sovereignty and institutionalised modes of political power. He argues that political theory needs to "cut off the King's head" to understand how societal governance operates.

Transition thinking needs to do some cutting as well. Dominant transition approaches need to move away from their institutionalised, (neo-)liberal and anthropocentric frames to more adequately address transition politics. Taking most academic transition approaches at face value suggests that complex systems, aggregated behaviour agents and socio-technical actor-networks can be known and understood rationally and scientifically and rendered useful for strategic market positioning and policy practices in view of environmental and sustainability concerns. Even though some attempts and suggestions are present in this direction (Hendriks, 2009; Lawhon & Murphy, 2012), we must develop a more thorough understanding of the political dimensions of transitions beyond these frames. If we want to investigate the politics

of sustainability transitions beyond their depoliticisations, where should we look? If we do not adhere to the modernist nation-state, and electoral and legal-administrative system boundaries of human populations, then, what are the places that we can address sustainability transitions and their political dynamics most fruitfully?

My experience has been that too often transition scholarship employs abstract concepts that rarely ‘touch the ground’. This made me focus on empirical work as much as possible. During my field work, I noticed that in order to adequately address and overcome depoliticised conceptual frames in transition research, *cities* and *urban settings* are very fruitful entry points to study transition politics¹¹. Cities are highly suitable sites to analyse transition politics given their conflict-based histories, socio-material composition, bedrock of unsustainability concerns and sustainability aspirations (this is elaborated later). This also drew me to the literature on geographies, spatial and scalar differences associated with transitions. In order to understand the specificity of the *politics* of sustainability transitions in urban settings, I first turn to the more general question of (urban) space in transitions and (un)sustainability discourses.

1.4 What do cities have to do with transition politics? Everything!¹²

Discourses of sustainability transitions cannot be isolated from cities and urban environments. As Peter Evans (2002) nicely argues, sustainable development is a “code word” that refers to pertinent social issues in our time, which are increasingly urban in character. It is instructive to quote Evans at length here:

“From Bangkok to Mexico City, levels of air and water pollution are rising. Getting to work takes longer and longer. Affordable housing is an endangered species and green space is shrinking. The large cities of the Third World are becoming “world cities,” increasingly important nodes in the financial and productive networks of the global economy, but they are not providing livelihoods and healthy habitats for ordinary people. They are also degrading environmental resources inside and outside the urbanized area itself at a rate that cannot be maintained. Without new political strategies aimed at increasing liveability, the future is bleak” (Evans, 2002: 1).

¹¹ I came to this insight during my empirical studies (see also Chapter 2).

¹² Subtitle inspired by Heynen, 2013.

The urban materiality of sustainability transitions

Urban geographies are increasingly understood as places where modern problems come together and can be tackled (Kaika, 2005; Mostafavi, & Doherty, 2010; Brenner, Marcuse & Mayer, 2012). Modern urbanisation, embedded in processes of industrial revolution and the major political, social and cultural transformations of the 18th and 19th century, are interesting places to situate transitions. Cities bring together enthusiasm and cosmopolitan cultures with severe problems for human populations and ecologies. For French philosopher Rousseau¹³, the emergence of modern cities represented not civilisation as such, but rather the production of “a cannibalistic society” (Hénaff, 1992: 3). In unequivocal terms, he stated that “I would rather see men grazing on meadow grass than devouring each other in cities” (ibid) (I wonder, who dares to speak so imaginative and daring in academia today?). The urban dreams in the age of modernity contain critical tensions and traces of self-subversion. This ‘dialectic of modern urbanisation’ emerged in the modernist era of Man, Reason and Rational modes of organising urban life, creating its own limits (of economic growth, urban sprawl, etc.). It seems that the ‘internal tensions’ and ‘environment’¹⁴ of modern cities have become issues, and that modern urban life has become a matter of deep concern and an object of study and intervention.

Since the 1992 Earth Summit in Rio de Janeiro, Brazil, the focus on sustainability at the level of urban regions and cities has increased dramatically. Agreements among nations across the world, labelled as ‘Agenda 21’, marked an alleged collective effort to address serious concerns about the future of humanity on planet earth (21 refers to the 21st century). These (non-binding) agreements followed prior calls from the 1972 Club of Rome report *The Limits to Growth* and the 1987 Brundtland Report *Our Common Future*. Subsequent international meetings mark this increased global interest in addressing sustainability concerns at the urban scale (Holden, Roseland, Ferguson & Perl, 2008)¹⁵. Since then, cities have increasingly been understood as sites for intervention in the wake of environmental, social and economic crises.

Contemporary cities and metropolitan areas are sites where human beings dwell and live, especially since the era of modern industrialisation and increased urbanisation (Deelstra & Girardet, 2000). They signify places where a number of preconditions are required to survive and live collectively, such as ample productive soil, stable flows

¹³ In Emile, the French romantic philosopher Jean-Jacques Rousseau (1712-1778) explained the modernist rush to the city, criticising it as well: “(...) for those of us to whom urban life is necessary, and who cannot forego eating men, it is to our advantage to frequent the countries where one finds the most of them. That is why everyone flocks to Rome, Paris, London. It is always in capitals that human blood is the cheapest” (IV, 831, cited in Hénaff, 1992: 3).

¹⁴ A 19th century notion differentiating human societies from their ‘environment’ or ‘surroundings’ (Luhmann, 1989).

¹⁵ For example, the 1996 UN Habitat II Forum (Istanbul), the 2002 World Summit on Sustainable Development (Johannesburg), and the 2006 World Urban Forum 3 (Vancouver).

of food distribution, energy provision, roads, houses, work force, etc. Therefore, it is sensible that an *urban* focus emerged in sustainability discourses in recent years. A well-known ‘fact’ in this regard is that 2008 was the year that “humanity crossed a milestone when the global urban population exceeded the rural population for the first time in history (Seto et al., 2012), since then more than half of the world’s population lives in cities (Crossette, 2010)” (Nevens, Frantzeskaki, Gorissen & Loorbach, 2013: 111) (note the anthropocentric bias in this quote). Cities can be considered as crucial nodal points of human civilisation, given that “world-wide cities are responsible for almost 75% of the global resource consumption” (ibid). Since the mid-1990s, literally thousands of city-driven networks (including policy makers, politicians, scientists, citizens groups, businesses, etc.) have taken up initiatives, made plans and strategies to address their local sustainability challenges (Birch & Wachter, 2008).

Transformation and urban politics

Cities and urban areas are increasingly approached as an adequate geographical scale to address concerns around environment, economy and social relations. As urban theorists and geographers have shown, metabolic processes embedded in urbanisation since the industrial revolution have increased tensions within the economic system, in particular, via global competition and technological innovations of products and services (Harvey, 1985). In fact, the intricate link between processes of urbanisation and the concerns around sustainability date back to over 10.000 years, when agricultural revolutions triggered the emergence of human civilisations and the birth of cities (Soja, 2000)¹⁶. Similarly, ongoing ‘urban globalisation’ (Rusteikienė, 2008) produced the historical emergence of environmental concerns in the 1970s, triggering ongoing tensions between e.g. economic and ecological values (Hall & Hubbard, 1996; Davidson & Martin, 2013). Many uneven political, economic and cultural developments, generated by modern urbanisation and globalisation, created specific concerns for ‘(un)sustainable cities’ (cf. Appadurai, 1996, 2001; Perrons, 2004; Harvey, 2008; Heynen, Kaika & Swyngedouw, 2006; Krueger & Gibbs, 2007). Various scholars suggest that (un)sustainability concerns and societal transformations in the 21st century are inherently local *and* global, and indeed, come together in urban environments. Some scholars also state that one cannot understand (changes related to) sustainability without understanding how human ecologies, industrial societies and cities co-emerged and developed throughout history (Rees & Wackernagel, 1996).

My argument here is that historical urban processes are closely linked to modern technological innovations, (un)sustainability concerns and current transformative

¹⁶ Cities and civilisation have common etymological roots (*civitas*, Latin for ‘city’) and is antagonised against e.g. the non-city, non-civilised, environment (cf. Brenner, 2014).

changes. There are a number of reasons that cities should be considered as crucial when one studies transition politics:

1. *Historical formations*

Technologies and socio-technical systems co-emerge(d) with urbanisation processes. From earliest forms of urbanisation (primitive civilisations as of 10.000 BC) and agrarian societies to modern forms of (industrial) urbanisation in the 19th century;

2. *Entanglements*

Since their first formations, cities have been sites where heterogeneous practices emerged (agriculture, administration, art and labour). Modern urbanisation in particular is even more conditioned by different socio-technical and societal function systems that are deeply entangled (sewers, pipelines, roads, cars, houses, leisure, economic activity, Internet, etc.);

3. *Problematisations*

Since the late 20th century urbanisation processes are key spaces where forms of reflexive and eco-modernisation emerge and meet, such as environmental degradation and socio-economic deprivation. Since the early 1990s, such concerns have been tied together through labels such as 'sustainable development' and 'sustainability';

4. *Interventions*

Since the 1990s, cities have also been targeted as spatial nodes where many modernisation concerns could be addressed and tackled. A wide range of initiatives, policy programmes, commercial businesses strategies and citizen engagements aimed at intervening in cities to solve issues of (un)sustainability.

If we aim to investigate the specific *political* dynamics of urban transitions, we have to engage with the historical formations, entanglements, problematisations and interventions of heterogeneous urban technologies, economies and practices. Cities are not only interesting sites to study the materiality of sustainability transitions, but also express contemporary concerns around sustainability in terms of the unequal distribution of health, welfare, security and ecological wins/losses.

The urban in transition research

The field of transition research has avoided the specific locality of *the urban* for a long time. There are several reasons for this. First, there has been an a-spatial and a-geographical understanding of socio-technical transitions and transition management, often focussing on sectoral or societal system delineations. Second, even though recent years witnessed a focus on spatial and geographical dimensions

of system innovation and transitions, many scholarly contributions fail to address ‘sustainability’ and ‘transitions’ as urbanisation concerns (cf. Nevens et al., 2013: 112). The focus on ‘urban sustainability transitions’ has ‘simply’ been addressed as a new focus for transition research for a number of reasons. As Nevens et al. (2013: 113) state “[e]ven though the opportunities of investigating transitions in urban contexts or bringing in the spatial element in transitions studies are arguably relevant and valuable both socially and for policy (Coenen et al., 2012), thus far an analytical rather than an action focus dominates the urban transition scholarship”. This more substantive and thematic negligence of the relationship between sustainability transitions and the urban, might seem sensible, given that the urban can be (and often is) observed and treated as ‘just another scale’ or ‘just another system delineation’ around which urban issues are addressed. In a same vein, other scales (e.g. national, European, global, neighbourhoods) through which sustainability transitions are understood, conceptualised and pursued, are linked to the urban, even though they are deeply entrenched with socio-historical processes of inter-urban space-making. This is also noted by Hansen and Coenen who state that a “characteristic of urban and regional sustainability transition policies is that they are typically aimed at combining ecological goals with economic competitiveness (Hodson and Marvin, 2009; Späth and Rohrer, 2010)” (2013: 8-9). To put it somewhat polemically, sustainability transitions and urbanisation always go hand in hand. Less polemically, urban materialities and spatialities can be considered as a necessary condition to actually understand socio-technical system innovation and sustainability transitions discourses, including well-known transitions around agriculture, food, energy or infrastructure (Verbong & Loorbach, 2012; Spaargaren, Oosterveer & Loeber, 2012; Geels, Kemp, Dudley & Lyons, 2012).

Fortunately, a number of contributions have recently addressed geographical variations and spatial issues in the context of socio-technical innovations and sustainability transitions (e.g. Rotmans, 2006; Lawhon & Murphy, 2012; Coenen & Truffer, 2012; Hodson and Marvin 2012; Truffer & Coenen, 2012; Avelino, 2011; Coenen, Benneworth & Truffer, 2012; Späth & Rohrer, 2012; Bridge, Bouzarovski, Bradshaw & Eyre, 2013; Hansen & Coenen, 2013, 2014; Truffer, Murphy & Raven, 2015). Space and geography are increasingly addressed and explored at transition conferences and in transition-related academic journals (e.g. European Planning Studies, 2012). Many of these literatures are embedded in e.g. social and economic geography (Hansen & Coenen, 2013). Quoting the 2010 STRN research agenda, Avelino addressed the issue of scale and geography in her dissertation on power in transitions: “Until now transition theory has paid too little attention to the spatiality of transitions”, which obscures important questions like “why do transitions occur in one place and not in another?” (STRN, 2010: 18, cited in Avelino, 2011: 363). Spatial

and geographical variations and differences are not simply concerns of existing governmental structures and sector-based regimes, but also transcend them. Coenen, Benneworth and Truffer advocate a spatial perspective on sustainability transitions. They explain the relative lack of a spatial and geographical understanding of transition by the focus on temporal dynamics within transition research. Benneworth and Truffer (2012) argue that time has become more important than space. In their editorial article that introduced the European Planning Studies special issue on space and scale in sustainability transitions, Coenen and Truffer state that “[s]cholars of sustainability transitions have only recently shown an increased interest in geographical aspects of sustainability transitions (Smith *et al.*, 2010)” (...) “Despite a number of seemingly spatial illusions, the conceptual vocabulary to deal with these aspects has been limited and strikingly devoid of transgressions into geography literature (...) Questions concerning *where* sustainability transitions take place and why have thus remained largely off the radar in this otherwise burgeoning field of studies” (Coenen & Truffer, 2012: 368).

Since there are different insights and conceptual frameworks that resonate with different transition approaches, intersections between transitions and issues of space diverge (Coenen & Truffer, 2012). For example, as Hansen and Coenen argue, it depends which ‘turns’ are highlighted in economic geography as to how geography of sustainability transitions might be understood (e.g. cultural turn, relational turn, evolutionary turn) (2013, also cf. Coenen *et al.* 2012: 975). They state that “(...) the conception of space is a highly complex and contested issue even without the further confusion added through the use of expressions such as niches as “protected spaces” (Geels, 2002, p. 365) in the sustainability transitions literature” (Hansen & Coenen, 2013: 6). Conceptually, it is argued that “the TIS and MLP approaches suffer from a missing or naïve conceptualization of space” (Coenen & Truffer, 2012: 369). Similarly, focussing on socio-technical approach to transitions, Coenen, Benneworth and Truffer (2012) highlight the dominant conceptions of space. These scholars argue that a broader and different spatial approach is needed, since these socio-technical perspectives on transitions have implicit conceptions of space and place that resonate with nation-state and administrative-territorial boundaries. This obscures inter-spatial linkages and cross-national dynamics, which they call “institutional embedding in space” and “multiscalarity” (2012: 973). Interestingly - and quite significantly - the spatial seems to be addressed even less explicitly and critically in transition management literature, even though transition management projects unfold in regional and local scales (Neuens *et al.*, 2013; Wittmayer, Roorda & Van Steenberghe, 2014).

1.5 Bringing transition politics and urban space together: A new problematic

What do we gain from reading dominating sustainability transitions discourses and practices in this way? How do the problems of the political and urban geographies in transitions actually relate? And, how does this establish a point of departure for this study? Methodologically, one can read these problematics separately and investigate them separately (and write two different dissertations). However, these alleged separate themes are highly entangled¹⁷. We need to read them against each other in order to see their points of contact to address transition politics in urban settings (cf. Barad's so-called 'diffractive reading', Barad, 2007). In this way, we can see how a more adequate understanding of transition politics can be brought together with urban dynamics.

I claim that *urban* transitions simply cannot be isolated from transition *politics*. As Magnusson (2014) argues, historically, the urban and the political have always developed together. Today, however, we do not experience this as such because the urban has been depoliticised. The spatiality or what entails urban life has never been a mere technical concern. Similarly, in the field of transition research, different or contrasting ideas about what entails a sustainability transition "may not only disagree in terms of technologies and level of ambition, but also include struggles over the right geographical scale to develop initiatives promoting sustainability transitions (Hodson and Marvin, 2012)" (Hansen & Coenen, 2013: 8). The 'proximity-thesis' of economic geographers, highlighting the close ties between industry, knowledge networks and policy circles, also implies that we might observe an accumulation of power, network inertia and the assembling of "usual suspects" (Hansen & Coenen, 2013: 14). Similarly, as illustrated in the Danish wind turbine industry context by Coenen et al. (2012), there are "specific territorial institutional advantages such as collaborative culture and attitude towards knowledge sharing (...)". The fact that a more radical transition politics and urban transitions have not yet been linked can indeed be explained by the fact that many scholars who do address spatial and geographical dynamics, seem to highlight ideas from economic geography, sometimes explicitly downplaying other bodies of knowledge e.g. political geography. The geographical and spatial unevenness is often approached from an *economic* perspective rather from a *political* perspective. As Coenen et al. explain "[w]e emphasize economic geography, because it is the sub-discipline within geography that has done most work on mapping and explaining the uneven geographical landscape of innovation and technological change" (2012: 969).

¹⁷ This study first started with a single focus on legitimacy in transitions. However, after doing empirical work, it became clear that spatial dynamics and issues of urbanisation cannot be isolated from 'politics' and legitimation struggles.

An almost literal invitation to further this thematic is provided by Coenen and Truffer (2012), stating:

“ (...) the existing [transitions, SJ] literature remains insufficiently equipped to assess the advantages, conflicts and tensions that are constituted by the economical, institutional, social and cultural territories in which transitions dynamics and pathways by default are embedded, except as passive contexts. There is a risk it fails to recognize why certain transformative instances of institutional, entrepreneurial and innovative interactions occur where they do and for what reason unless it develops a more spatially sensitive perspective or geographical lens on transition pathways” (Coenen &Truffer, 2012: 368).

Comparably, Nevens et al. explicitly state that future research on urban transitions might:

“explore the role of agency dynamics in urban sustainability transitions in terms of politics, power and seizing or seeking opportunities. The role of political agency in coupling innovations, in strategically delaying take-up of innovations and in allowing (transition) discourses to incept policy dialogues requires careful investigation” (2013: 121).

Importantly, the relative lack of a political understanding of urban sustainability is a broader concern. Instead of a proper political account of how urban environments deal with sustainability narratives and initiatives, there seems to be a consensus that a depoliticised technical framing is adequate. As Bulkeley and Betsill argue:

“Most analyses of urban sustainability attempt to document the extent to which cities are, or are not, becoming more sustainable through the use of indicators, flows, footprints and so on, and the practical challenges which are being encountered in putting the sustainable cities agenda in place. While this is no doubt important, as Whitehead (2003, p.1187) suggests, ‘such work has tended to reduce the analysis of sustainable urban development to a technical matter of institutional restructuring, traffic management, architectural design and the development of green technologies’ (2005: 42-43).

This technical (or rather technocratic) reductionism of new forms of urbanism and urban sustainability requires a more fundamental inquiry. What we need is a more conceptual and empirically informed understanding of the politics and struggles associated with urban sustainability transitions. This does not only refer to the more long-term shifts and discontinuities (*urban transition* politics), but also to the specific everyday struggles and negotiations in sustainable urbanisation (as *urban transition politics*). To me, such an investigation does not ‘undermine’ transitions

studies or specific transition models such as TM or the MLP. Rather, it extends transition knowledge and explores new pathways. There are many hints embedded in transition research that can support a more fruitful understanding of urban politics of sustainability transitions.

A research question: Examining transition politics of sustainable urban spaces

As transitions towards sustainable cities and urban environments are inherently political, and transition politics should ‘touch the ground’, I explore a political understanding of sustainability transitions in urban contexts. The objective of this study is to *critically analyse transition politics in urban settings*¹⁸. More specifically, it seeks to critically examine the creation, normalisation and contestation of sustainable urban spaces. It is important to include emergence, normalisation and contestation to cover the long-term transformative dynamics of urban space-making, as well as the persistence and recurrence of conflicts and struggles thereof. This takes us to the central research question that guides this study:

How are sustainable urban spaces created, normalised and contested; and what does this mean for pursuing urban sustainability transitions today?

This central question in itself is too generic to focus on the various aspects related to the objective. Therefore, a number of sub questions are formulated that address these more specific features. Together, these questions serve the central question and the overall aim. The sub questions also resonate with the chapters of this dissertation.

- Sub question 1:
How does sustainability transition research address and understand politics in urban environments? [Chapter 3]
- Sub question 2:
How can the creation, normalisation and contestation of sustainable urban spaces be conceptualised and analysed empirically? [Chapter 2 and 4]

¹⁸ It is instructive to note that the political and non-political dimensions of urban transitions are related. If we define politics as struggles shaped by antagonisms beyond institutional, liberal and/or anthropocentric depoliticisations, the political dimension of urban transitions is exactly about struggles for urban transformations (Rancière, 2004; Badiou, 2007; Žižek, 1999, 2010). Whenever such urban struggles and moments of dissensus are negotiated and compromised, the radical nature of dissensus is downplayed strategically and tensions become practical and technical issues. This is the moment when political dimensions turn into procedures or social dimensions (or cultural, legal, financial, economic, etc.)(cf. Torfing, 1999; Newman, 2007). To approach the proper political aspects of urban sustainability transitions, means to address the dynamic between the political and non-political of urban transformative change today.

- Sub question 3:
How can the creation, normalisation and contestation of sustainable urban spaces be understood empirically? [Chapter 5, 6 and 7]
- Sub question 4:
What do these inquiries mean for pursuing urban transitions in the 21st century?
[Chapter 8]

In Chapter 4, I present the analytical meaning of the central notions in these research questions (such as creation, normalisation, contestation, sustainable urban spaces), as part of broader analytical framework. See also the Glossary for the definition of key concepts and terms.

1.6 Outline of the dissertation: Four parts, eight chapters

The main structure of this study is organised into four parts: 1) an introductory part; 2) a conceptual part; 3) an empirical part; and 4) a reflexive part. This categorisation is mostly presented for the sake of clarity and readability¹⁹.

Part I: Introductory part (Chapter 1 & 2)

Chapter one introduces (or rather introduced) the central research topic. Chapter two presents the underlying methodologies and methods that guided this study. The methodology is called ‘critical constructivism’ and tries to overcome a number of problems I encountered with more orthodox methodologies. This chapter also discusses the research design, the scientific qualities I pursued and the ways in which empirical materials were collected, coded and analysed (using computer software, Atlas.ti). Methodologically, these empirical analyses are directly informed by the transition analytics I elaborate in Chapter 4. Chapter 2 also reflects on doing research based on critical constructivism and producing scientific knowledge about transitions and sustainable urbanism.

Part II: Conceptual part (Chapter 3 & 4)

Building on the problematisation of transition politics in urban settings, Part II critically discusses transition literature, explores alternative literatures, and proposes a new framework. Chapter 3 first critically reviews transition research vis-à-vis the political and urban spaces. I argue that dominant political frames in transition research are ill-

¹⁹ Initially, I considered a less traditional structure and a more stylistic form of this thesis. However, I soon noticed that a basic structure provides a sense of simplicity and communicability.

equipped to grasp struggles associated with sustainability-led transformations. Instead of taking nation-state institutions, deliberative democratic arenas and anthropocentric politics as givens, it is argued that it is more fruitful to *spatialise* transition politics. A spatialised understanding of transition politics allows me to focus on multi-spatiality, non-institutionalised realities and material environments. Chapter 3 also illustrates that *urban* spaces and geographies offer fruitful entry points to better understand the situated politics of sustainability transitions. A more spatial understanding of the politics of sustainability transitions thus enables me to overcome depoliticised frames within transition research. Yet, the politics of sustainability transitions in urban settings requires further investigation and conceptualisation.

Chapter 4 explores work in the field of critical urban research and urban political ecology to inform a more conflictual understanding of urbanisation and urban systems. These insights allow me to understand transition politics beyond Westphalian, (neo-)liberal and anthropocentric assumptions. Importantly, I link these more radical theories on urban politics to everyday spatial governing concerns and urban power regimes for a comprehensive understanding. To this end, I use insights from Foucaultian research on governmentality tailored to urban settings (urban governmentality). These insights are then tied to insights from transition research in order to re-conceptualise transition politics in urban settings. Consequently, I introduce a *transition analytics of urban spaces*. Put simply, this analytics refers to the struggles and negotiations associated with the transformations of urban spaces. The analytics also enables me sensitise the uneven developments associated with the recent emergence and establishment of so-called ‘sustainable cities’.

Part III: Empirical part (Chapter 5 & 6)

This part covers the empirical cases of the study. The two cases articulate sustainability transitions in urban settings, one close to institutional settings (‘regime’) and one relatively remote from them (‘niche’). Chapter 5 first describes the emergence and establishment of Rotterdam’s current waterfront, i.e. a ‘sustainable waterfront’. It particularly focuses on the emergence and establishment of spatial governing regimes and practices around floating houses, offices and living environments. This chapter is roughly based on three major ‘genealogical episodes’ of Rotterdam’s modern waterfront. These episodes respond to one another in a complex manner. Episode I (1860-1960) was a period of port-industrialisation and urbanising socio-biological life (*the bio-industrial waterfront*). Episode II (1960-2000) responds to episode I and can be understood as a period of new port-city relations and integration of social and environmental values (*the neo-industrial waterfront*). Episode III (2000-now) is a period of further urbanisation of old port areas and the use of market-based strategies and sustainable technologies (*the neoliberal eco-waterfront*).

Chapter 6 presents the second empirical case. It historicises and reconstructs the discourse and practices of a socio-ecological movement called the ‘Transition Network’ or the ‘Transition Towns Movement’. It specifically focuses on two transition networks in the Dutch cities of Rotterdam and The Hague. These local networks are embedded in a global movement aimed at building local resilient communities in the wake of contemporary crises (e.g. peak oil, environmental destruction, economic deprivation). The main structure of Chapter 6, again, is based on ‘genealogical episodes’. Each of these episodes highlights the (intertwined) genealogies of Rotterdam’s and The Hague’s Transition Town. Episode I (1850s-1960s) was an era in which ‘the environment’ and ‘ecology’ emerged in direct relation to industrial activities and socio-economic conditions (*the industrial eco-city*). Episode II refers to a number of more recent decades (1960s-2000s) in which mass consumption, individualisation, state regulations and market forces shaped the meaning of ecology in Rotterdam and The Hague (*the neoliberal eco-city*). Episode III marks the most recent era (2000s-now) that gives rise to more community-based initiatives and actions to relink ecology, economy and communal life in these cities ‘from below’ (*the neo-communitarian eco-city*). Both empirical cases are also reflected upon in terms of new challenges and struggles associated with sustainable urban space-making.

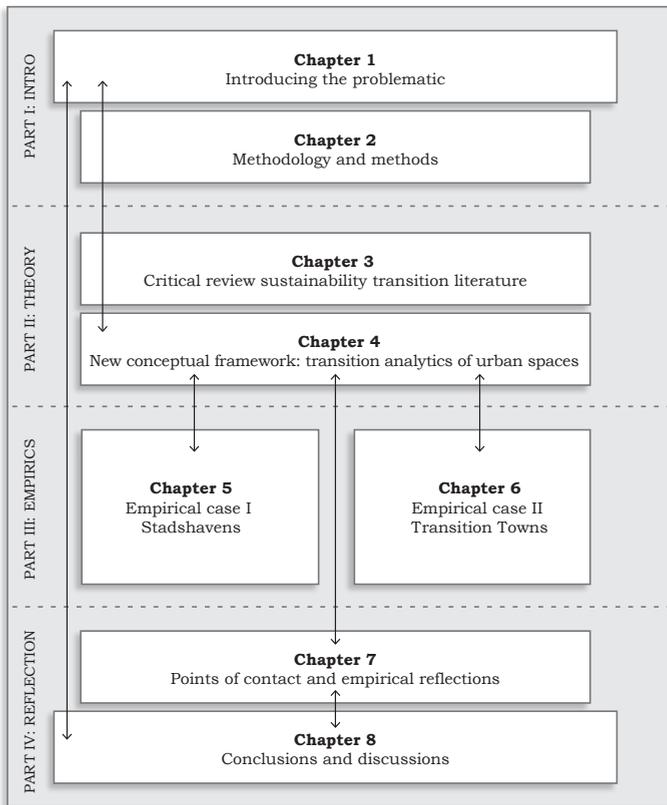
Part IV: Reflexive part (Chapter 7 & 8)

The final chapters aim to reflect on the empirical cases and the central research question as outlined in Chapter 1. Chapter 7 first aims to enrich the empirical reconstructions by means of connecting it to the transition analytics as presented in Chapter 4. As such, it seeks to explain more reflexively the rise of sustainable urban spaces. I present two specific spatio-political rationalities: *neo-liberal eco-mentality* and *neo-communitarian eco-mentality*, as well as a number of broader spatial politicisations and struggles. The empirical studies are then examined in terms of their points of contact and put in a broader context. This allows me to reflect on the empirical cases and enrich the proposed analytical vocabulary. I argue that a set of fluid and transpersonal governing authorities and institutions connects both cases, articulating what I call *post-liberal eco-spaces* (shaped by a *post-liberal eco-mentality*). Importantly, this also raises questions about new forms of uneven spatial distributions of wins and losses, and tensions between democratisation and (green) gentrification of both urban regions.

Chapter 8 returns to the central research question and sub-questions. It presents a number of key findings. It then asks a more strategic question: ‘what is to be done?’ Based on the insights I developed throughout all chapters, a number of strategic considerations can be made concerning the politicisation and governing of urban spaces today. This final chapter also puts forward some limitation of the current study

and some themes and suggestions for further (critical transition) research, before some final ‘afterthoughts’ are presented. Figure 1.1 provides a visual overview of the sections and chapters, including their connections (arrow signifies: ‘shapes’).

Figure 1.1 Overview of chapters





Chapter 2

Using hammers and tweezers

Methodology and methods

Chapter 2. Using hammers and tweezers: Methodology and methods

“During times of universal deceit, telling the truth becomes a revolutionary act”.

George Orwell

“Not only does man dwell in the ‘prison-house of language’, (...) he dwells in a torture-house of language”.

Slavoj Žižek

2.1 Introduction

This dissertation examines the transition politics of sustainable urban space-making. It especially focuses on the politics associated with the mushrooming of sustainable cities since the early 2000s. Combining theoretical and empirical work, this endeavour requires a clear methodological accountability. This chapter aims to explicate my methodological basis and choices. It should be made clear at the outset that most choices emerged in the research process and were made pragmatically. Furthermore, the methodological choices are strategic. Whenever one makes methodological choices in social sciences, certain ways of construing and knowing social reality are privileged, while others are deprioritised (Andersen, 2003; Glynos & Howarth, 2007: 201). By necessity, specific procedures and techniques are used to engage with ‘the literature’, ‘the theories’ and ‘the empirical data’. My methodological choices correspond to a specific way to identify, approach and understand the politics of sustainability transitions in urban environments.

This chapter first presents the epistemological starting point underlying my understanding of transition politics in relation to urban sustainability (section 2.2). I utilise a critical constructivist approach, which allowed me to overcome a number of problems I encountered with more orthodox methodologies. In line with critical constructivism, I briefly present my ontology of urban transitions: assemblage urbanism. The next section (2.3) discusses the research design of this dissertation in terms of the research steps and the transition analytics as one of the central elements. It

also presents the scientific qualities I tried to pursue, which are directly related to a critical constructivist epistemology. Section 2.4 specifies the ways in which empirical materials were collected. In section 2.5, I elaborate on how empirical information was reconstructed, analysed and coded (using computer software, CAQDAS, Atlas.ti). Methodologically, these empirical analyses are directly informed by the transition analytics I elaborate in Chapter 4. The final section concludes with some reflections on doing research based on critical constructivism and producing scientific knowledge about transitions and sustainable urbanism.

2.2 Transition research and critical constructivism

Before I present my methodology, it is important to understand what is at stake in approaching and investigating radical urban change as a social scientist. Cities have been the epicentre of battles, revolutions and social transformations, but also of wealth, pleasure and heavenly comfort (Kaika, 2005; Prakash & Kruse, 2008). Understanding the struggles associated with shifts in the urban fabric and everyday city life, requires an adequate epistemological position. Many scholars have argued that there are different ways to study sustainability transitions (Van Asselt & Rotmans, 1996; Geels, 2010; Loorbach, Frantzeskaki & Thissen, 2011, Avelino, 2011; Wittmayer & Schöpke, 2014), cities and urban transformations (Davies & Imbroscio, 2010; Brenner, 2014), and their linkages (Bulkeley, Broto, Hodson & Marvin, 2010). The field of transition research is highly diverse in terms of methodological, epistemological, conceptual, analytical and thematic foci and directions (Geels, 2010; Markard, Raven & Truffer, 2012), each of which assumes a specific understanding of social reality and the ways in which transitions are identified.

The limits of traditional methodologies for this study

During my research, I learned that classical methodological traditions are quite limited to adequately understand and analyse the politics of sustainable urban transformations. I present two alleged extremes of the traditional methodological spectrum: 'positivist-realism' versus 'interpretive-constructivism'²⁰. A *positivist-realist* position presupposes that reality can be identified, known and analysed objectively

²⁰ The labels 'positivist-realism' and 'interpretive-constructivism' suggest two monolithic approaches, however a wide range of sub-labels and sub-sub-labels can subdivide each label. Positivist-realism combines an objectivist epistemology (our knowledge of the world can be objective) and a realist ontology (things and social reality are real). Interpretive-constructivism combines a subjective/interpretive epistemology (our knowledge of the world is based on interpretations) with a constructivist ontology (things and social reality are constructed) (cf. Schwartz-Shea & Yanow, 2011). For the sake of clarity and my argument, I use these two simplified but widely recognised and used methodological approaches.

and unmediated (mind-independent). Social scientists often argue that methods and protocols derived from natural science produce objective knowledge and should therefore be adopted by social sciences (Sayer, 1992; Psillos, 1999)²¹. I argue that this approach is the most privileged epistemology in social sciences today. We can perhaps understand positivist-realism as a “positivist hegemony” operating in social sciences, which includes transition research and urban studies (cf. Geels, 2010; Wyly, 2010). I argue that objectivity is considered desirable, but it is hardly realistic. Science and objective knowledge are increasingly problematised as neutral practices that take place outside social transitions and governance practices (Van Asselt & Rotmans, 1996; Ravetz, 2006; Wittmayer & Schöpke, 2014). Issues of uncertainty, complexity, contingency and subjectivity seem to undermine the basis for objectively knowing. Categories such as ‘transitions’, ‘sustainability’, ‘spaces’ and ‘cities’ can impossibly be known from the outside and their meanings require in-depth local descriptions and contextualisation (Avelino, 2011; Geertz, 2010). So, the topics of transition politics and urban spaces require a methodology that moves away from crude generalisations and natural science-like objectifications. Rather, such a methodology should sensitise sustainable urban spaces as contingent categories, and in terms of local experiences that are embedded in broader urban struggles and discontinuities (Geels, 2010; Coenen & Truffer, 2012; Raven, Schot & Berkhout, 2012).

On ‘the other side’ of the spectrum, we find an *interpretive-constructivist* position. Interpretive-constructivism assumes that reality cannot be identified, known, and analysed objectively without mediation. Social reality, then, consists of local and contingent forms of knowledge. An interpretive-constructivist epistemology claims that knowledge is always ‘situated’, ‘local’ and ‘contextual’ and that social reality depends on how one interprets that reality in the first place (Schwartz-Shea & Yanow, 2011). However, this position may result in a lack of critical engagement with actual ‘generalisations’ and ‘social laws’ that have been naturalised and create certain fields of action (Glynos & Howarth, 2007). Furthermore, linkages between the natural and the social seem to be obfuscated, if one adopts a mind-dependent and idealist position. Society-nature linkages, objectifications and naturalisations should be taken into account to adequately understand how local and contingent meaning-making subjects relate to broader fields of urban knowledge and modes of transformation. Even though transition research offers a number of entry points to actually pursue such an approach, its epistemological basis is rarely explicated (Geels, 2010).

²¹ This set of activities, for Law, share similarity with a ‘hygienic practice’: “Do your methods properly. Eat your epistemological greens. Wash your hands after mixing with the real world. Then you will lead the good research life. Your data will be clean. Your findings warrantable. The product you will produce will be pure. It will come with the guaranteed [sic] of a long shelf life” (Law, 2006: 2, cited in McCoy, 2012: 763).

Fortunately, the field of transition research employs methods and tools to account for over-generalising and over-contextualising knowledge, while focussing on the strategic role of the researcher (Geels & Verhees, 2011; Loorbach, 2010; Avelino 2011; Wittmayer & Schöpke, 2014). Constantly iterating between theories, practical knowledge and action research informs a more engaged position to combine contextual and local knowledge with broader institutional and social developments. Methodologically, this position resonates with critical realism²². Critical realism was first developed by the British philosopher Roy Bhaskar (1975, 1978). This hybrid epistemology argues that reality can indeed be represented and known objectively, but that these representations are to be understood by the ways in which they are construed and created subjectively²³. However, during my research I found two problems with a critical realist approach. First, even though social contingencies and material realities are considered as related, there seems to be a promise of presenting social reality *objectively* (Archer, Bhaskar, Collier, Lawson & Norrie, 2013). As critics have argued, critical realism tries to overcome law-like generalisations, but often remains realist as evidenced by often objectifying concepts, conditions of possibility, mechanisms and methods (Glynos and Howarth, 2007). Put bluntly, despite relations of power and contextual knowledge, objective knowing is actually possible for critical realists. Second, and related, critical realism aims to be critical and sometimes emancipatory, but its realist overtones create a blind spot for the ways in which scholars and scientists enact science and *intervene* in public discourse, policy programmes, collective thought and small-scale social projects (e.g. via action research). Importantly, sustainability transitions are both academic discourses and socio-political practices, as they have transformed and shaped public policy and community engagement in a number of countries in the last decade (Hendriks, 2009; Avelino, 2012; Audet, 2014). So, the agential role of a researcher is not merely academic in this context, but also public or political. This means that a general methodology for transitions should be able to account for the link between public engagement and intellectual work in engaging

²² The well-known bi-polar taxonomy (positivist-realism vs. interpretive-constructivism) suggests an opposition or contradiction between these two methodological approaches, respective methods and evaluation criteria. However, even though these two approaches are established and nested academic institutions and educational programmes (positivist-realism more than interpretive-constructivism), the portrayal of these approaches here is rather simplistic and not sufficiently relevant for the epistemology I use for this study. In fact, in the last decades new positions have emerged, some of which are more appropriate for and attuned to this academic inquiry. In the domain of transition research, such intermediary positions also are sometimes employed (tacitly).

²³ Accurate and scientifically objective descriptions of reality are possible if one pays close attention to the mind-dependent character of mind-independent reality. For example, “to note a correlation between voting and social class, for example, is not to explain a causal relationship, but to describe an event in need of further explanation. Such an explanation would have to explore how class was defined, how people (mis)perceived their material interests, what non-material factors influenced voting, and so on” (Cruickshank, 2003: 2-3).

with knowledge, complexity and contingency. A more adequate transition methodology should be able to specify why and how understanding ‘a transition’ towards ‘sustainable urban spaces’ is both academic and public.

This more critical engagement is often neglected in transition research resulting in incomplete ontologies and methodological accounts. Since urban sustainability and transformative change can be considered normative orientations, I also want to be more explicit about the ethical and normative commitments methodologically. What I aim for, alternatively, is a methodological strategy that is able to link ontology, epistemology and critical engagement in such a way, that it is suitable for the intellectual and socio-ethical ambitions of transformative agency in general and transition politics of urban spaces in particular.

Critical constructivism: An alternative methodology

These somewhat demanding criteria made me extend a critical realist take on transitions and add a clear ethical dimension on approaching and understanding urban transformations. What is more, the specific transition ontologies that I take as a starting point express both a ‘conflictual’ and a ‘relational’ ontology (Geels, 2010). A conflict ontology is critical in understanding the politics and hegemonic struggles associated with (un)sustainable cities. A relational understanding of the world allows us to ‘spatialise’ sustainable transitions in such a way, that ‘the city’ is approached in terms of local and multi-scalar relations associated with various urbanisation processes, i.e. in terms of entangled urban spaces (Coenen & Truffer, 2012). This enables me to account for recent methodological innovations in terms of action research, post-normal science and a public-democratic understanding of scientific knowledge. This epistemology can be called *critical constructivism*.

Critical constructivism is relatively new and is developed e.g. in the field of critical pedagogy (Kincheloe, 2005). Critical constructivism as I conceive it, however, is a broader methodological position. I employ it to denote how ontology, epistemology and ethics are deeply connected. For me, critical constructivism is essentially informed by what Karen Barad calls ‘ethico-onto-epistemology’ (Barad, 2007; Haraway, 1988)²⁴. Barad’s work is characterised by creatively exploring insights from natural science (e.g. Niels Bohr’s quantum theory) and critical social theory (e.g. Michel Foucault and Judith Butler). Her work is particularly relevant as it allows me to tackle the challenges I experienced with classical methodologies. Thinking about transition towards sustainable urban spaces as a social and material reality (ontology) cannot be isolated from knowing it (epistemology) and ethically committing to more just and

²⁴ Critical constructivism can be considered as synonymous with ‘ethico-onto-epistemology’. I expect the latter term to be rather monstrous and intimidating, which is why I stick to the term critical constructivism.

democratic urban spaces (ethics). Critical constructivism is based on the following three assumptions:

1. *Reality cannot be represented but is constantly made and remade performatively*
Barad challenges positivist-realism that assumes that language and meaning are transparent, but also rejects a naïve interpretive-constructivism that centre-stages Language and Meaning as if signification and semantics can represent reality in its totality. Alternatively, Barad calls for a more performative approach to grasp society-science entanglements and engagements. A performative approach shifts “the focus from questions of correspondence between descriptions and reality (e.g., do they mirror nature or culture?) to matters of practices/doings/actions” (Barad, 2003: 802)²⁵. To understand transition politics and sustainable urbanisation from this point of view, suggests that various networks and actors constantly make, remake and unmake urban spaces: there is no outside perspective (any more). Simply observing and understanding already are forms of intervention. Theory and social reality are deeply entangled. Theories emerge through social practices and social reality is constantly made and remade through theories (economic models, political assumptions, cultural maps, etc.). Theories and concepts do not represent realities about the entire world, but are specific doings and makings of particular realities in time and space. This also means that my ‘position’ as a researcher consists of performative practices that are making, unmaking and remaking urban (and academic) realities (Rose, 1997). During my research work, this became evident in a variety of ways. Not only did I work at an institute (DRIFT) that explicitly aims to connect and develop theory with practice, I also noticed how certain theories and concepts informed the mentality and practices of actors I interviewed and engaged with (e.g. transition theory, economic growth paradigm, ecological science). Over and over again, I was confronted with how representations, theories and concepts shape reality.
2. *Reality consists of socio-material entanglements*
Reality cannot be clustered and divided into the objective and natural world versus

²⁵ As Barad explains, performativity is concerned with activity, process and doings: “Performativity’s lineage is generally traced to the British philosopher J. L. Austin’s interest in speech acts, particularly the relationship between saying and doing. Jacques Derrida is usually cited next as offering important poststructuralist amendments. Butler elaborates Derrida’s notion of performativity through Foucault’s understanding of the productive effects of regulatory power in theorizing the notion of identity performatively. Butler introduces her notion of gender performativity in *Gender Trouble*, where she proposes that we understand gender not as a thing or a set of free-floating attributes, not as an essence—but rather as a ‘doing’: ‘gender is itself a kind of becoming or activity . . . gender ought not to be conceived as a noun or a substantial thing or a static cultural marker, but rather as an incessant and repeated action of some sort’ (1990, 112)” (Barad, 2003: 808).

the subjective and cultural world. Rather, these realities are always entangled and intertwined. As Barad states: “surely it is the case – even when the focus is restricted to the materiality of ‘human’ bodies (and how can we stop there?) – that there are ‘natural’, not mere ‘social,’ forces that matter. Indeed, there is a host of material-discursive forces – including ones that get labelled ‘social,’ ‘cultural,’ ‘psychic,’ ‘economic,’ ‘natural,’ ‘physical,’ ‘biological,’ ‘geopolitical,’ and ‘geological’ – that may be important to particular (entangled) processes of materialization” (Barad, 2007: 66). This is particularly relevant for this study, as urbanisation is often considered to be a socio-material process of metabolism that transcends human organisations and activities (Kaika, 2005). Furthermore, this non-human-centric position resonates with sustainability transition research that addresses co-evolving complex systems, socio-ecological and socio-technical regimes and assemblages (e.g. Lawton & Murphy, 2012). In practice, I found socio-materiality to be quite evident, especially during my field work. For example, I noticed how people cultivated urban territories through construction and gardening practices. These actors were also shaped by non-human matter such as the climate, soil, excavated ports, seawater, produce, carbon, or cars (cf. Bennett, 2009). It did not make sense to me to simply downplay these materialities as ‘background’ or ‘irrelevant data’, rather such discursive-material networks enabled me to tell a more comprehensive story about the emergence of sustainable urban realities.

3. *Regimes of power-knowledge invoke scholarly ethics*

Methodological and academic debates are often strategically isolated from moral and ethical issues. However, ethics cannot simply be isolated and outsourced to society and politicians²⁶. Neutral descriptions and observations are not only impossible but also avoid power relations and politics. They downplay how exclusion and outside-making works through scientific practices. Science is part of society and its reproduction. Therefore, it is entangled with all kinds of political, economic and cultural regimes that privilege some and marginalise other forms of knowledge. Given the agential and performative nature of science making, I argue that we need to account for the types of differences we make. Scholarly ethics, from a critical constructivist viewpoint, suggests that proper science is also about experimentally and critically engaging with hegemonic regimes and creating alternative perspectives. In Barad’s words: “Ethics is about mattering, about

²⁶ As Barad argues: “Engaging science in a serious manner shows us why and how matters of science (including esoteric features of quantum physics, such as the uncertainty principle) are always already intra-actively entangled with questions of politics and power. Who and what gets excluded matters. Theories are not mere metaphysical pronouncements on the world from some presumed position of exteriority. Theories are living and breathing reconfigurings of the world” (Barad, 2011: 9).

taking account of the entangled materializations of which we are a part, including new configurations, new subjectivities, new possibilities – even the smallest cuts matter” (Barad, 2007: 384). Resonating with transition ontologies that reject totalities (regime/niche, structured/unstructured practices), ethical commitments emerge out of accounting for the unseen, unheard and unaccounted vis-à-vis (un)sustainable urbanisation and contemporary socio-economic transformations (e.g. nature, animals, the poor, minorities). For me, thinking and acting with an ethical mind-set was a crucial part of doing research. I tried to pursue an academic ethic by focussing on a set of topical concerns under the label of ‘sustainability’ in specific urban environments (social, economic and ecological). During my research, I experienced the institutional power of traditional scientific knowledge systems, but also entry points to tell new and different stories about how cities transform (Rose, 1997). At the level of theoretical reflection, collecting and analysing empirical materials, I also tried to critically reflect on unequal relations of power and what conditions might shape more just and democratic realities. Critical scholarship and academic activism (or ‘scientivism’) in this context, are not only justified labels and worthwhile endeavours, but should be included in standard scholarly repertoires.

Barad’s work in general, and the notion of critical constructivism in particular, helped me to make sense of my academic work at a methodological level. It allowed me to overcome many of the obstacles I could have encountered with a realist, a constructivist or a critical realist position. Following the experience and argument of Boswell and Corbett (2015), I felt that my research was not critical constructivist in ‘systemic’ terms, but rather in ‘impressionistic’ terms. That is to say, my methods and analytical tools refer to an *academic craft* that centre-stage complexity and contingency before methodological justification. Therefore, impressionistic academic work does not refer to ‘being vague’ and ‘imprecise’, but designates a revolutionary ethos against hegemonic grids and mentalities that produce and reproduce objectifying and ‘normal’ science (Boswell and Corbett, 2015: 218). Unfortunately, this type of academic work often remains disclosed, leading to some forms of knowledge production to take a back seat in the social sciences. I argue that the academic and public orientation of post-normal science (including action research) in transition scholarship can be epistemologically advanced by critical constructivism.

A spatio-conflictual ontology for urban transitions

I briefly want to unfold the ontological basis that informs the conceptual contours of my research. It is instructive to briefly discuss the concept of *urban assemblage*. An assemblage can be understood as a “constellation of singularities” (Tampio, 2009;

McFarlane, 2011). As Faris and Bender nicely argue (2010), an ontology of urban assemblages applies a more generic ontology of agential socio-technical networks to heterogeneous urban spaces and practices. Cities are not geographical things but specific socio-material processes imbued with uneven developmental directions and velocities (Prigogine & Stenger, 1984, 1997; Prigogine 1989; Whitehead, 2013)²⁷. In this sense, urban assemblages, complexity science, Science and Technology Studies (e.g. actor network theory) share a common image and understanding of how the social world and the material world are related through a variety of processes (Latham & McCormack, 2004; Farias and Bender, 2010; Farias, 2011; Swanton, 2010). This is where assemblage urbanism intersects with geographical and multi-scalar dynamics, as was recently explored in transition research with a socio-technical bend (Coenen, Benneworth & Truffer, 2012; Truffer & Coenen, 2012; Raven, Schot & Berkhout, 2012). Assemblage urbanism considers transitions as immanent shifts through particular relations and spaces. Cities are understood as contingent forms of ‘emergence’ at various levels, replacing the static image of the city with a more vitalist image of multi-directional space-flows that can be conservative and subversive (Jacobs, 2012: 415). The work of Farias and Bender (2010), for example, portrays the city as follows:

“The notion of urban assemblages in the plural form offers a powerful foundation to grasp the city anew, as an object which is relentlessly being assembled at concrete sites of urban practice or, to put it differently, as a multiplicity of processes of becoming, affixing sociotechnical networks, hybrid collectives and alternative topologies” (Farias and Bener, 2010: 2).

Understanding cities through urban assemblages, implies sensitising cities in terms of processes with networked and nested hierarchies as well as sites of resistance (Swyngedouw, 1996; Brenner, 2014). This, again, resonates with transition theory, now in more specific terms of regime-niche dynamics (see Chapter 3). It also highlights the political nature of key concepts in transition management such as emergence, co-evolution and self-organisation (Loorbach, 2007; Rotmans & Loorbach, 2010). Cities as sites of constant socio-material change imply that micro-ruptures and everyday dynamics produce emergent structures and singular realities. Blok notes that “[r]

²⁷ There is a resonance between this ontology of assemblage urbanism and theories on complex and socio-technical regimes and systems. Assemblage thinking is not a radically ‘new’ ontology here. It actually resonates with ontologies in transition research associated with ‘socio-technical regimes’, ‘actor-networks’, ‘seamless web’, ‘constellations’ or ‘configurations’ in socio-technical systems and complexity theory (cf. Geels, 2010; Rotmans & Loorbach, 2009). More specific work in transition research that intersects with urban assemblages is e.g. the governance of complex systems in urban contexts (Rotmans, 2006) and the politics of spatialised and geographically stretched technological systems and socio-technical regimes (pipelines, water systems, sewers, roads, etc.) (Lawhon & Murphy, 2011; Coenen & Truffer, 2012; Hodson and Marvin, 2009, 2012; Truffer & Coenen, 2012; Hansen & Coenen, 2013; Neves, Frantzeskaki, Gorissen & Loorbach, 2013; Quitzau, Jensen, Elle & Hoffman, 2013; Bulkeley, Broto & Edwards, 2014).

ather than focussing on the city as a resultant formation of structural determinations, assemblage urbanism highlights contested processes of *city-making*, articulated within variable temporalities and spatialities, and their emergent ethico-political possibilities”(ibid). To summarise - and following MacFarlane quite explicitly - an ontology of urban assemblages accentuates three things (MacFarlane, 2011: 667; Magnusson, 2014):

1. “Urban assemblages are more than their constitutive parts (contingent and emergent urbanities). Their depth and potentialities transcend notions of urban systems, spaces and networks;
2. Urban assemblages have no fixed spatial category or formation, but a complex of doings, performances and events;
3. Urban assemblages are structured hierarchically, relying on unequal relations of power, knowledge and legitimacy”.

This ontological position understands transition politics and urban sustainability in terms of the struggles and negotiations associated with governing urban spaces and lives of populations²⁸. As such, a particular understanding of the lives of ‘urban populations’ is privileged and enhanced at the expense of others. At the same time, there might be dissensus and conflict over ‘who owns the city’ (businesses, engineers, politicians, residents, building materials, animals, etc.). This is a radically different image of politics and urban transformations than politics as a consensus-seeking and deliberative activity among equal human beings and groups. It unequivocally moves away from a Laswellian understanding of politics as ‘*who gets what, when and how?*’ within frames of distributing nation-state arrangements. Radical dissensus and contingency is foregrounded in order to grasp the political. In urban settings, this means politicising not only a specific local issue, district or concern, but the entire make-up of ‘a city’.

²⁸ At a more conceptual level, we could reframe the MLP, for instance, by deconstructing landscapes, niches and regimes as separate analytical categories (see also Avelino, 2011). We can begin by internalising landscapes, as a nice spatial image, in the categories of regimes and niches. So, instead of externalising landscapes as ‘exogenous trends’ that shape socio-technical constellations from ‘the outside’, an ontology of urban assemblages and their contingent cartographies understand ‘the outside’ to be *immanent*. The spatial metaphor of ‘landscapes’ is quite useful. It enables us to further spatialise the non-spatial character of the concepts regimes and niches. Consequently, this reframes regime and niche dialectics into interacting and global heterogeneous ‘regime landscapes’ and ‘niche landscapes’.

2.3 Research design: The research process, transition analytics and remaining scientific

This study's main ambition is to theoretically and empirically understand the creation, normalisation and contestation of sustainable urban spaces. I focus on the ways in which specific discourses and practices around 'the sustainable city' emerged and sedimented over time, but are also became subject to conflict and contingency. Here, a more specific and technical research design follows, further advancing a critical constructivist position in transition research.

The research process: Surprises and focus

How did I actually start my research project? How did the research process unfold? This section briefly reconstructs the research steps and the research strategy. Originally, the main topic of this research was different, namely 'transition management' and 'public decision-making' with empirical cases in the domain of 'sustainable infrastructures'. However, due to unforeseen institutional circumstances, I was able to reframe the study according to my personal interests. I started reading many articles and books, became acquainted with some empirical aspects of sustainability transitions, and talked with many junior and senior scholars. Slowly, my approach of the problematic of *transition politics* (as supposed to transition management or governance) emerged as a theoretical and an empirical concern. The central topic of this dissertation, then, did not emerge out of 'the literature' or 'the field' by itself. Rather, after starting with my PhD project, I oscillated between reading 'academic literature' and engaging with 'the field'. Instead of a deductive or inductive approach, my experience has been one of 'abduction' (Schwartz-Shea & Yanow, 2011). An abductive approach lets theoretical debates and empirical experiences 'clash'. It accepts that the researcher is being 'abducted' by the puzzles, tensions, surprises and concerns that emerge during these clashes²⁹.

With my new focus on the politics of sustainability transitions, I engaged with more empirical encounters such as interviewing people and reading documents and websites. This led to a significant shift, or rather thematic focus, of the overall study. Instead of a general (and often rather abstract) focus on politics and legitimacy, I noticed that many struggles and negations had a *spatial* dimension. For example, the urban development plans for floating houses and offices had a clear geographical

²⁹ As Schwartz-Shea and Yanow argue, if we in all honesty answer the question: 'where does my dissertation topic and my research question come from?', we should not put on a show and tell the perfect research story about 'the literature review' and 'the empirical study' and 'the analysis' as if they are consecutive steps in a nice and neat research process. Rather, we should be transparent about the flexibility of the research flows and the unexpected ways in which our research was shaped.

dimension in terms of land, spatial planning and working spaces. In another empirical context, I encountered how bottom-up struggles for a ‘green city’ connected different sites and initiatives within one city and between different countries. This made me go back to the literature on the spatial and geographical dimension of transitions, but also made me reframe the case studies in more spatial terms. Consequently, the generic puzzle of transition politics was increasingly linked to urban spaces.

The ‘new’ theoretical study started with problematising the dominant conceptualisation of politics in sustainability transition research in relation to spaces and cities. After critically engaging with transition research, I found a number of challenges and hints that led me to some alternative theories and literatures. These academic works offered me additional vocabularies to differently understand transformative change of urban spaces in relation to (un)sustainability concerns. I then developed an alternative framework to conceptualise transition politics in relation to urban spaces. The empirical study started with the selection of two cases for empirical descriptions. I selected two cases that exemplified sustainability transitions in urban contexts, with one being embedded close to dominant regimes (state authority and big businesses) and one being relatively distant from these hegemonic arrangements (more bottom-up and grassroots). These empirical cases offered nice entry points to critically examine the emergence and establishment of sustainable urban spaces. Figure 2.1 shows the main research steps I took over the years according to different types of academic work.

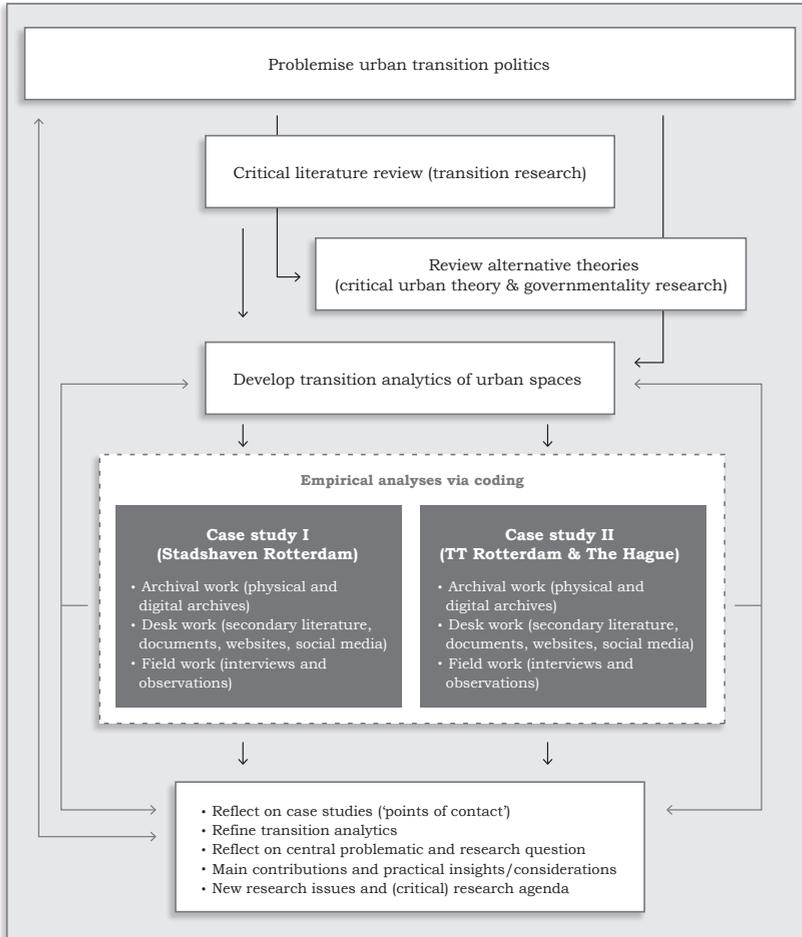
Figure 2.1 Research steps

	2010	2011	2012	2013	2014	2015 & 2016
RESEARCH STEPS						
Theoretical work	<i>Talking with peers/supervisors and reading on sustainability transitions and the problematic of legitimacy, power and politics</i>	<i>Crafting first conceptual framework on legitimacy and transition politics</i>	<i>Thematic reframing on spatial and urban dynamics associated with transition politics. Develop analytical framework reframed into transition analytics of urban spaces</i>			
Empirical work		<i>Selecting empirical contexts and doing field work (interviews, policy documents, websites, etc.). Collecting empirical materials for two case studies</i>				
Writing and desk work		<i>Writing literature reviews and conceptual ideas</i>	<i>Doing empirical analyses, coding supported by Atlas.TI (software). Writing empirical chapters and rewriting conceptual chapters. Rewrite/edit all chapters</i>			

My research was (now) based on problematising the (un)sustainability of urban spaces, both at a conceptual level and empirically. A critical constructivist approach argues that theoretical and empirical research was required. In the next sections, I elaborate on these issues, especially the empirical research.

For the theoretical study, I used a *diffractive method*. This method suggests that doing social scientific research mixes planning with unexpected surprises, direction with disorientation, linearity with non-linearity, and problematising 'the field' with problematising one's own assumptions. Significantly, the metaphor of diffraction is "marked by patterns of difference" (Barad, 2007: 71). In other words, bodies of knowledge, empirical evidence, archival references, tacit knowledge of the researcher, everyday scholarly (and non-scholarly) experiences all collided during the last few years. Focussing on the theoretical part, I followed three diffractive steps. First, I engaged with transition research and problematised how politics has (not) been understood in relation to urban spaces. I examined some conceptual challenges and academic hints and clues within the field of transition research. Second, I explored some marginal(ised) voices and insights within transition research. This made me review and explore research in the field of critical urban theory and governmentality. Third, I explored points of contact between these fields, construing a conceptual basis and analytical vocabulary to more adequately understand the politics of transformations towards sustainable urban spaces. The empirical study was informed by *case-study method* (Hesse-Biber and Leavy, 2010). Case studies are highly relevant to grasp the complex and dynamic nature of local contexts. This is especially relevant from a critical constructivist viewpoint, in which local contexts should be understood in relation to their broader historical, social and cultural settings (Merton, 1987; Haraway, 1988). The empirical cases were analysed on the basis of the (diffracted) analytical framework. This allowed me to systematically analyse the empirical cases. On the basis of the empirical analyses, I then revised and refined the analytical framework. Figure 2.2 visualises the entire research process (arrow signifies: 'leads to').

Figure 2.2 Research process



A strategy for critical analysis: A transition analytics

Taking a critical constructivist perspective, it did not make sense to produce a theory devoid of dynamic social practices and relations of power. Therefore, and in order to create a strategic sense-making heuristic to better understand empirical settings, I developed a *transition analytics*³⁰. I use the terms analytics to refer to an analytical strategy that makes me accountable for my critical examinations without suggesting God’s point of view. As Andersen argues, there is a difference between a conceptual or analytical ‘framework’ and an analytical ‘strategy’ (Andersen, 2003). A framework refers to a representational frame of reference that does not impact or effect reality

³⁰ I would like to thank prof. dr. Schinkel for highlighting the usefulness of the notion ‘analytics’.

(perspective, model, approach, etc.), whereas strategy accepts the discursive nature and performative agency of theories, ideas and analysis. As such, the term analytical strategy resonates with a critical constructivist position. My analytics is called a *transition analytics of urban spaces* and permits me to critically analyse the creation, normalisation and contestation of specific urban spaces, in my case 'sustainable spaces'. Put simply, I developed a strategy to pursue critical transition analysis³¹. Chapter 4 presents this analytics.

My analytics combines what traditionally is carved up and differentiated as 'description', 'explanation' and 'critique'. Often, it is argued, scholars have to choose what type of research they conduct and what objectives they have. However, for me, an analytics combines these objectives. Glynos and Howarth call this mixing of objectives, describing, explaining and criticising, a 'logic of critical explanation' (Glynos and Howarth, 2007: 152). For this dissertation, this would mean that my analytics describes, explains and criticises the rise³² of sustainable urban spaces. This differentiation is still rather static, as it suggests a positivist isolation of descriptions, explanations and critique as different practices. I think these efforts are so entangled that it does more harm than good to still use the terms separately. I noticed that to simply describe a system as 'unsustainable' or in 'crisis', is already to assume certain underlying and historical dynamics that led to a crisis, also suggesting that certain positions of thought and action become (in)visible. This 'tacit knowledge' holds for virtually all types of descriptions. In traditional terms, my analytics aimed to describe, explain and criticise the transition towards sustainable urbanisms (see also Chapter 4).

My understanding of 'critical' or 'critique' here is informed by Glynos and Howarth who state that critique should be understood more in terms of Derrida's deconstruction than a Marxist critique or moral judgements (Hanssen, 200; Glynos and Howarth, 2007). I understand critique in terms of troubling and challenging the unquestioned in order to open up pathways for alternative experiences and realities. Critique is practiced in two forms in this study: epistemologically and ethically. Epistemological critique refers to creatively challenging systems of knowledge and sets of assumptions. In line with Derrida's deconstructive method, epistemological critique starts when two or more positions are confronted with one another and that which emerges is followed³³. This allowed me to confront different literatures, empirical data and cases

³¹ I believe that transition research is in dire need of critical frames and analytical tools in order to address issues of antagonisms, politics and unequal space-making (see Chapter 3).

³² In this context, 'rise' also refers to 'emergence' and 'normalisation', as well as the 'contestations' that co-develop with sustainable urban space-making.

³³ According to Barad "[e]ach discipline has its own vocabularies, methods, standards, ways of making and responding to arguments, evidence, and so on. That is why I proposed a diffractive methodology (...) I had to find a methodology appropriate to the task, one which would be respectful of different disciplinary approaches and the differences between them, and sufficiently rigorous to provide new insights recognizable by scholars in the various disciplines with which I engage" (Barad, 2011: 4). In this study,

with each other in order to critically challenge what we know and to sensitise ‘the new’ and ‘the novel’. Epistemological critique made it possible to challenge and reframe transition approaches, critical urban theory and governmentality. This avoids simple reproductions of existing descriptions and explanations of how cities change and social life is ‘being sustained’ and becomes ‘sustainable’. Next to epistemological critique, I practice(d) ethical critique. Ethical critique refers to the critical engagement of a researcher as (s)he highlights the radical contingency of a specific hegemonic regime and practice. Slightly adapting Glynos and Howarth account of critique here (Glynos & Howarth, 2007: 191-199), I used ethical critique as a means to visualise the invisible, to make audible the unheard and to foreground the downplayed. This resulted in being attentive to ‘all the voices’, and especially voices, respondents, theoretical positions and ideas that have been downplayed (historically). Obviously, not all voices can be heard and accounted for in a research project like this. Nevertheless, I try to include the voices that somehow did not have an equal voice in urban systems and hegemonies (e.g. local residents, citizen initiatives or politicians). This methodological sensibility can be related to a critical democratic-pluralist approach in which unequal relations of power are challenged and accounted for (Kincheloe & McLaren, 2002). In a way, my research strategy resonates (at least to some extent) with Feyerabend’s epistemological anarchism, which is linked to a socio-political horizon of decentralised forms of knowledge production (Feyerabend, 1975). Importantly, the social and normative ambitions of transitions towards a sustainable world seem to suggest this, but often lack a clear ethical methodology. A variety of new contributions in humanities and critical social sciences enables us to advance critique in relation to just and ethical transformations (cf. Feyerabend, 1975, Haraway, 1988; Barad, 2007; Boltanski, 2011).

Scientific qualities: Being accountable as a critical constructivism

Being accountable is crucial in academia. As a critical social scientist, I want to be accountable as well. However, questions that are often neglected or addressed without further critique are: Accountable to whom? And accountable for what reason? As Barad would argue (2007), notions of representation, accountability and trustworthiness are as much academic virtues as they are political categories. If scientists are evaluated, whose criteria should be privileged? Who makes up the jury in the ‘academic trial by jury’? As should be clear by now, my research on transition politics and sustainable

some ‘waves’ were literatures (transition research, urban governmentality, STS literature, philosophy of science literature, eco-urbanism, etc.), other waves were historical references (historical cases), again other waves were contemporary data (policy texts, interview settings) and still other waves were everyday encounters and experiences (with fellow scholars, chatting during conference dinners, watching television, thinking while driving a car, etc.).

urban spaces was not informed by positivist criteria such as validity, reliability, objectivity and replicability. Such criteria do not make sense to me as objectivity and replicability are simply impossible and unethical for a critical constructivist. Alternatively, I employed a number of interpretive methods and sometimes adapted them for a more critical constructivist position (Schwartz-Shea & Yanow, 2011). These scientific criteria or qualities are: academic schizophrenia, thick description, member check, critical triangulation, source criticism and critical reflection³⁴.

Academic schizophrenia

An important principle was looking into different theoretical directions, talking with different epistemic communities and pragmatically keeping an eye open for new traits (theoretical and empirical). This is a kind of 'schizophrenic' attitude through which a researcher creatively pivots between multiple disciplines and roles. In my inquiries, I found that this attitude was an important quality to understand different worlds, explore their points of contact and experiment with new insights. It resonates with inter-disciplinarily, multi-disciplinary and trans-disciplinary in the fields of sustainability science and transition research (Avelino, 2011). A schizophrenic attitude can actually create some 'academic trouble'. I believe it is an important scientific quality for critical constructivists to problematise dominant bodies of knowledge and social experiences, while staying with this trouble and trying to improve and overcome existing concerns. For me, this meant challenging certain assumptions in the field of transition research and discourses regarding political realities and urban morphologies. I utilised existing scientific diversity in the field of 'transition research' and the practice-oriented focus of the academic institution in which I worked (DRIFT), in order to follow some hints. DRIFT is a research institute that combines theoretical academic work with practice-oriented project work. As such, it is sometimes considered as the 'odd one out' at the university, which (for that exact reason!) makes it a very interesting and inspiring place. The clues I explored led me to the academic disciplines of critical urban research and (urban) governmentality. Academic schizophrenia allowed me to accept the fundamentally fragmentary nature of doing theoretical and empirical work. It permitted me to safeguard openness for oneself and others without pursuing conceptual or thematic 'closure' or 'synthesis'. I looked into different directions at the same time, which was of critical importance in each and every chapter. This principle of simultaneously looking into different directions was especially relevant for explaining and criticising the rise of sustainable urban spaces.

³⁴ In Chapter 8, I elaborate on how transition research might pursue a critical research agenda.

Thick description

If one engages in critically describing a phenomenon, its context is perhaps even more important. The interpretive method that highlights how 'context' should be centrestaged, is called 'thick description'. Geertz's ethnographic work (1973) was crucial for the development of this method. For example, using a knife can have many different meanings (e.g. economic value, lethal weapon, cooking instrument, etc.). All these meanings are situated and local. Therefore, describing the use of a knife without its context is ('thin' description) is a way of stripping the phenomenon of its local entanglements and its situated meaning. In this study, the empirical materials and cases are reconstructed on the basis of thick description. That is to say, whenever I interviewed a person, I positioned him/her in relation to the interview location, the biography of the person, the specific backgrounds of certain comments and answers, etc. Similarly, certain words or sentences in policy documents, websites or archives, or observations are not described without their context (e.g. social, physical, cultural, economic, political). Obviously, it did not make sense to endlessly describe all phenomena. I focussed on certain issues, themes and problems. With regard to the logic of critical explanation, thick description was important in order to systemically describe and explain the rise of sustainable urban spaces.

Member check

Key methods I used to construct empirical materials were interviews and field observations. In order to prevent 'misrepresenting' interviews and observations, qualitative data should be checked by the members from whom empirical materials were derived (Sandelowski, 1993; Morse, 1994; Angen, 2000). This member checking safeguards the quality of empirical re-presentations made by me. Even though empirical reconstructions and interpretations are mine, member checking allows for a way to let members (of interviews and field work) assess the extent to which they recognise their role and experience in academic representations. This is especially relevant as data are not merely data. Different actors can disagree on what actually happens during a field experience. I did not check all mental notes, scribbles and recordings with all members, but only the descriptions that were articulated in the two empirical chapters (5 and 6). I let all respondents and most actors that were involved in my field work respond on the relevant empirical sections. This allowed for a member check in context. My empirical reconstructions depend on many sources (see critical triangulation), which makes it significant to understand how relevant 'members' considered their role and experience in a broader empirical context. In some cases, there were differences in perspective on the data and the empirical reconstruction, but it did not lead to significant changes. Member check was valuable to describe and explain the rise of sustainable urban spaces.

Critical triangulation

In relation to thick description, critical triangulation was also crucial. Triangulation is a well-known principle by which different methods and empirical sources are taken into account to more accurately describe and understand a specific phenomenon (Olsen, 2004). However, very often this leads to a quest for ‘confirming’ or ‘checking’ whether different positions point towards the same direction, creating an alleged ‘complete’ and more ‘objective’ image. From a critical constructivist viewpoint, this is disputable. Different methods, sources and positions have different backgrounds and interact in a certain way, not leading to a more ‘complete’ understanding, but rather to a new understanding (Blaikie, 1991). Triangulation might lead one to follow different methodological and empirical sources and come to different conclusions. During my research, different sources did not lead to a more ‘trustworthy’ account. Sometimes various methods and empirical sources led to contrasting positions and totally new empirical issues. Therefore, a more critical approach is appropriate. Critical triangulation shares with ‘normal triangulation’ the idea that different positions should be taken into account (e.g. different respondents, documents, etc.). However, it differs from regular triangulation in that ‘gluing together’ differing sources should be understood as strategic. By integrating and stitching together different sources and positions, new forms of knowing are actively produced by the researcher. This principle of negotiating heterogeneous sources and methods was relevant for describing, explaining and criticising the rise of sustainable urban spaces.

Source criticism

I used a wide variety of empirical materials, however, I did not take the sources at face value. Such a sceptical attitude towards ‘sources’ is called source criticism. Source criticism is a methodological tactic often used in historical research. It asks a number of critical questions about a particular data source (cf. Bailin & Grafstein, 2010). To increase the scientific quality of this study, I used source criticism not only for archival records and historical data, but also for contemporary data sources (respondents, policy documents, websites, etc.). Importantly, source criticism should not only be a concern for empirical data, but also for theoretical accounts. Therefore, I used source criticism as a method in the empirical and theoretical work. Some of the questions I asked were:

- In what context is or was the document, statement, etc. produced (historical, social, economic, political)?
- For who is or was a document, statement, etc. produced? What purpose did it have?
- What power relations shaped a document, statement, etc.?

It would be very demanding to criticise all sources systematically in this way. Therefore, I used these questions pragmatically, to approach empirical materials without accepting them as isolated phenomena. Often, I was able to sensitise the power relations and historical contexts deeply associated with documents, respondents, archives, statistics, ethnographic sites, etc. Since critique and ethics are part of my critical explanation approach, source criticism was tied to describing, explaining and criticising the rise of sustainable urban spaces.

Critical reflexivity

A key quality of interpretive researchers is reflexivity. As interpretive research is about interpreting practices, symbols and local forms of knowing, a researcher should be held accountable for his/her own interpretations. Additionally, certain observations can be the result of the researcher's history, presence or involvement (e.g. gender, race, class, etc.) (Schwartz-Shea & Yanow, 2011: 162-163). To be reflexive about one's role in empirical contexts (or theoretical debates for that matter), is to be honest and open about one's involvements and experiences. This also makes a researcher vulnerable to critique. I see this as an asset. From a critical constructivist position, I would add that reflection can be critical but also uncritical. I could have reflected on the type of knowledge I produced and my own position *without* any form of critique. Critical reflection adds epistemological and ethical critique to how the 'I' was involved in writing, interviewing, observing, participating, reading, etc. In my empirical work in particular, I found reflexivity a highly useful method. Being reflexive about one's role and active involvement is not 'a problem', rather, it is part of doing decent empirical work (especially from a critical constructivist viewpoint). The openness and the constant breaking of 'the fourth wall' (the symbolic boundary between the writing scholars and the readers, see Interlude 0) enabled me to demystify my own agency in empirical contexts. This is particularly relevant to produce interesting knowledge as a scholar. As such, writing should be clear and frank, without self-censorship and conforming to hegemonic academic rituals. This type of subversive communication is informed by Foucault's notion of *parhassia* (Foucault, 2006). Interestingly, frank writing and critical scholarship are not new in transition research, but seem to circulate only in some works (implicitly) (e.g. Avelino, 2011). I argue that this critical reflection is an important criterion for critical scholarship, engaging in theoretical and practical knowledge concerning struggles vis-à-vis sustainable urban spaces. This issue is concerned with the quality of life of human and non-human populations, especially more marginalised and vulnerable ones. While reading, interviewing and conceptualising, I noticed that telling 'the truth' as a PhD candidate meant being both methodologically sound and reflexive, while being critical and frank about one's findings and perspectives. I tried to account for my scholarly ethics by translating

my critical constructivist take wherever possible and fruitful. Regarding the logic of critical explanation, this quality resonates with describing, explaining and especially criticising the rise of sustainable urban spaces.

I expect that some scholars find some of these additions irrelevant and problematic as social scientific qualities. For me, critique against these criteria is very welcome because it proves that there are clear differences between different types of criteria (positivist, interpretive and critical constructivist). This opens up methodological debates that cannot be isolated from actual substantive conceptual debates and empirical findings. To me, doing social scientific work meant working at an academic institution in the midst of society in the wake of many social, economic and environmental debates and concerns. A critical constructivist does not safeguard the alleged difference between science and society, but re-cultivates everyday linkages between science and society.

2.4 Collecting and reconstructing empirical materials

We can now move to the methods I used for the empirical studies. How did I account for different everyday experiences and empirical data? And how did I relate local and contingent knowledge to more universal and generalisable insights?

Understanding cases as spatio-historical contexts

The English poet William Blake once said: “[t]o generalize is to be an idiot. To particularize is the lone distinction of merit. General knowledges are those that idiots possess”. In less polemic but still unequivocal terms, Lincoln and Guba (1985) state that “the only generalisation is: there is no generalisation”. Hesse-Biber and Dunleavy provide a more academically acceptable definition of a case study approach (2011: 256):

“a case study approach provides the researcher with a holistic understanding of a problem, issue, or phenomenon...because the case is investigated from many different angles and pays attention to many different dimensions of the issue, case study is typically able to avoid the kind of essentialist and context-free analysis...allow[ing] for a highly complex and nuanced understanding of the subject of inquiry”.

In line with this insight, I reject crude generalisations and large-N studies, which are often used in positivist methods such as experiments and surveys. To me, empirical descriptions cannot be isolated from a broader logic of critical explanation. As such, a case simply does not and cannot exemplify a larger population. In other words, knowledge about the world should be explored, constructed and analysed

in their particular contexts. Importantly, a case is also not merely a local singular context isolated from the rest of the world or the 'non-case'. As Glynos and Howarth remind us, it does not make sense to simply oppose case studies in terms of law-like generalisations versus contextualism. Resonating with their logic of critical explanation, they argue that:

“For us (...) the selection and investigation of in-depth cases is a vital part of our overall logic of critical explanation. This is because case studies provide an important vehicle for critically explaining problematized phenomena by providing the contextually specific knowledge within which to link our more general logics together in a particular instance” (Glynos & Howarth, 2007: 204).

As such, a case study is a *strategic* way of doing empirically informed research. It is not bound to either the positivist or interpretive tradition. For me, the objective of employing case studies was to empirically describe the creation, normalisation and contestation of sustainable urban spaces, as part of a broader inquiry that also seeks to explain and criticise. I approached cases as local spatio-historical contexts within broader spatio-historical developments in which they are embedded. Cases are particular empirical contexts (either historically, socially, culturally, spatially, etc.) that might be subsumed under a broader label, but *never* without losing their particularities.

Following Thomas (2011), there are two dimensions to a case: its subject and its object. The *subject of a case* refers to the case as a 'practical and historical unity'. The subject of a case lacks specific and explicit conceptual references or confinements. The second dimension is the *object of a case* and refers to an analytical or theoretical frame through which the case is interpreted. The object of a case always has a specific conceptual focus and is embedded in a logic of inquiry ("it is a case of"). The subject and object of a case are not totally separated, but dialectically related. One needs to engage with the case subject to be able to 'objectify' and analytically reflect on the rich case.

Figure 2.3 Sneak preview of the empirical cases

Selecting the cases

So, what cases did I select? Why these cases? Why did I select 'only' two cases? And how did I compare them? First of all, case 'selection' suggests a rational choice based on sound scientific criteria. For this research there were indeed a number of *a priori* scientific criteria, but also a number of more pragmatic and unforeseen criteria. Not all criteria were nicely formulated prior to the actual case selection. In fact, a significant part of the case selection was shaped during the initial phase of the empirical work while I was exploring, reading, talking and interviewing. As such, cases have been selected abductively.

Scientific and *a priori* criteria

Substantive presence. The empirical study focusses on the struggles and negotiations related to transitions towards sustainable urban spaces. Empirical cases, therefore, should contain at least four aspects:

1. A discourse of transformative ambitions (explicit reference to 'transition');
2. Sustainability-led discourse addressing environmental and socio-economic issues (explicit reference to 'sustainability');
3. Situated in urban spaces and settings; and
4. Significant degree of problematisations, struggles and/or dissensus.

Empirical variety. In order to prevent crude generalisations and oversimplifications, I selected different types of empirical settings (Flyvbjerg, 2006). The politics associated with urban sustainability does not play out in the same way everywhere. Rather, it expresses itself in all kinds of forms, as there are thousands of cities in the world and urban sustainability discourses are mushrooming. Empirical variety can be accounted for in a number of ways. I combined two case selection strategies: a *least likely approach* and a *paradigmatic approach*. Least likely cases seek to safeguard maximum empirical variety (ibid: 230-231). Such a strategy aims at (re)constructing radically different empirical contexts in order to account for local variations and diverging practices and processes. I initially selected ‘three cases’ for the empirical study to make sure I captured ample empirical variety (close/intermediate/remote). However, the contrasts and differences became less clear, which undercut the maximum variety. Therefore, I dropped one of the cases (intermediate). Furthermore, the two more diverse cases showed some overlap (as ‘intermediate’ elements). The second case, (Transition Towns, TT) started with a quite local initiative in Rotterdam. In order to safeguard sufficient empirical variety ‘within’ this case, I also approached TT The Hague. These two TT initiatives together (TT Rotterdam and TT The Hague) formed a more geographically decentred (and typical) TT context.

Paradigmatic logic. Additionally, my focus on the politics associated with urban sustainability transitions transcends contextualisms. In that, a broader dynamic is at work in my study, namely that of historical shifts towards sustainable urbanisation and the politics thereof. To account for this broader trans-local logic, a paradigmatic strategy was used. Paradigmatic cases are cases that highlight local specificities, but indicate a wider ‘paradigm’ (e.g. neoliberal urbanisation). In my cases, one could say that this paradigm refers to a paradigm of politics and governance of urban (un)sustainability. Combining a least likely and paradigmatic approach allowed me to sensitise local empirical varieties in relation to their broader paradigmatic logics.

Pragmatic and emergent criteria

Selecting-by-doing. Next to quite classical selection criteria, there were some pragmatic reasons that made me select these two cases. The Stadshavens case initially seemed to be a rather technical case of urban and port development. As I was interested in the political features of urban transitions, I was not that interested in this case. However, I got more enthusiastic as I learned about the spatial development plans, especially about contested plans and initiatives to build ‘on water’ and transform the ‘old city ports’. This made me turn to a specific empirical setting of Stadshavens: the ‘Floating Communities Strategy’. For the second case, I contacted people of Rotterdam’s Transition Town and visited one of the initiatives (a community garden). This geographical proximity (Rotterdam) turned out to be a very fruitful empirical setting

because of the partly overlapping (but singular) characteristics with the Stadshavens case. During my field work, I soon noticed that the TT movement in Rotterdam was fragmented, which led me to also contact and participate in the TT network in the city of The Hague. This already shows how the two cases differ in terms of their organisational structure.

Time-efficiency. Initially, I had plans to engage in a more international context of cases, possibly doing comparative case studies (perhaps even European and non-European). However, since I had limited resources and time, I still engaged in empirical variety but within the western region of the Netherlands. Selecting 'Dutch cases' seemed sensible, as sustainability transition discourses emerged in Western Europe, in particular in the Netherlands. I learned that both cases are not 'local' at all, indeed, no case is local. Instead, they are connected to all kinds of plans, places and discourses that stretch well beyond their 'local boundaries'. Conceptually, the notion of assemblage urbanism was particularly instructive in grasping this trans-local dynamism of the cases.

Figure 2.4 Summary basic case differentiation

Empirical case	Case subject	Case object	Similarities	Differences
Stadshavens, Floating Communities Strategy – Rotterdam	Sustainable waterfront regeneration	Paradigmatic logic of transition analytics of urban spaces	Sustainability transition in urban setting	Dominant form of urbanisation and urban space-making
Transition Towns Nederland – Rotterdam and Den Haag	Socio-ecological movement			Alternative form of urbanisation and urban space-making

Collecting empirical materials

Each empirical case 'consists' of empirical materials and both cases have been reconstructed on the basis these materials. Importantly, I did not just 'collect' data that was up for grabs, passively waiting to become useful. As Schwartz-Shea & Yanow (2011) suggest, empirical data is construed by the researcher in particular ways, depending on specific methods. My cases were also not already 'out there'. All I encountered were people, documents, websites, archives, news letters, buildings, rainy Sundays, computers, etc., but not cases. The empirical materials and cases had to be crafted in such a way as to make them palpable for interesting and feasible empirical analyses and conceptual reflections. The empirical materials have been constructed on the basis of three types of work: archival work, desk work and field work. Each type of empirical reconstructive work is associated with a number of specific empirical materials.

Virtually all data sources have been approached abductively. As mentioned earlier, abduction is a method through which a researcher follows the questions, puzzles

and problems he/she finds. Following particular themes and issues (informed by problematisation and more conceptual work), I tried to preselect as little as possible. However, the abundance of data and experiences pushed me to filter out some documents, respondents, archives and meetings. Consequently, empirical materials were selected through a mix of induction and deduction.

1. Archival work

Archival work refers to empirical work primarily concerned with the histories of the cases. This was mainly relevant for the historical contextualisation and genealogy, but sometimes also for contemporary aspects.

Physical archival records

In the last decades, more and more archives have digitalised. Consequently, many (but not all) interesting and relevant archival records could be found on the Internet (see below). Importantly, most parts of The Hague's city archives have been digitalised. This is not (yet) the case for Rotterdam's city archive. For the Stadshavens case and the Transition Town case Rotterdam, I visited the official city archive of Rotterdam (*Rotterdamse Stadsarchieff*)³⁵. My visits to this archive took place between December 2014 and March 2015. Regarding the Stadshavens case, I searched for and found many interesting documents about the development of Rotterdam's port and development plans around the city ports. Some exploratory search terms I used (that gave me interesting results) were: 'Stadshavens', 'sustainability', 'transition', 'environment', 'economy', 'climate change', 'housing', 'hygiene', 'urban planning and development'. Some search terms led nowhere. As is often the case with archival work, searching for certain documents and themes requires patience and reframing of contemporary terms and labels. The term sustainability (in Dutch: *duurzaamheid*), for example, rarely emerged before 1900. A number of other themes, however, could be explored such as "hygiene", "living conditions" and "working conditions" or "public health"³⁶. I found primary documents such as policy plans, maps, personal archives and notes from meetings. Regarding the Transition Town case Rotterdam, a number of records in both archives caught my interest regarding the emergence of 'environmental policy', 'urban gardens' and all kinds of environmental and ecological issues. Again, I searched for different words, labels and themes than contemporary notions such as 'peak oil' and 'climate change'. This archive enabled me to historically map the more 'official narratives' regarding both case histories. In most instances, I was able to find and select primary documents, such as policy documents and maps. Interestingly, a

³⁵ The city archive of Rotterdam also harbours archives of the Port Authority (*Havenbedrijf Rotterdam*).

³⁶ This is how I experienced the specifics of genealogical work, i.e. the emergence, fusing and transformations of historical themes, labels and debates.

number of records were classified, and could not be consulted, which means that I did not have access to all physical archives³⁷. I made copies of archival records with my smartphone and noted some comments in my notebook (whenever relevant).

Digital archival records

Luckily, a great number of historical records were accessible via Internet. The most important digital archives were accessed via the digital archives of The Hague and Rotterdam (*Haagse Gemeente Archief* and *Rotterdams Stadsarchief*³⁸). Next to huge archives to access 'old' official policies and political debates, I found a vast number of maps, drawings, photos and videos (on websites of port authority, visual archives, etc.). Most of the time, I used the same search terms for digital archives as I did for physical archives. Official policy documents, city plans and political debates (council meetings) have been especially fruitful for the historical reconstruction of the Transition Town The Hague setting. For the Stadshavens case, there were more audio-visual materials available (maps, photos, drawings, videos) than for the Transition Towns case. This might be explained by the less official and formal histories associated with Transition Towns case. In both cases, digital archives disclosed thousands of images, photos and texts that allowed me to reconstruct official and more unofficial histories. This provided me with a more critical and democratic type of historical inquiry, which is important for a genealogical method (Owen, 1995; Koopman, 2013).

2. Desk work

Desk work refers to all the empirical work I was able to conduct from 'my desk' (quite literally). Most of the time this was done while identifying and mapping empirical materials, but without physically going into 'the field'. Desk work was relevant for historical contextualisation and genealogy, but mostly for the reconstruction of contemporary aspects of both cases.

Secondary literature

For both cases, I did not only focus on 'primary data', but I looked into academic books, articles and background literature *about* the empirical cases. These texts, often accompanied by images, maps and drawings, offered me a specific framing of the cases as understood by historians or social scientists. Nevertheless, I gained a rich image by consulting dozens of books and articles about the history and recent situation around Rotterdam's waterfront and ecological governance and politics in Rotterdam and The Hague. Although, most of the secondary literature seemed to

³⁷ Most of these documents will be public in the future (sometimes even in the 2050s).

³⁸ See: <http://www.denhaag.nl/home/bewoners/kunst-en-cultuur/haags-gemeentearchief.html>; <http://www.stadsarchief.rotterdam.nl/>; <http://rjb.x-cago.com/index.html>.

touch upon ‘my’ empirical cases only briefly, they still offered a broad and historical picture. I was able to read explicit plans for industrial urbanisation in the 19th century, policy plans to restructure Rotterdam’s waterfront in the 1980s, and proposals to reduce carbon emissions in the city centre. I also read about more ‘contextual’ policy plans and political debates, such as national economic and cultural developments. A genealogical method supported me in deconstructing pre-given themes and problems such as ‘climate change’, ‘energy policy’ or ‘spatial development’. This created the conditions to tease out alternative histories. In this way, I could grasp how historical shifts in urban governance (as ‘normal history’) were related to counter-narratives and forgotten stories. For the secondary literature, I used Dutch and English texts, accessed via the University Library of the Erasmus University Rotterdam and other digital academic search engines (Google scholar, Scopus, etc.).

Documents

One of the most important primary data sources during my desk work were documents: policy documents, legal documents, meeting minutes, strategic reports, mission statements, etc. In total, I collected well over 500 of such documents (for both cases). Many documents had a more or less formal status, especially in the Stadshavens case. I found numerous documents and publications via the websites of organisations and groups (e.g. Port Authorities, City plans, Stadshavens Programme, Transition Town organisations). Most of these documents covered a period from the 1990s up until the present (i.e. 2015). They provided me with a plethora of empirical material regarding the emergence and background of my cases, the main themes and sustainability objectives of the people engaging in transforming the city, their methods and projects, but also their contacts and networks. As such, these documents provided detailed information about the more formal and official parts for the case histories and reconstructions.

Websites and social media

During my desk work, I found many interesting and relevant documents online. A number of websites and social media were of particular interest to me. Not only the expected official website texts of the Stasdhavens projects, official municipal websites (Rotterdam and The Hague), Transition Towns websites, but also a range of photos, Facebook pages, YouTube channels and other digital materials. Sometimes, I just ‘clicked along’ and came across interesting interconnected websites and YouTube references. Other times, e.g. during an interview, I was urged to “definitely look that up on the web”. Most of the people I met and interviewed were related to networks or organisations with ‘their own’ or affiliated websites, YouTube channel, Facebook account and newsletters. In this way, I did not only gain direct access to their ‘digital

identities', I was also able to map their broader digital and social environments. Using digital technologies as a means to collect and reconstruct empirical materials is called digital ethnography (Murthy, 2008). An important insight here is that digital realities do not 'represent' but rather 'extend' empirical settings and social life (Dicks, Mason, Coffey & Atkinson, 2005). Therefore, website texts, images, videos and social media have been particularly relevant in identifying and reconstructing empirical settings.

3. Field work

Field work refers to all the empirical work I physically did 'in the field'. It should be clear that the distinction between archival work and desk work is rather diffuse. The same holds for the distinction between desk work and field work. I understand field work in the sense of 'ethnographic work', namely as the detailed mapping of very specific practices and realities. Field work was sometimes relevant for historical contextualisation and genealogy, but mostly for the reconstruction of contemporary aspects of the cases.

Interviews

One of the most important aspects of my field work was the interview. This well-known ethnographic method starts with the idea that people are nodal points of history, experiences, ideas and social relations. People are not passive objects, they are 'living sources'. The nice thing about interviews is that people 'talk back' so that a researcher and a respondent can have 'a conversation'. Therefore, all interviews should be understood as a practice of co-constructing empirical material. My presence as a human being and role as a researcher cannot be isolated from the 'answers' of the respondents³⁹. I approached interviews not in terms of 'respondents' that provided me with 'data'. Rather, I approached a number of people in and around the organisations and networks I focussed on. While having an interview/conversation, they (or should I say 'we') could illuminate certain puzzles and issues I found while reading websites and documents. In most cases, I approached key figures and organisations (directors, coordinators, managers, etc.) and a variety of actors and positions (engineers, consultants, residents, politicians, policy makers, teachers, etc.). For further selection, respondents were chosen by 'snowball-sampling'. This sampling method refers to a dynamic selection of respondents suggested by other respondents (some of whose ideas, voices and practices were marginalised vis-à-vis the dominant discourse). In total, I interviewed over 75 people (over 30 for Stadshavens case and over 40 for the Transition Towns case)⁴⁰. Most of them had a duration of well over one

³⁹ In the empirical chapters, this is elaborated whenever relevant.

⁴⁰ See Bibliography for the list of respondents/interviews.

hour. All interviews were semi-structured, shaped by a number of guiding questions. First, I asked all people about their biography (e.g. place of birth, education). Then, I continued with more thematic questions about specific case-related (un)sustainability problems, and their own ideas and experiences regarding (un)sustainability in their (professional) work and/or daily lives. Most interviews for the Stadshavens case took place in official working places (Port of Rotterdam, Town Hall, etc.) or a café. For the Transition Towns case, most interviews took place in bars, dining places, homes, or other ‘unofficial places’. All interviews were recorded with a voice recorder for reconstruction, with approval of respondents and with a guarantee of personal anonymity. The interview audio files served as ‘input’ for the empirical analyses and coding⁴¹. Next to the loosely structured interviews, I talked to dozens of people about one specific issue, theme or experience (‘mini interviews’ waiting for a tram together, sitting together in a car). Often, their contribution and ideas were noted in my ‘field note book’, for my study. Sometimes these conversations were just enriching experiences for me...as a human being⁴².

Field observations

An important aspect that gave me a different type of rich empirical context was physical ethnographic work (cq. field observations). I did not only approach people for interviews, but also to get a better sense of their material lives, experiences and positions vis-à-vis a number of urban sustainability related problems and themes. Observational field work is crucial to understand the specifics of local meanings, lived experiences, physical localities, material artefacts and everyday practices (Cook & Crang, 1995; Walcott, 1999). I was interested in broad historical shifts associated with urban sustainability, as well as their everyday material settings. Therefore, ethnographic work was crucial. For the Transition Towns case, I was able to participate and enmesh myself ‘in the field’ for a number of months. My observations were ‘semi-structured’, staying open for the new and unknown, but shaped by prior analytical interests (Mulhal, 2003). I was honest about my position and objectives as a social scientist and tried to participate and ‘hang out’ as an insider, not as an outsider. My experience is that I was often quite successful. I gained access quite smoothly (also because I worked at DRIFT and engaged in an involved type of scholarship). I was

⁴¹ I did not transcribe the interviews, because this would mean a shift in medium (from audio to text). I was able to maintain as much of the interviews as possible by directly using the audio files for coding and analysis (aided by QDA, Atlas.ti). This turned out to be a great experience as well as a time-saver!

⁴² I did not write down all conversations, nor the ideas and experiences of people I spoke to. An important part of field work is to let all ‘traces and hints’ guide the work, not transcribing and registering everything for the sake of ‘doing field work’. From a critical constructivist perspective, I find it even offensive as a researcher (and also for my respondents and empirical settings) to ‘record’ the practices and ideas of the ‘natives’. In the field of critical ethnography there is much attention for these academic methods of objectification and their subtle forms of power and violence (cf. Thomas, 1993; Madison, 2011).

welcomed in a very open way and I was able to join many initiatives and meetings of Transition Town Rotterdam and The Hague⁴³. Unfortunately, for the Stadshavens case, it was more problematic to do ethnographic work for a number of reasons. First, a number of projects were ‘on hold’ due to the economic crisis since the late 2000s which meant little actual ‘field activities’. Second, many interesting meetings and initiatives already took place before I entered ‘the field’ around 2013. Nevertheless, I was able to do some field observations by taking interviews as entry points for a broader ethnographic mapping of the places, social contexts, networks and material artefacts⁴⁴. This meant that I spent more time before and after the Stadshavens interviews to map and experience associated practices and networks.

Most of my ethnographic experiences were noted down in my notebooks. For example, I noted the date of each meeting, people’s conversations, or workday experiences at an ‘urban garden’. I noted down the most interesting and significant (which are not the same) things I experienced during, between, and after meetings and encounters. Sometimes, these were just quotes or book references. Other times, they were philosophical insights, routines and physical practices (in total I mapped dozens of interactions, meetings and rendezvous). Furthermore, I made photos and videos with my smartphone to accompany these notes. Often, taking a snapshot or video of a setting or specific situation, provided a fuller reconstruction⁴⁵. It should be emphasised that I was not an outside researcher, at least, I did not experience my field work as such. I talked, discussed, harvested, drank tea, danced, sang, laughed and (in some instances) cried together with TT participants. This is not unscientific, but a crucial aspect of an ethnographic method and my experience in ‘the field’. Embodiment has been crucial for experiencing empirical settings (Pink, 2008; 2011). It was very interesting to see how my body could be useful as a methodological tool in experiencing an empirically interesting setting (e.g. getting tired from working in a garden, walking inside a floating house, joining a protest).

Next to the a-select focus on certain groups and networks, my field observation methods were based on three types of ‘scripting’ (Clifford, 1990):

⁴³ Interestingly, in some instances, I noticed that some respondents and networks were affiliated with people I personally know (friends, or family). This is not uncommon or strange, as these networks were situated in big Dutch cities. It shows that research - empirical work in particular - is not an isolated endeavour as ‘work’, but cuts across different spheres of life.

⁴⁴ In retrospect, perhaps it could have been possible to try to engage in some more ethnographic work in the Stadshavens case, e.g. as an intern or shadowing some key figures.

⁴⁵ Using (digital) technologies for ethnographic work is explored and conceptualised in different ways, e.g. ‘visual ethnography’ (Pink, 2013), ‘digital ethnography’ (Murthy, 2008) or ‘multi-modal ethnography’ (Dicks, Soyinka & Coffey, 2006).

- (1) *inscription*, as first noticing, observing or making ‘mental notes’ of a specific situation or phenomenon. These situations are not simply static fragments of ‘the field’, but rather comprised forms of complex historically embedded practices and urban configurations⁴⁶;
- (2) *transcription*, as the complex and selective processes of capturing inscriptions in scribbles, raw notes, a photo or video, or a drawing. This translation of experiences and specific jargon and practices has been useful in order to make sense of the situation as a researcher⁴⁷; and
- (3) *description*, as the more or less coherent re-construction of empirical reality for analytical purposes. These descriptions started with physically moving away from ‘the field’ and reconstructing ‘the cases’ by doing more reflexive work⁴⁸.

Ethnographic field work has been a fascinating experience. I had little in-depth experience with this method, especially with systematically using digital technologies for data collection. During my field work, I talked to countless people and had many interesting discussions. In many instances, I received flyers, brochures, documents, sometimes even poems and cd’s, to ‘take into consideration’ or for ‘further exploration’. Many respondents and people noticed that I also had an open attitude and wanted to learn, which led them to ‘give’ me additional information and insights (to be honest, sometimes, this also made me experience the dark and colonial history of ethnographic methods).

Figure 2.5 provides an overview of the empirical works, the data sources, specific selection methods and the actual ‘useful’ empirical materials. The three types of empirical work (archival, desk and field work) were highly intertwined. I did not do one type of work prior to another. Most of the time, it was a matter of criss-crossing, learning new things about the main themes, approaching another respondent and looking up new archival records, or looking up another document (or website) that people referred to. In fact, the empirical work was quite unstructured, but was given a sense of structure along the way and *a posteriori*.

⁴⁶ As Geertz nicely put it: “The ethnographer ‘inscribes’ social discourse; he [sic], SJ] writes it down. In so doing, he turns it from a passing event, which exists only in its own moment of occurrence into an account, which exists in its inscriptions and can be consulted” (Geertz, 1973:19).

⁴⁷ Transcriptions and translations are rarely neutral. All languages and experiences are embedded in local and global relations of power and unequal structures (Clifford & Marcus, 1986). Therefore, I tried to be as careful and open as possible with regard to mapping and capturing ‘the field’.

⁴⁸ Translations from field experiences to empirical materials are not well-ordered sequential steps. As Clifford argues: “The three scenes of writing are, of course, artificially separated: they blend, or alternate rapidly, in the shifting series of encounters, perceptions, and interpretations called fieldwork”. As such, “there can be no rigorous definition of exactly what constitutes a field note” (Clifford, 1990: 52).

Figure 2.5 Overview of methods and empirical materials

Type of work	Empirical data sources	Selection method	Specific empirical materials	Indication of quantity
Archival work	Physical archival records	Following problematisations around urban planning, environmental policy and sustainability issues	Documents, maps, photos, pictures, drawings	Hundreds of singular documents and fragments
	Digital archival records	Following problematisations around urban planning, environmental policy and sustainability issues	Documents, maps, photos, videos, drawings	Hundreds of singular documents and fragments
Desk work	Secondary literature	Searching for literature on specific problems related to my cases	Books, articles, historiographies (academic)	Dozens of books and papers
	Documents	Following problematisations around sustainability and transformations of the city	Policy documents, strategic reports, plans, minutes	Hundreds of singular documents and texts
	Websites and social media	Following official websites, digital networks and hyperlinks	Website texts, images, videos, Facebook texts, newsletters	Hundreds of singular fragments and texts
Field work	Interviews	Approaching key (and non-key) figures. Snowball sampling and searching marginalised voices	Interview conversation (audio) and additional notes (+ flyers and brochures)	Around 75 in-depth interviews
	Observations	Approaching people and settings with sustainability plans and concerns, then, inscription, transcription and description	Field notes, photos, videos (+ flyers and brochures)	Over 50 meetings and rendezvous

It is important to note that it was *me* who pulled all kinds of unrelated experiences, everyday practices, idea(l)s, historical narratives and policy discourses together, and moulded them into relevant empirical materials and cases. In so doing, I selected and filtered a large amount of materials to make the analysis manageable and tangible. The two empirical cases have been constructed in their own right (as case subjects) but also selected and filtered in a way that turned them into ‘useful’ pieces and fragments. This makes the cases *paradigmatic* in terms of contexts through which I critically explained the rise of sustainable urban spaces (as case object). As a researcher, I was engaging in ‘a case’, no one else. I created the case boundaries, even though they turned out to be quite blurry and flexible. Notwithstanding that in both cases a number of students, scholars and participants were also analysing and trying to

understand the specific situation in their own terms, e.g. as a master thesis, a journal article, architects, advisors, or a policy maker. Many actors and documents tried to grasp their networked environment, and so was I.

2.5 Analysing the materials: Coding between empirics and theory

Initially, I sought to analyse the empirical materials using critical discourse analysis (CDA, Fairclough, 1992). Discourse analysis offered me tools to systematically and critically observe, describe and reflect upon local and global struggles, as well as more specific environmental and sustainability related issues and politics (Hajer & Versteeg, 2005). However, I noticed that CDA was too text-focused and I was already developing my own analytical framework. Briefly, I tried to use Nexus Analysis (Scollon & Scollon, 2004), as I expected it to be more fruitful for the type of analysis I was looking for (linking language and matter). But again I asked myself: what is the added value of this analytical framework, if I develop my own conceptual framing? I therefore stopped trying to 'squeeze in' established analytical frameworks, and continued fine-tuning my own analytical approach (as presented in Chapter 4).

As I crafted my own analytical framework, which was mostly informed by transition theories and (urban) governmentality analysis, I steadily gained confidence about approaching the empirical reconstructions with 'my own' analytics (even though I was standing on the shoulders of giants)⁴⁹. This was all the more relevant since I did not want to remain a comfortable "methodological anarchist" that abides by the principle of 'anything goes' (Thomas, 1997; Graham, 2005). I wanted to leave clear trace of how I mapped, analysed and reflected upon the issue at hand. The starting point of my own analytical framing can be understood in the tradition of governmentality analysis, with a focus on its spatial and transformative aspects (Dean, 2010). However, for me, methodological insights from transition research and critical urban scholarship were equally inspiring. Foucault's work, in retrospect, offered a nice entry point to explore

⁴⁹ There is a clear difference between doing (critical) discourse analysis and governmentality analysis. Foucault tried to describe and critically examine how certain formations of knowledge and power privilege some discursive regime and practice, while they marginalise others. Most discourse analytical approaches focus on the ways in which such power relations are expressed and enacted via speech, communication and social action (Fairclough, 1992; Wodak & Meyer, 2009). As I understand it, a governmentality approach is a somewhat broader heuristic to understand how certain fields of visibility and knowledge formations emerge in relation to specific problematisations, and highlight how certain procedures and techniques emerge that (together) govern social relations and everyday life (Dean, 2008). As such, discourse analysis (or dispositive analysis) focuses on some parts of governmentality analysis. Governmentality analysis adds a more engaged social and political layer, highlighting social action, identify formation and spatiality.

my *own* analytical toolkit⁵⁰. This is nicely captured by Collier, stating that Foucault's work:

“provides a rich vocabulary for examining the ‘patterns of correlation’ in which heterogeneous elements – techniques, material forms, institutional structures and technologies of power – are configured, as well as the ‘redeployments’ and ‘recombinations’ through which these patterns are transformed” (Collier, 2009: 80).

Collier's contribution highlights Foucault's “topological analysis on the broad configurational principles through which new formations of government are assembled, without implying that they arise from some inner necessity or coherence” (ibid). Urban spaces and the government thereof are always incomplete and might be contested and problematised at any given moment. Specific modes of urban governmentality and shifts therein should be understood through ‘the political’, that is, by investigating the dynamics between antagonistic struggles and new pragmatic and technical political rationalities. This conceptual background is elaborated on extensively in Chapter 4.

Analysing the cases and coding methods

The analytical frame I developed (*transition analytics of urban spaces*) was used to make sense of the case subjects by reflecting on the cases conceptually (case objects) (Thomas, 2011). This analytics enables me to grasp how urban spaces are shaped historically, what political rationalities govern them and how they are contested (see Chapter 4, section. 4.4). How did I analyse the cases in more technical terms? How did I bridge ‘the gap’ between the rich histories and empirical materials on the one hand and these analytical categories on the other hand?

Initially, I intended to catalogue, thematise and analyse the empirical materials and cases by hand. Indeed, ‘old school’, with a marker and a pen. Before my PhD research, I have done empirical analyses for (conference) papers in this way. However, the vast amount of data I collected (hundreds of documents, 75+ interviews, field note, books, pictures and video's) made me reconsider. After exploring some alternative methods, I started getting some experience with CAQDAS (Computer Assisted/Aided Qualitative Data Analysis Software). At first, I thought about using CAQDAS only for archiving and clustering the data. But as soon as I started exploring the more analytical possibilities of CAQDAS, such as NVivo and Atlas.ti, I wanted to make use of more analytical options. I have been sceptical about using software for a long time (even after digital methodology workshops). But as I read more about underlying logics

⁵⁰ Whether or not I am a ‘real Foucaultian’ I leave to conservative and progressive forces, that wish to either cherish a mythical Foucaultianism or engage in critical-creative social analysis.

of software and their purposes, I felt more comfortable and started using Atlas.ti (Smith, 2002).

The simplest way to account for how I analysed the empirical materials is *coding*. Coding is not only a technical analytical practice to make sense of empirical data. In non-academic contexts it might refer to certain ‘cultural codes’ or ‘legal codes’. Coding is a general means to arrest the flow of the world and cluster reality in specific ways⁵¹ (e.g. Deleuze, 1971; Luhmann, 1995). Methodologically, especially in more *qualitative* inquiries, a code can be defined as follows:

“(…) most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data. The data can consist of interview transcripts, participant observation field notes, journals, documents, literature, artefacts, photographs, video, websites, email correspondence, and so on” (Saldaña, 2010: 3).

Codes can be used in many ways, serving different purposes. Coding was done to reduce, cluster and summarise very diverse and vast amounts of data, but also to render possible analytical framing and conceptual refinements (ibid: 4). Coding, in this sense, is a craft and requires patience and focus. In many cases, a number of analytical reflections and ideas emerged while I was doing archival, desk and field work. I noted these ‘analytical fragments’ in a separate document, which I was able to access at a later stage.

I followed a two-tiered approach for coding: *first-cycle coding* and *second-cycle coding*⁵². This differentiation is also referred to as ‘descriptive coding’ and ‘analytical coding’. First-cycle coding refers to the first steps in which sense is made of empirical materials, so the “initial coding of data” (Saldaña, 2010: 45). According to Saldaña, it is sensible to combine a number of coding methods, to be able to comprehensively code and account for various coding aspects. For the first cycle, I used the following coding methods: *attribute coding* (descriptive information of field work setting, biographical info of respondents); *initial holistic coding* (highlighting some first (un)sustainability-related themes or issues that cover different qualitative data); *in Vivo coding* (using ‘local’ language and labels that are used in documents and respondents); *process coding* (highlighting doings, saying and actions that not only refers to things but also to broader processes); and *simultaneous coding* (applying two or more different codes to a fragment or to qualitative data). I was able to ‘select’ these coding methods as relevant only retrospectively. These first-cycle coding methods were used together in order to focus on specific aspects associated with everyday concerns, broader problematisations that required attention, formulated objectives, and so on.

⁵¹ Importantly, codes are never stable and ‘logical’, but highly contingent and socially construed and strategic (see critical constructivist background above).

⁵² There are many methods for first-cycle coding and second-cycle coding (cf. Saldaña, 2010).

Second-cycle coding follows first-cycle coding and adds a more analytical layer by “classifying, prioritizing, integrating, synthesizing, abstracting, conceptualizing, and theory building” (ibid). As mentioned above, I first focussed on conflicts, struggles and problematisations associated with current issues of (un)sustainability (sustainability’, ‘energy’, ‘ecology’, ‘mobility’, ‘health’, ‘food quality’, ‘social relations’, etc.). Genealogising these concerns allowed me to assess the extent to which these issues were politicised and problematised through time and space. Tracing how historical conflicts, incidents and debates reshaped the governing of urban spaces, helped me ‘codify’ the emerging political rationalities that rendered governable ‘(un)sustainable spaces’. Codifying the governmentalisation of urban (un)sustainable spaces was based on the four dimensions of urban governmentality (see Chapter 4). Nevertheless, new struggles and contingencies were always accounted for by understanding possible politicisations and antagonistic struggles. For this codification, a number of second-cycle coding methods were used for the case reconstruction and urban transition political analysis. I did not reconstruct and analyse the cases in a linear fashion. Rather, the empirical cases were (re)constructed in tandem with first-cycle and second-cycle coding. In relation to first-cycle coding, second-cycle coding was done in the following way, connected to three methodological steps that resonate with the logic of critical explanation I explained earlier.

Step 1. Identifying current struggles and problematisations around (un)sustainable urban spaces

After I had read a number of policy documents, websites and texts and had interviewed a few people, I got acquainted with what was considered as *problematic*. In some instances, I was first triggered by a quote, an image or policy objectives (mostly during exploratory desk and field work). References to climate change, housing, food quality, biodiversity and quality of life articulated all kinds of ‘problems’ in both empirical settings. These problematisations sometimes related to controversies and conflicts between different ideas, practices and groups. The two empirical cases (Stadshavens and Transition Towns) expressed some of these problematisations in view of transformative ambitions towards urban sustainability. The main coding method I used was:

- *Problem coding* (describing specific problems and conflicts related to various actors and practices – focus on politicisation and problematisation⁵³).

⁵³ ‘Problem coding’ is not explicitly referred to in literature, but made more sense to me as it directly relates to problematisations and conflictual aspects as covered in e.g. ‘values coding’ and ‘versus coding’ (ibid).

Step 2. Genealogising struggles and problematisations of (un)sustainable urban spaces

Following my analytics (Chapter 4), such problems are never about the 'here and now'. They should be 'stretched' *historically* and *spatially*. Therefore, I traced the historical and spatial traces of these socio-economic and environmental problematisations in both empirical settings. Using mostly archival records and secondary literature, I was able to historicise Rotterdam's sustainable waterfront regeneration in relation to the emergence of late medieval commerce and port cities. Historical documents and historiographies of Dutch cities enabled me to understand shifts in waterfront governance vis-à-vis modern urbanisation in spatial and transnational terms. The problematisations around the Transition Towns case, made me look into the emergence of Dutch cities as early modern economic nodal points in which environmental concerns emerged in direct relation to urbanisation processes. I constantly moved back and forth, trying to gain new insights and spatio-historical contexts, while having a focus on the contemporary issue of 'urban sustainability' and socio-material metabolisms. After reaching 'points of saturation', I drew circles around the complex case histories⁵⁴. A Foucaultian genealogical approach should be seen as a 'history of the present', describing in detail everyday lives, routines, concerns and struggles (Dean, 1994). This genealogical method allowed me to map periods of struggle and discontinuity, as well as the specific governing regimes that emerged.

By using many (digital) documents, maps, images and records (and sometimes videos), I was able to tease out how Rotterdam's waterfront actually emerged as a waterfront and transformed over time. Particular (un)sustainability issues, such as socio-economic life and environmental quality, emerged as themes through which sustainability became a governmental issue. Similarly, for the Transition Towns case, I tried to map when and how particular environmental concerns emerged in Rotterdam and The Hague, and became political or governmental concerns. For example, the notions of 'sustainability' or 'environmental policy' did not emerge before the 20th century. Any genealogical account is faced with the problem of the heterogeneous 'roots' and the emergence of new labels and themes. It is a complexity-sensitive method. There is no shortcut.

After creating an overall picture of both empirical cases in terms of key themes and problematisations associated with urban sustainability, I focussed on periods of stability and 'normal' urban governing. I also looked into historical references of controversies, struggles, debates, incidents and crises. Slowly but surely, a broader picture emerged of the ways in which urban spaces were governed (in both empirical cases), how this 'failed' and was interrupted, and then lead to new plans, programmes and modes of intervention. Consequently, I was able to structure these genealogies by *periodising* them. This can be seen as an analytical step, but for me it

⁵⁴ This so-called 'circumference' step is mostly informed by Nexus Analysis (cf. Scollon & Scollon, 2001).

was also useful in situating and reconstructing the cases. The main coding methods I used were:

- *Problem coding* (describing specific problems and conflicts related to various actors and practices – focus on politicisation and problematisation);
- *Theoretical coding* (linking different materials and codes to existing or new theoretical categories – focus on four dimensions of urban governmentality).

Step 3. Critically understanding the creation, normalisation and contestation of sustainable urban spaces

After these steps, it was time to further enrich an understanding of *current* struggles and governing processes associated with urban (un)sustainability in both cases. This is where desk work, and especially the field work, became crucial. The many digital references, documents, interviews, field observations and participatory meetings allowed me to map the main themes and problematisations of (un)sustainable urban spaces. Many socio-economic and ecological issues were associated with different positions, coalitions and conflicts. Interestingly, I was able to see the historical traces in the present (as a genealogical method ‘promises’). This allowed me to significantly reframe ‘the present’ in terms of seeing a wide variety of historical struggles and power relations in current urbanisation plans, spatial developments and (un)sustainability discourses. It gave me a historically grounded understanding of the current politics associated with sustainable urban space-making, of both cases. The coding methods I used were:

- *Longitudinal coding* (linking first-cycle codes to qualitative transformations of urban spaces over longer periods of time – focus on transitional dynamics urban governmentality);
- *Theoretical coding* (linking different materials and codes to existing or new theoretical categories – focus on four dimensions of urban governmentality);
- *Problem coding* (describing new problems and conflicts related to various actors and practices – focus on politicisation and problematisation).

Even though I present these aspects as ‘steps’ in which I (re)constructed the cases, they were not consecutive phases. In fact, most of the time I did at least two things simultaneously. As mentioned earlier, in each ‘phase’ of the case reconstruction, I engaged in archival, desk and field work. Identifying and reconstructing were (and are) always already forms of analysis. During the two coding cycles, I selected textual fragments, images and quotes, which I clustered. During the coding process, I constantly interacted with and depended on the software and its (im)possibilities⁵⁵.

⁵⁵ In this sense, we (Atlas.ti and me) clearly were an ‘analytical cyborg’, a human-machine hybrid,

Points of contact: Paradigmatic case analyses

As argued earlier, my understanding of empirical cases moves away from positivist criteria of comparing ‘case diversity’. Comparison in social science, to me, too often relies on an objectivist notion of isolating and comparing non-related cases from ‘the outside’. Instead, I suggest that empirical cases, from a critical explanation viewpoint, should be investigated in terms of their ‘points of contact’⁵⁶. This is especially relevant, since I noticed that some empirical fragments of one case also overlapped with the other (e.g. in interviews, cross-references). However, I first analysed the empirical cases in their own right. Each empirical case has its own history, its own complexity, and current dynamics. However, as discussed above, the two cases were selected to safeguard variety in the empirical inquiry, while having a paradigmatic logic. The two cases are not isolated ‘examples’ that represent broader populations. Rather, they express a specific paradigmatic logic, that is, they have been selected on the basis of a sustainability-led and transformative context. These specific ‘similarities’, however, have not been explored before the actual analyses. Similarly, their respective distance towards urban regimes and state institutions has also been subject to empirical analysis. I did not simply compare the cases on the basis of these similarity/difference dimensions. For paradigmatic case analyses, it made much more sense to approach and analyse the cases in terms of singularities, while at the same time sensitise and map their *points of contact*. So, how did I map and analyse the points of contact between the cases?

The ‘points of contact analysis’ was quite straightforward and in line with the separate case reconstructions. I analysed the points of contact by tracing which codes overlapped and ‘touched’. In more technical terms this is called ‘code weaving’ (Saldaña, 2010: 187). Each case analysis had its own set of codes and genealogical dynamics (first-cycle codes). Second-cycle coding enabled me to identify and map how the emergence of (un)sustainable urban spaces could be understood more broadly. For example, the ongoing urbanisation and problems regarding hygiene and health in the 19th century were not case specific, but a broader ‘European trend’. This does not mean that I simply subsumed both cases under the same broader logic of modern urbanisation and modern urban planning. Rather, both empirical contexts experienced some of the same type of ‘paradigmatic logic’, while keeping their own local histories, regimes and modes of intervention. Intersections between how urban spaces became politicised, problematised and governmentalised in both cases, could be unravelled by code weaving. When there were no significant pragmatic points of contact, the cases actually were not ‘cases’ for me, but simply singular (genealogical) contexts. Importantly, I did not try to subsume all empirical materials under the

using algorithms and cognitive creativity to make sense of vast amounts of data. Sometimes we worked together effectively, other times we did not really ‘know’ each other that much.

⁵⁶ I would like to thank Jessica Rivers for this excellent insight.

analytical labels. A number of urban(isation) themes and problematisations did not fall under these labels. This allowed me to also explore alternative and unforeseen (un)sustainability issues and technologies of power (as elaborated in Chapter 7 and 8). In the Appendix, I elaborate on the more technical part of the coding process and present the most relevant codes I used for the coding process.

Post-coding, text work and reading work

Using software and coding was fascinating. In a way, I felt that it made my methodological choices and framework more professional and mature. Nevertheless, there was a translation issue between coding and paradigmatically comparing the empirical cases on the one hand, and the actual text I produced on the other. I had to cluster, thematise, codify and choose which story (or stories) I wanted to tell. What did ‘my empirical cases’ and ‘my analytics’ tell *me*? And in what way did I want to present this to the (academic) world?

As mentioned before, archival work, desk work and field work were criss-cross activities. I did not follow a pre-given sequence. Importantly, the same was relevant for *text work*. Text work refers to all the writing I did that directly or indirectly ended up in this dissertation (Schwartz-Shea & Yanow, 2011). Taking field notes was field work, but drafting, writing and editing these chapters should be seen as text work. In social sciences, writing is rarely seen as a methodological issue. To me, this is an issue that deserves much more attention. I argue that writing is a complex craft and cannot be separated from one’s epistemological take on social reality. Instead of a more or less logico-mathematical and formalist style of writing, I wrote (or rather, I *tried* to write) social scientific texts with a more poetico-lyrical and playful style. Playful academic writing does not mean compromising ‘rigour’ or ‘representation’, it serves a specific goal. Style is not a bonus. It is part of a broader methodological and analytical strategy (Anderson, 2003). Adopting a ‘normal’ formalist writing style often creates a sense of distance, disengagement and neutrality. Objective and realist research is not so much objective, but *objectifying*. Contrastingly, academic playfulness allowed me to *denaturalise* certain grids of academic knowledge and common sense. Academic playful writing was an important ingredient to create new and alternative heuristics and analytical sensibilities. I combined quite different literatures, concepts and insights in my quest to understand the complexity of urban transition politics. This cannot be avoided, as it is inherent to a critical method that aims to produce new analytical lenses and modes of knowing and intervening.

The reader is deeply entangled with this dissertation. Reading different sections of this dissertation is indeed part of the dissertation itself. In a way, academic texts do not exist if they are not read. Consequently, reading different writing styles implies active work on the part of the reader. This can be called *reading work*. Reading work

is an engaged activity readers actually *do* when reading an academic text. Readers interpret, make sense, integrate, translate, evaluate, criticise, reject, nod, laugh, yawn, etc. The reader of this dissertation is expected to engage in different literatures, concepts and methods with their different writing traditions. Therefore, the reader should at least be moved or annoyed in one way or another. As I see it, reading these chapters, is also part of the research process. The experiences, the concepts and the stories I carefully (re)crafted and (re)produced, are embedded in a broader dialogical manner of doing social scientific work. In making these stories public, by publishing this book, I hope to engage in academic (and non-academic) discussions and practices related to urbanisation, transition politics and (un)sustainability.

2.6 Methodological postscript: Re-producing the world differently

This chapter presented the methodology and methods of this study. Particular methods are intertwined with a number of chapters. As a critical constructivist, I want to remind the reader that producing scientific knowledge is a specific form of *intervening* in the world. This can be our mental world of thought, but also in terms of perspectives for policy making and social projects. Critical constructivism would argue that I re-made the world by having written this thesis. The question here is: in what way did and do I remake 'the world'? What type of urban reality did I *want* to challenge? What type of urbanisation did I want to make sensible, see-able and knowable? I opt for crafting perspectives and vocabularies that allows one to call into question unequal forms of urbanisation, and rendering possible alternatives in the name of the past and present marginalised. Does this make my research normative? Yes. Is this a problem? Perhaps, depending on whose problem we are talking about here.

I argue that every scholar should be held accountable in this context. This especially holds for the ones that are paid with public money. Accountable, not only in terms of 'scientific rigour' and 'reflexive hygiene', but for the types of social, cultural and economic worlds (s)he is producing and - more importantly - *makes unattainable and impossible*. As a critical constructivist, and in line with critical scholarship more generally, I advocate 'subaltern' research that engage in experimental thought and producing scientific knowledge 'from below' (De Sousa Santos & Rodríguez-Garavito, 2005; Spivak, 2010). Cutting against the grain, then, does not only refer to a heterodox methodological or theoretical position, but also to one in terms of social and ethical engagement. By this, I mean that the type of methods I use and the academic knowledge I aim to produce, is in part produced to account for marginalised voices (the poor, the non-human, the excluded, etc.) and the exploration of new public sensibilities and common futures (Hardt & Negri, 2009). I tried to do my best in this

regard, but probably failed more than succeeded. I call on other social scientists to more adequately and ethically account for the types of voices and realities they are *not* creating and nourishing. The unsaid and non-sensed are often downplayed in social scientific work, but are still part and parcel of what universities and academic research programmes produce.

The field of transition research is particularly interesting in this regard. If the reader permits me to simplify, research on transitions towards sustainability ranges from hyper-capitalist technological innovations based on modelling and evidence-based technocratic interventions, to post-capitalist experimentation and community-led innovations inspired by green radicalism (Audet, 2012). Indeed, it is very exciting to *struggle together* with this field and to employ new epistemological insights and methods. This is especially important to me, as a publicly financed academic creature, working and writing in an age of socio-economic and environmental turbulence. Doing fundamental research was a transformative experience for me personally, but it should also be able to communicate and make public (i.e. 'publish') hegemonic forms of knowledge and novel ways in which everyday lives and social relations can transform. In this way, doing social science can be publicly relevant, given its potential to (re-)politicise public policy, economic power and hegemonic forms of urbanisation.

Interlude 1: Raw food

Food is fascinating. It can be fuel for survival, a private guilty pleasure or a means to bond with friends and family. However, it can also become a field of struggle. Even though we often do not consider food to be a political issue in our daily lives, it can be. Food can become a matter of concern that reframes how we relate to our bodies, nutrition, nature, health, science, modern culture and our place in the food chain.

When this happens, the ground underneath our feet starts trembling.

Captured by documentary

In 2008, Anneloek Sollart made a documentary called *RAUW* (in English: ‘raw’) about a young boy called Tom and his mother who live on a raw food diet. Francis Kenter, Tom’s mother, expected her son to eat only raw food (smoothies, nuts, fruit, etc.). Kenter argued that we, as human beings, are used to eating raw food and that all processed and fried foods (beverages, pizza, French fries, etc.) are unhealthy and have the potential to cause cancer. Sollart did not only register the somewhat ‘unconventional’ food lifestyle of both individuals and the upbringing of Tom, and the conversations he had with his friends and other people (e.g. her grandmother and a famous Dutch cook). Tom’s life was also presented as falling in between his mother’s expectations on the one hand and the arguments and eating habits presented by others. When the documentary *RAUW* was picked up by Dutch mass-media, it stirred many emotions. Kenter appeared in various media interviews and was often portrayed as a ‘crazy mother’ that experimented with her own son. In one of the programmes, someone said that Kenter ‘acted irresponsibly’, ‘abused her own child’ and needed ‘to visit a psychiatrist’.

In 2011, Sollart made a follow-up documentary called *RAUWER* (in English: ‘rawer’). The setup was the same. Tom (then 15 years old), was followed while having different conversations and confrontations regarding his ‘food and eating habits’ (with opponents and proponents). Additionally, *RAUWER* also captured the confrontations between Francis Kenter on the one hand and the Dutch Child Welfare Council, health, experts and public authorities on the other hand. Conflicts arose with such institutions after Kenter took her son away from his school (and attempted home-schooling), but also because Tom’s health became a ‘risk’ and the responsible motherhood Kenter was being questioned. Tom’s body length was problematised (he didn’t have a ‘normal’ growth curve), Tom would miss out on vital nutrition and did not meet other medical standards. Paediatricians filed a report and Kenter was brought to court. She was expected to explain her parental role and Tom testified in front of a juvenile judge. During this process, Kenter challenged scientific evidence (e.g.

by referring to Colin Campbell, a ‘guru’ on raw food), she called into question what counts as vital nutrition, normal food in and around secondary schools, medical knowledge, and acceptable food and eating habits. Interestingly, she inverted the critiques and arguments against her. For example, when opponents argued that she experimented with her child, Kenter would say that actually most Dutch parents experimented with their own children by giving them all kinds of ‘unnatural’, ‘unhealthy’ and processed food. She suggested that this was a kind of dangerous and ‘collective experiment’ and many ‘normal’ parents abused their own children.

The banality of social eviction and food deconstructions

These documentaries tell a story. They illustrate that a ‘normal framing’ of our food does not exist. More importantly, the ‘case of Kenter’ illustrates how our food regimes are actually hierarchical landscapes. Without suggesting that Kenter’s position or strategy is virtuous, her struggle against parenting doctrines, health institutions and Dutch food culture shows that something as mundane as food can become a fierce struggle. What Kenter actually does, and many people like her, is *deconstruct* food regimes. Deconstruction, a notion introduced by French philosopher Derrida (indeed, an *enfant terrible* for most academics), refers to the interruption of normal flows based on the emphasis of internal contradictions and hypocrisies. Food deconstructions, like Kenter and Sollart’s documentaries, emphasise the arbitrary logic and violent nature of seemingly normal food practices and experiences. Such food deconstructions are confronted with the limits of ‘normal food’ and express themselves differently. If we consider it to be normal to *buy food (sometimes meat) in a supermarket with the income from a paid job that is then cooked rather quickly*, many food deconstructions might emerge:

- Buying (health regulated) food is countered by growing your own food;
- Eating meat is countered by eating vegetarian;
- Using supermarkets for food is countered by local food cooperatives;
- Having a paid job is countered by sharing and exchanging goods and services;
- Cooking food is countered by raw food practices;
- Cooking rather quickly is countered by slow cooking.

These examples show that what counts as ‘normal’ is always under the risk of being countered and deconstructed. Importantly, countering normal food in terms of deconstructions are *immanent* processes. That is to say, they emerge out of the enthusiasm and saturation of normal food regimes and experiences (Dolfijn, 2007). Returning to Kenter’s experiences with Dutch food culture, she presents a specific form of food deconstruction. As such, raw food can politicise food in a number of ways, foregrounding the utter contingencies and absurdities in what we consider to be a healthy diet.

Enthusiasm and pharmakon

What does this say about the broader issues at stake presented in this study? What can the case of Kanter teach us about social dynamics? It tells us that *norms do not represent normality, but hegemony*. It suggests that normal life and everyday practices are privileged forms of existence as they depend on the tacit but violent exclusion of difference and otherness. Interestingly, societies deconstruct themselves whenever they experience hegemonic practices as normal practices. If dominant food production and products (e.g. fast food) are considered normal, it is only a matter of time before they become 'abnormal'. This is the starting point of a complex process of self-undermining, tension-building and grotesque hypocrisy. So, should we celebrate raw food as a deconstruction of our dominant foodscape? Is this a model for broader change? Does social deconstruction lead to political and intellectual enthusiasm?

Enthusiasm is a Janus-faced category. Enthusiasm after political victory, establishing a new organisation or even the introduction of a new smart phone is essentially schizophrenic. It increases social and mental comfort (political power, organisational space, always being 'connected'), while at the same time are the very conditions of tragic reversals and decay (political loss, organisational conflicts, desire to 'disconnect'). In this context, Derrida referred to a remedy being its own poison: *pharmakon*. This enigmatic notion refers to self-mutilating phenomena and the agonising interplay between hierarchically structured opposites (remedy/poison, victory/loss, peace/violence). This self-displacement also operates at an everyday level. Eating a hamburger, driving a car, using electricity or writing a dissertation are all subject to *their own* deconstruction, exactly because they are local hegemonic norms and practices and downplay their own otherness. Hegemonies organise their own decline.

If Kanter's case teaches us anything, it is to account for the surreal paradox that 'normal' life constantly creates the possibility for new worlds. The emergence of raw foodism expresses the deconstruction of hegemonic western food choices and habits. Importantly, raw food, as a discourse and a set of practices, can also become hegemonic (which I doubt). However, if it does, it is also a matter of time before it creates its own transformability and marginalisation. The more 'normal' (= hegemonic) a social activity or structure becomes, the more it fails to sustain itself. Tragically (or perhaps fortunately), any radical alternative is its own self-undermining force, which (again) is its own self-undermining force, which (again) is its own self-undermining force...*ad infinitum*.

PART II - CONCEPTUAL MATTER

*“A concept is a brick. It can be used to build a courthouse of reason.
Or it can be thrown through the window”.*

Gilles Deleuze



Chapter 3

Fighting the system?

Politics and the urban challenge in transition research

Chapter 3. Fighting the system?

Politics and the urban challenge in transition research

“War is God’s way of teaching Americans geography”.

Ambrose Bierce

*“Technology is not neutral. We’re inside of what we make, and it’s inside of us.
We’re living in a world of connections — and it matters which ones get made and unmade”.*

Donna Haraway

3

3.1 Introduction

Sustainability transitions are fascinating phenomena. They begin with societal cracks and ruptures in the face of economic, social or environmental deprivation. Transitions are shaped by individuals and groups that call into question the status quo and experiment with new forms of living. But, what does a ‘sustainability transition’ as a concept actually imply? And, what blind spots can be traced and foregrounded in the context of this study? This chapter presents academic knowledge about sustainability transitions and problematises the understanding of politics in urban settings in transition research.

The chapter is structured as follows. First, in section 3.2, I discuss the discovery of ‘transitions’ as recent phenomena for academic reflection, as articulated in transition research. The problematic of politics in urban environments is then presented at the intersection of two critiques in the field of transition research: the political and urban spaces. Section 3.3 critically discusses how transition research deals with the issue of conflict and politics. I argue that politics in sustainable development is often downplayed. Whenever sustainability-led conflicts and transformative politics are addressed, they are often depoliticised and reduced to selective Euro-traditional framings. I discern three of such political frames within sustainability transition research: (1) Westphalian politics (nation-state based procedural negotiations); (2) (neo-)liberal politics (network-based deliberations often involving market-models); and (3) anthropocentric politics (social conflicts within society and among human beings).

These frames are ill equipped to grasp crucial struggles associated with sustainability-led transformations. Instead of taking nation-state institutions, deliberative democratic arenas and anthropocentric politics as givens, section 3.4 argues that in order to address these issues, it is instructive to *spatialise* transition politics. A spatialised understanding of transition politics enables me to include multi-spatiality, and the non-institutionalised and material environments. Particularly, urban spaces offer fruitful entry points to better understand the multi-faceted politics of sustainability transitions. Recent discourses on ‘sustainable cities’ allow us to further examine and understand historically embedded struggles around technological, economic and socio-ecological changes⁵⁷. A more spatial understanding of the politics of sustainability transitions allows us to overcome depoliticised frames within transition research. I argue that even though specific research on the spatial aspects of (socio-technical) transitions highlight uneven developments, they often remain depoliticised because of their socio-economic bias. Section 3.5 argues that the politics of sustainability transitions in urban settings requires further investigation and conceptualisation. Finally, the concluding section reflects on some contributions by transition scholars to further our understanding of urban politics of sustainability transitions.

3.2 The birth of transition knowledge

Chapter 1 introduced the emergence of transition discourse at the intersection of scholarly interests and policy innovation. In the late 1980s, a number of scholars started working on the basic insights of what later became known as ‘transition research’ or ‘transition studies’. With their own particular academic background, these scholars sought to develop a conceptual apparatus to understand contemporary transformations and systems’ innovation in the field of socio-ecologies, technology, markets and society more broadly. Rip, Kemp and Schot developed the so-called Multi Level Perspective (MLP) by building on existing work on sociotechnical regimes in the 1980s and 1990s on socio-cognitive frames and social scripts (Nelson & Winter, 1997; Bijker, 1995; Tushman and Anderson, 1986; Christensen, 1997), technological niches (Kemp, Schot & Hoogma, 1998) and socio-technological settings. Other scholars worked on transformations and systemic innovations in different contexts and with other vocabularies, for example Rotmans’ work on Integrated Sustainability Assessment (Rotmans, 1990, 1998, 2006). Since the early 1990s, Kemp, Rotmans and other scholars have developed various conceptions of ‘transitions’, highlighting

⁵⁷ I particularly focus on discourses of sustainable cities, given that sustainability plays a central role in sustainability transition research. However, here are many related labels in this context such as ‘green’, ‘low-carbon’ and ‘resilient’ cities.

how complex societal systems evolve and can move towards more sustainable states (Rotmans et al., 2001; Kemp and Rotmans, 2009). As in any academic discourse, there are complex and heterogeneous ‘roots’⁵⁸. In many instances, these approaches can broadly be situated in the age of late-modern and reflexive transformations of society, as they all focussed on more practical socio-technical, ecological and sustainability issues. For example, a number of (Dutch) scholarly networks employed a transition perspective to grasp the long-term dynamics around energy policy (Kemp and Rotmans, 2009; Ligtoet & Chappin, 2012).

The discovery and dissemination of ‘transition knowledge’ was both intellectual and practical, evidenced by the fact that the Dutch department of Housing, Spatial Planning and Environmental Protection authorised a study (for the so-called *Vierde Nationale Milieu Beleidsplan*) to explore how contemporary environmental concerns around biodiversity, climate change and acidification could be addressed by systemic changes in the domains of energy, transportation and agriculture (Rotmans, Kemp & Van Asselt, 2000; Geels & Kemp, 2000; Kemp & Rotmans, 2009). The scholars that explored these issues were financially supported to further develop applicable frameworks, ultimately to understand and govern ‘system innovations’ and ‘transitions’ directed to tackle a number of environmental concerns. The intersection between academic endeavours and real world policy concerns was fruitful. Dutch policy makers became more interested in how the notions of transitions and system innovation could be rendered useful in different domains at a national level.

Over the years, transition knowledge matured and professionalised. A science-policy network was created in 2001 called *Knowledge Network for System Innovations and Transitions* (KSI). KSI consisted of over 80 scholars working in various fields and institutes as they sought to develop knowledge around transitions and “promoting transitions to a sustainable society,” making transition knowledge applicable in domains such as “energy, agriculture, transport, spatial planning or health care”⁵⁹. Since 2001 (and officially since 2004) the KSI network developed various concepts and theories. The focus of transforming societal systems towards a ‘sustainable society’ has been a clear normative orientation from the beginning. In order to reach this ideal:

⁵⁸ Rotmans, for example, worked on Integrated Assessment modelling since the early 1990s and gained practical and professional experience in Dutch national contexts (e.g. RIVM) and international institutions around sustainable development (e.g. RIO+5). In such complex networks, various researchers have co-operated and different fields have been analysed, e.g. ecology, health and energy (cf. Rotmans, Hulme & Downing, 1994; Rip & Kemp, 1998; Rotmans, et al., 2001; Rotmans, Grin, Schot & Smits, 2003; Schot & Geels, 2008).

⁵⁹ Source: <http://www.ksinetwork.nl/what-is-ksi/about-ksi>.

“...large-scale, fundamental changes in our society are required: transitions. These are made up of the modernisation of many sectors: system innovations. In turn, these require efforts on the part of many, highly diverse parties. System innovations can only come about through the collective effort of parties from different cultures, structures, and institutions, each bringing in their own skills and knowledge”⁶⁰.

The KSI network and its scholarly efforts laid many foundations for the academic transition discourses that developed since the early 2000s⁶¹. An academic transition discourse developed in direct relation to policy networks, substantive socio-political concerns and in different practical milieus, which became increasingly international. Over the years, more and more themes, empirical domains, theoretical approaches and geographical regions have been explored and addressed. They all added to the development of transition *research*⁶². Academic transition knowledge became further institutionalised. In 2010, for example, an academic journal was established to further explore and share insights around transitions (EIST, Environmental Innovation and Societal Transitions). The inaugural paper of the EIST journal, as a means of self-definition, stressed what transition research entails:

“This new journal responds to an increasing awareness that solving resource scarcity and environmental problems, notably related to fossil energy use and climate change, represents a very tough problem, the solution to which requires a combination of technical, organizational, economic, institutional, social-cultural and political changes. Jointly, these are increasingly referred to as a socio-technical transition to an environmentally sustainable economy. The emerging field of transition studies examines both economy-wide and sector transitions, such as in energy, transport, chemicals, manufacturing, agriculture and tourism sectors” (Van den Bergh, Truffer & Kallis, 2010: 1).

The proliferation and diversification of themes, analytical frameworks, concepts and empirical objects makes it rather hard to grasp what transition research actually

⁶⁰ Source: <http://www.ksinetwork.nl/research/programme>.

⁶¹ The three KSI sub-programmes are: 1) Fundamental Transition Programme (FTP) geared to the development of fundamental knowledge of transition and transition management. I) research on historical transitions; II) research on ongoing and future transitions, and; III) research on transition management. 2) Practice-oriented research (PO) focusing on the development of competences, conditions and exchange mechanisms based on transition experiments in various sectors. 3) Testing Ground (TG) (in Dutch: proeftuinen) as part of practice programmes managed by practice organisations in which KSI researchers participate. Testing Grounds are practical transition experiments in which relevant stakeholders work together to contribute towards solving persistent social problems in specific sectors at the system level. See: <http://www.ksinetwork.nl/research/programme>.

⁶² This research project emerged and was written in the institutional environment of DRIFT, located at the Erasmus University Rotterdam. This very dissertation, in a sense, is historically situated in the aftermath and slipstream of the KSI programme. Compared to earlier KSI-related dissertations, this study has slightly more critical overtones. I reckon this can be explained by my particular methodological position (critical constructivism), and focus on transition *politics*.

entails today. In fact, transition studies is not a coherent field. Nevertheless, a number of overview papers sought to map the field of innovations and transitions towards more sustainable (socio-technical) regimes (cf. Paredis, 2009; Jacobsson & Bergek, 2011; Markard, et al., 2012; Van den Bergh, et al., 2011; Coenen, et al., 2012; Coenen, 2011; Lachman, 2013). It would be naïve to simply present and discuss different transition theories and approaches as ‘equals’. As is the case in all academic disciplines, not all theories are deemed equally relevant and legitimate, consider e.g. the mystification of gender-related politics in transition processes (Kronsell, 2013). This unequal valuation of approaches and perspectives invokes a more critical reading of transition literatures.

Dominant transition approaches: A simplified introduction

What many transition literature review papers often seem to do, unfortunately, is only highlight *dominant* transitions approaches as if they are the only ones in town⁶³. Even though these contributions are valuable, they do not illuminate the entire self-defined field of transition research⁶⁴. To me, it is often unclear when an idea, concept or number of concepts associated with transitions or system innovations actually may be labelled an ‘approach’ or a ‘theory’. Furthermore, the meaning of ‘sustainability’ is also often obscured, given its multi-semantic characteristic in many transition-related researches. Overall, it is safe to say there is a *hierarchy* in how academic transition works and contributions are valued as transition research. I mention this explicitly because I critically engage with dominant approaches but also explore and extend marginalised ideas and theoretical positions later. My main objective here is to introduce some of the ideas and insights dominating scientific transition knowledge. I clustered them into two dominating transition approaches: 1) *Socio-Technical Innovation Approach* (or *STIA*); and 2) *COMplex-Reflexive Steering Approach*

⁶³ Recently Markard et al. (2012) and Truffer & Coenen (2012) provided an overview of transition studies in which they distinguish four main, i.e. dominant, perspectives in the field: 1) Multi-level Perspective (MLP) (Geels 2005, 2010); 2) Strategic Niche Management (SNM) (Kemp, Schot & Hoogma, 1998; Schot & Geels, 2008; Smith & Raven, 2012); 3) Technological Innovation Systems (TIS) (Hekkert, Suurs, Negro, Kuhlmann & Smits, 2007; Wieczorek & Hekkert, 2012); and 4) Transition Management (TM) (Rotmans et al., 2001; Rotmans, 2006; Loorbach 2007, 2010). Lachman (2013) provided a different clustering: 1) MLP (Rip & Kemp, 1998; Geels, 2002, 2011); 2) SNM (Schot & Geels, 2008; Raven & Geels, 2010); 3) TM (Loorbach & Rotmans, 2006; Loorbach, 2010); 4) Innovation Systems (Hekker et al., 2007; Jacobson & Bergek, 2010); 5) Techno-economic paradigm (Van den Bergh & Oosterhuis, 2008; Geels, 2011); 6) Socio-metabolic transitions approach (Rotmans & Fischer-Kowalski, 2009; Fischer-Kowalski, 2011).

⁶⁴ Some examples: Multi-Level Perspective and Social Practices (Hargreaves, Haxeltine, Longhursts and Seyfang, 2011), Socio-ecological approach and Transition Management approach (Rotmans & Kowalski-Fisher, 2009), Strategic Niche Management and Grassroots Innovation (Hargreaves, Hielscher, Seyfang and Smith, 2013), Strategic Niche Management and Multi-Level Perspective (Schot & Geels, 2008), Innovation Systems and Multi-Level Perspective (Weber and Rohracher, 2012), Technological Innovation Systems and Multi-Level Perspective (Markard and Truffer, 2008), Socio-technical approach and Social Practices (Shove, 2012).

(or *CORSA*). Needless to say, these approaches co-emerged and co-evolved over time. For now, the dominating approaches are presented separately and clustered according to their underlying ontologies and intersecting notions, informed by existing reviews of transition literatures (Jacobsson & Bergek, 2011, Markard, Raven & Truffer, 2012; Van den Bergh, Truffer & Kallis, 2011; Coenen, Benneworth & Truffer, 2012, Coenen, 2011; Kern, 2012; Lachman, 2013).

The socio-technical innovation approach (STIA)

This approach is embedded in innovation studies, technology studies, neo-institutional theory and evolutionary economics. It investigates shifts and transformations in technological innovation networks (TIS, Techno-economic paradigm) and socio-technical systems (MLP, SNM). A transition in this approach is often understood in terms of radical shifts in *socio-technical systems* and *technological innovation systems* (Rip & Kemp, 1998; Geels, 2002, 2005, 2010; Kemp, Schot & Hoogma 1998, Schot & Geels 2008, Smith & Raven 2012; Hekkert et al., 2007, Wieczorek & Hekkert 2012)⁶⁵. STIA aims to understand how socio-technical systems (e.g. energy systems and mobility systems) transform over time by focussing on interactive networks composed of technologies and social action. These broad networks are framed as ‘socio-technical systems’, denoting the intertwined nature of technological innovations and societal dynamics (Rip & Kemp, 1998; Geels & Schot, 2007; Geels & Kemp, 2007; Geels, 2010).

Scholars of history and the sociology of technology have addressed the complexities with which technological innovations emerge and transform. For example, they try to understand technological transitions by examining how propeller-piston engine aircrafts turned into turbojets, how sailing ships transformed into steamships, and how the horse-and-carriage turned into the automobile, or even how rock-and-roll emerged (Geels, 2002, 2007). Earlier work of e.g. Rip and Kemp (1998) suggest how concepts such as ‘actor-networks’ from Bruno Latour (1988) and ‘seamless web’ from Hughes (1986) informed a broader and more contextualised socio-historical understanding of technological innovations (insights from SCOT & ANT). Conceptually, socio-technical transitions have been framed as:

⁶⁵ This approach emerged in the late 1980s in circles of innovation and technology scholars, as a response to e.g. the “marked failure approach as a basis of policy action” in modern 20th century societies (Bergek, Jacobsson, Carlsson, Lindmark & Rickne, 2008: 407). ‘Innovation systems’ became a new buzzword, adopted by national governments, economic policy networks and international institutions focussed on economic growth and market improvements (*ibid*), but also informed by economic insights e.g. Schumpeter’s market innovation and dynamics. An innovation system can be national, regional or sectoral and is composed different elements: actors in the whole supply chain, networks, institutions (regulations, norms, cognition) and in some approaches technologies (e.g. Malerba, 2004; Suurs & Hekkert, 2009; Hellsmark and Jacobsson, 2009; Jacobsson & Bergek, 2011: 45). (Technological) innovation systems are conceptual frames to relationally grasp how technologies emerge and develop in market contexts. This understanding was particularly relevant to counter product –and technique-based approaches in companies and economic networks that dominated in the 1950s and 1960s.

“non-linear processes that result from the interplay of development at three analytical levels: niches (the locus for radical innovations), socio-technical regimes (the locus of established practices and associated rules that stabilize existing systems), and an exogenous socio-technical landscape (Rip and Kemp, 1998; Geels, 2002, 2005a)” (Geels, 2011: 26; Geels, 2012: 473).

This multi-levelled framework is commonly referred to as ‘the’ Multi-Level Perspective (MLP). From a MLP perspective, a transition can have different directions or pathways, e.g. transformation, reconfiguration, technological substitution, and de- and re-alignment (Schot & Geels, 2007).

According to Schot and Rip (1996), the management of technological innovations has historically been fiercely criticised. Since the 19th century, the industrial revolution accommodated new technologies but also marginalised workers. Opposition against new technologies have never disappeared. Instead of ‘planning and implementing’ certain technologies, which triggers resistance, a more nuanced approach on *socio-technical* innovation has emerged, e.g. under the label of Constructive Technology Assessment (CTA). Schot and Rip argue that the “aim of CTA is to build better machines” (Schot & Rip, 1996: 263). Although they do not reject ‘sabotage’, they argue that a more social understanding of technological innovations enables a more ‘dialogical’ frame of socio-technical oppositions. In other words, Schot and Rip argue that if a more comprehensive understanding of how technology and society interact (as socio-technical systems), then, more effective and perhaps legitimate strategies for socio-technical innovation can be developed. The ways in which such niches could be supported is a strategic concern for governmental agencies and a scientific concern for (sustainable) innovation and technology scholars⁶⁶.

Following CTA, a more strategic understanding of transforming socio-technical systems has been derived from and developed through Strategic Niche Management (SNM). SNM was developed to strategically support and develop specific technologies. As stated by Caniëls and Romijn:

“SNM advocates the creation of socio-technical experiments in which the various innovation stakeholders are encouraged to collaborate and exchange information, knowledge and experience, thus embarking on an interactive learning process that will facilitate the incubation of the new technology” (2008: 246).

Such technological innovations - often explicitly framed as ‘market niches’ - refer to e.g. “wind energy, biogas, public transport systems, electric vehicle transport and eco-

⁶⁶ In this sense STIA shows similarity with classical (economic) modernisation theories (e.g. Rostow, 1960), but also tries to move beyond structuralist and determinist assumptions by adopting insights from STS, neo-institutionalism, evolutionary economic and innovation studies.

friendly food production” (ibid). The basic focus of SNM refers to ‘niche’ formations and conditions that allow for more sustainable technologies to emerge. As such, SNM seeks to understand experimentation-based learning and how the protection/cultivation of niches leads to the adoption and dissemination of certain technologies (Kemp, Schot & Hoogma, 1998; Kemp, Rip & Schot, 2001; Caniëls and Romijn, 2008; Schot & Geels, 2008; Smith & Raven, 2012). This also implies navigating between ‘radical innovations’ or ‘niches’ in R&D departments, market and policy contexts on the one hand, and socio-environmental concerns about the use of ‘sustainable technologies’ in society on the other. A socio-technical transition is ‘completed’ when niches are normalised and experience so-called ‘increased structuration’.

The complex-reflexive steering approach (CORSA)

Next to STIA, there is another transition approach that dominates the field of transition research. This approach is embedded in complex systems theory, population dynamics, socio-ecological resilience theories, scenario methodologies and governance studies. Instead of addressing socio-technical and technological aspects, this approach emphasises issues around the governance of societal transformations. A transition in this approach is often understood in terms of radical shifts in/of broader *societal systems* (Verbong and Loorbach, 2012: 14; Rotmans et al., 2001, Rotmans 2006, Loorbach 2007, 2010; Grin, 2006, 2010; Voß Bauknecht, 2006; Frantzeskaki, Loorbach & Meadowcraft, 2012). This transition approach emerged in the last decades of the 20th century and moves away from traditional planning and control policy, as part of the so-called shift from government to governance (Rhodes, 1997; Grin, Rotmans & Schot, 2010). It moves away from command-and-control frameworks to address persistent predicaments in e.g. energy systems or food production systems⁶⁷. The difference between STIA and CORSA is relatively simple: whereas STIA’s focus is on technological and socio-technical transformations, CORSA aims to explore flexible forms of intervention through new social and governance arrangements.

⁶⁷ Such social concerns are often understood in terms of ecological or reflexive modernisation, in which late modern societies are confronted with the ‘side effects’ of industrialised economies and processes of globalisation. Reflexive modernisation, as understood by sociologists such as Ulrich Beck and Anthony Giddens, refers to “the motive power of social change in categories of the side-effects (reflexivity). Things at first unseen and unreflected, but externalized, add up to structural rupture that separates industrial from ‘new modernities’ in the present and the future” (Beck, 1997: 38). The unwanted and undesired ‘side-effects’ of modernity (industrial societies) that humanity is confronted with are understood as entry-points for technological and policy interventions. STIA seems to be embedded in this diagnostic of reflexive technological innovations and improvements (Schot & Geels 2008, Smith & Raven 2012). CORSA also situates itself in this discourse, though more implicitly (cf. Grin, 2006; Voss & Bauknecht, 2006; Jänicke, 2008).

Similar to STIA, CORSA has a prescriptive focus on the direction and speed of transitions as well. The dynamics of societal systems are understood more strategically and based on selecting *particular* actors instead of the usual policy arenas and institutional routes (so-called ‘change agents’, ‘frontrunners’ or ‘policy entrepreneurs’). Such change-minded actors or forces are expected to engage in long-term strategic envisioning of sustainable imaginaries, mid-term tactical network formation, short-term operational experimentation and continuous reflexive learning (Loorbach, 2007). Transition management (TM) can be understood as the CORSA-equivalent of STIA’s Strategic Niche Management (note that TM and SNM are both *management* approaches). TM is presented as a prescriptive governance concept that enables contemporary governments and social actors to address complex problems they are confronted with (often framed as ‘sustainability challenges’). As such, TM can be seen as one particular approach within the wider field of transition studies, using a particular set of assumptions and concepts (Markard et al., 2012; Lachman, 2013). Transition management principles are grounded in complexity theory, reflexive governance, social theories and other theoretical schools (Loorbach, 2007; Loorbach, 2008: 5; Rotmans & Loorbach, 2010). As Loorbach puts it, transition management:

“conceptualizes the role of agency in transitions and can be used to analyze possibilities for influencing. Transition management therefore necessarily builds on an understanding of transitions from a complex system perspective as basis for development of governance strategies” (Loorbach 2007:18).

So, managing, governing or steering transitions is understood in direct relation to a transition perspective (also cf. Van Raak, 2016). As Loorbach argues:

“The basic steering philosophy underlying transition management is that of anticipation and adaptation, starting from a macro-vision on sustainability, building upon bottom-up (micro) initiatives, meanwhile influencing the meso-regime. Goals are not fixed but developed (through a search and learning process) by society and the systems designed to fulfill these goals are accordingly created through a bottom up approach using incremental steps directed toward a long-term goal (e.g. directed incrementalism (Kemp 2003))” (Loorbach 2007: 81).

The regime concept, as part of a multi-level perspective and a multi-actor and multi-phase approach to transitions (Grin et al., 2012), is similarly as important to CORSA as it is to STIA. A regime in CORSA is conceived broader than in socio-technical terms (STIA). Societal systems are understood in terms of their deep structures, denoting the “incumbent regime: a conglomerate of structure (institutional and physical setting), culture (prevailing perspectives), and practices (rules, routines and habits)”

(Rotmans & Loorbach, 2012: 108). A transition, in broader terms than socio-technical transformations, is then defined as “a fundamental change in structure, culture and practices” (ibid: 109). Such transitions take shape when “an emergent structure as a niche (...) build up niche regimes that are ultimately capable of breaking down the incumbent regime and establishing a new regime (Van der Brugge, 2009)” (ibid: 108).

As might be clear, the language of complexity science plays an important role in transition management (e.g. as co-evolution, self-organisation and emergence)⁶⁸. A crucial notion in TM is the so-called ‘transition arena’. A transition arena, different from a policy arena or a market arena, is defined as “an innovative participatory process of envisioning, searching, learning and agenda-building aimed at social learning as a means to achieve (sustainable) social change” (Loorbach 2007: 44). It is a particular site in which the practice of managing transitions takes place. These arenas are understood as a ‘model’, that is, they can be connected to a specific sector (mobility, or health), to a region, or to another system. With some imagination, one can compare a ‘transition arena’ as part of TM (within CORSA) with a ‘protected niche’ as part of SNM (within STIA). All in all, transition management is an approach that combines hands-on and hands-off techniques through which direct control is virtually impossible, yet indirect influence and experimentally exploring ‘different futures’ is deemed feasible and desirable.

Urban(isation) politics as a blind spot in STIA and CORSA

STIA and CORSA dominate the field of transition research, thereby pushing some conceptual and thematic issues to the margin. Since the late 2000s, an increasing number of works explored such overlooked themes, e.g. on everyday practices (Spaargaren 2003; Shove 2004; Shove & Walker, 2007), power dynamics (Avelino, 2011), or grassroots innovations and social movements (Seyfang & Smith 2007; Hargreaves, Haxeltine, Longhurst & Seyfang, 2011; Seyfang & Haxeltine 2012). This dissertation is particularly interested in transition politics of urban spaces. I argue that there are two interrelated conceptual and practical concerns in sustainability transitions discourse: the political and urban spaces.

⁶⁸ “Co-evolution (...) refers to the path dependence that arises from mutual adaptation between system components and between system and environment” (Loorbach, 2007: 56). Co-evolution between complex systems lies at the heart of grasping the interactive logic between multiple societal levels and domains. Self-organisation can be understood as the emergence of order without external control (Nicolis & Prigogine, 1989). This is highly relevant, as innovative agenda’s and ideas for transformative change start beyond institutionalised structures and practices (in so-called ‘niches’). Emergence, formulated simplistically, refers to the upcoming of new patterns (ibid). This also implies that new patterns may become more and more visible and normalised at a higher level in society. Co-evolution, self-organisation and emergence, then, are very much interrelated. All three are important ingredients for transition management.

In fact, I argue that the challenges regarding the *politics* associated with sustainability transitions (Smith, Stirling & Berkhout, 2005; Shove & Walker 2007, 2008; Smith & Stirling 2008, 2010; Hendriks 2009, Meadowcroft, 2005, 2009; Stirling 2009, 2011; Jørgensen, 2012) can be better understood and tackled by engaging with the *geography* and *spaces* of transitions (Bulkeley et al. 2010; Späth and Rohracher 2010, 2012; Hodson and Marvin 2012; Truffer and Coenen 2012). This diffractive reading of transition research might seem unorthodox, but it is an important approach to address the conceptual and empirical changes related to urban transformations and sustainability. What is more, as discussed in Chapter 2, I encountered how transition politics and urban spatial issues and concerns were related during my conceptual and empirical work. Unfortunately, transition politics and urban spatiality are often addressed and studied *separately*. After my literature reviews on these two issues, I argue for a more adequate analytical vocabulary regarding the transformative politics of sustainable urban space-making.

3.3 Sustainability transitions and their (post-)political tenets

In a Letter to the Editor in 2008 in the Journal *Environment and Planning A*, an interesting polemic between Shove and Walker, and Rotmans and Kemp took place. This encounter is symptomatic of the debate about legitimacy, power and politics in transitions, and their place in transition theory. Shove and Walker asked the question: who actually ‘checks’ the people that claim to be transition managers (2007: 3)? These authors argue that there is a lack of attention for the ‘winners’ and ‘losers’ of transitions. More generally, Shove and Walker claim that transition management needs to explicate its “obscure politics” because of: (1) the high level of abstraction in its theories and practice (‘systems’, management of the ‘it’); (2) the unknown institutional side-effects of managing transitions; and (3) the unclear role of the vague and depoliticised notion of ‘sustainability’.

Rotmans and Kemp replied to Shove and Walker with a complexity-based conception of transitions dynamics and the role of politics therein (Rotmans & Kemp, 2008). Basically, Rotmans and Kemp stressed the importance of pragmatics in transition processes in times of reflexive modernity (adapting, experimenting and learning), while Shove and Walker referred to this as the ‘politics of shape shifting’ since politics is not only concerned with “selection and variation, but also with boundary making and definition” (Shove and Walker, 2008: 1014). This discussion represents the variety of academic backgrounds, types of ontologies and methods of analyses

present in the academic (and highly normative) transition debate (cf. Geels, 2010)⁶⁹. Smith and Stirling also address the political dynamics in transitions, arguing that it “is unclear how transition management processes sit in relation to prevailing policy institutions and political activities” (Smith & Stirling, 2010: 9). Similarly, Shove and Walker (2007: 5) argue that “there is a politics to transition management, a playing out of power of when and how to decide and when and how to intervene, which cannot be hidden beneath the temporary illusion of ‘post-political’ common interest claims of sustainability (Swyngedouw 2006)”. And as Kern argues: “If transitions are to a large degree political processes resulting from decisions by multiple actors, then political dimensions should be at the heart of the analysis” (2009: 26). The unclear meaning of politics in sustainability transitions is articulated by Verbong & Loorbach stating that experiments related to transition management, strategic niche management, transition monitoring innovation systems “raise questions about and prompt debate in the scientific arena (for example related to normative orientation of researchers, legitimacy of interventions and lack of attention to power and politics)” (Verbong & Loorbach, 2012: 16).

In direct relation to STIA, Hargreaves, Haxeltine, Longhurst and Syfang (2011: 21) state that sustainability transitions do not only deal with novelty but also with normality (referring to the MLP as developed by Geels (2002). From a ‘regime’ perspective, this normativity is assumed in e.g. a ‘lock-in’ situation, ‘re-stabilisation’ and ‘reproduction’ (i.e. sub-optimal solutions that prevent actual transitions). From a niche perspective, it is implied in notions such as ‘niche protection’, ‘up-scaling’, ‘acceleration’ and ‘growth and diffusion’ (Kemp, Rip and Schot, 2001; Raven, 2007; Rotmans and Loorbach, 2009). Many transitions scholars using STIA seem to discard politics because, for them, transitions can indeed be calculated, known objectively, and even modelled. Even though the idea of politics plays an implicit role, it is definitely not a core concern. Socio-technical systems innovations and sustainability transitions might be about many things, but they are not addressed as political per se. Most underlying ontologies that shape these frameworks are non-conflictual, and understand transition dynamics and agency through a-political ontologies, i.e. in terms of rational decision-making, evolutionary dynamics, deep and fixed structures, interpreting actors, functional systems or relationalities (Geels, 2010). As Geels argued (mostly for STIA), conflict and power struggles cover only a small portion of the ontological horizon of (mostly socio-technical) transition theories (ibid). Fortunately, a

⁶⁹ Interestingly, Avelino (2011) responded to this debate by accentuating how every deconstructive move should, by its own terms, itself be deconstructed. Alternatively, Avelino proposed to pay attention to ‘what ifs’ (potentialities) and ‘reconstructive deconstructions’, thereby going beyond ‘is’ vs. ‘ought’ dichotomies that shape such polemics. This, in turn, does not do away with politics or deconstruction, but simply displaces persistent questions about the politics of transitions. Again, which criteria would make just and acceptable reconstructive deconstructions?

number of scholars have actually explored and mapped the contours of what counts as *transition politics*. Some have found ‘technocratic’ and ‘pluralist’ narratives of democratic transition management (Hendriks, 2009), while others mapped different types of transitions, such as ‘neoliberal-technocratic’ and ‘communitarian’ modalities (Audet, 2014).

Post-political sustainability transitions?

I argue that research on the politics of sustainability transitions is confronted with a number of challenges. The overall concern is that the definition of ‘politics’ is assumed and employed in selective ways. Each of these selective understandings is not problematic per se, but becomes a challenge whenever we want to adequately understand politics associated with transformations towards sustainable forms of living. As has been argued frequently, sustainability is not only a fuzzy and multi-layered concept, its classical focus on balancing people, planet and profit seems to obscure antagonistic politics and struggles (Swyngedouw, 2007). As such, sustainability is often a consensus oriented notion that brings together various voices, instead of articulating dissensus and conflict. This also seems to be the case for the specific transition approaches. In STIA and CORSA, there often seems to be an emphasis on creative networking, consensus-building and win-wins, while often avoiding fundamental conflicts. This is also expressed in the terminology of strategic niche *management* and transition *management* (Scrase and Smith, 2009; Shove & Walker, 2007). Importantly, the tendency to understand sustainability in terms of consensus, and transition agency in terms of governing and managing transitions, is not simply a theoretical critique, but also refers to a historical context.

The disappearance of societal conflicts and social struggles is part of a broader historical trend that emerged in Western public spheres since the end of the Cold War. The idea that western liberal democracies are somehow the *only* feasible and desirable political frameworks has been articulated by for instance Fukuyama’s ‘end of history’ (1992) and Lyotard’s ‘end of grand narratives’ (1972). Critics have diagnosed this tendency to downplay fundamental political conflicts and social antagonisms as ‘post-politicisation’ or ‘de-politicisation’ (e.g. Rancière, 2004; Badiou, 2007; Žižek, 1999, 2010; Swyngedouw, 2009). According to Swyngedouw (2010), post-politics “mobilizes the cast apparatus of experts, social workers, and so on, to reduce the overall demand (complaint) of a particular group to just this demand, with its particular content (...)”. The era of post-politics is the era in which politics is understood as the “administration of social or ecological matters (...)” (ibid, 2010). In the environmental domain, climate change, biodiversity and socio-technical management exemplify the post-political paradigm. Social conflicts and concerns are understood as unexpected and unplanned ‘by-products’ of modernisation (Swyngedouw, 2010). The consequent

pragmatic approach regarding policy making and democratic politics, does not mean that politics simply displaced and became managerial in terms of horizontal networks, but signifies a shift in political and economic power. As David Harvey stated, the diagnosis of the so-called post-modern condition has in fact been an intensification and complexification of modern struggles around industrial capitalism and contemporary neoliberal hegemony (car-based mobility, high-energy consuming middle-classes, etc.) (Harvey, 1985, 2005).

The governance of technological and social change is often approached in post-political terms. Debates about revolution vs. reform are still present in transition research. However, they have been translated into debates over the radicalness of 'niches', how niche innovations can be managed strategically, and how transitions in specific sectors such as human mobility, energy, health, etc. can be governed reflexively (Rip & Kemp, 1998). Interestingly, avoiding radical emancipatory struggles and uneven power configurations is often considered an *asset* in an alleged post-ideological world. Transition practice seems to downplay antagonistic tensions and mostly require 'reflexive' governance or 'strategic' management (Kenis, Bono & Mathijs, 2016). We can observe how system innovations and transitions have become popular exactly in the age of ecological and reflexive modernisation. To put it somewhat polemically, the dominant transition approaches seem to want to have their cake and eat it. That is to say, they often assume transformative change without transformative politics. This becomes even more evident when we consider the substantive themes and struggles addressed by transition researchers. As Swyngedouw argues, even though there are clearly crises, hurricanes, tsunamis, changing weather patterns, CO2 emissions, contaminated water, shifts in biodiversity, etc., the majority of such a diagnostic discourse seems to:

"imagine the possibility of an originally fundamentally harmonious Nature, one that is now out-of-synch but, which, if 'properly' managed, we can and have to return to by means of a series of technological, managerial, and organisational fixes" (Swyngedouw, 2007: 23).

Admittedly, there is indeed space for discussion and disagreement in such broader sustainability narratives, "but only with respect to the choice of technologies, the mix of organisational fixes, the detail of the managerial adjustments, and the urgency of their timing and implementation" (ibid). So, while environmental and sustainability concerns are often presented as 'undeniably relevant' and 'necessary', it is important to note that there is no simple formula without winners and losers. Uneven power relations persist while reflexive decisions are made in tackling sustainability challenges and collectively moving towards 'sustainable' forms of life (such as eating 'organic food', building houses with 'eco-friendly' material, consuming green products or using less energy).

What, then, are the specific limits of current accounts of politics in transition research? I discern three dominant frames of politics: (1) Westphalian politics; (2) (neo-)liberal politics; and (3) anthropocentric politics. All frames assume and address politics in sustainability transitions in a very specific way, all of which are problematic to adequately understand struggles associated with the emergence and establishment of sustainable technologies and socio-economic forms of living (see also Chapter 1).

Frame #1: Westphalian politics

Many transition approaches rely on a Westphalian frame of politics and legitimacy (Fraser, 2001). This implies that 17th century state sovereignty, its territorial framework and procedural networks are taken as the horizon to grasp transition politics. The 1648 peace of Westphalia established a system of sovereign nation-states. The 1848 democratic revolt added to this system some forms of representation and aggregated electorates. However, both STIA and CORSA seem to take for granted the historicity and *radical contingency* of nation-state sovereignty and their political institutions and policy networks. STIA takes many institutionalised assumptions as natural given, such as formal policy making, political institutions and legal regulations around environmental and socio-economic issues. This is not surprising, as the main focus of STIA is technological innovation and socio-technical change, not politics as such. Of both approaches, CORSA is expected to be most reflexive and critical regarding such regimes. The reason for this is that CORSA engages with governance theories and issues of societal shifts. However, CORSA scholars often also rely on state-based and institutionalist heuristics (e.g. national environmental regulations, energy policy). A case in point is the transition scholar John Grin, who seems to avoid critically reflecting on the notion of legitimacy in transitions by stating: “Concerning legitimacy, it is quite common to distinguish between input, throughput and output legitimacy (e.g. Scharpf, 1997)” (Grin, 2012: 75). Without further justification or critically reflecting on the notion of legitimacy as developed by Scharpf, Grin employs a somewhat static systemic perspective on legitimacy in the context of transitions. Again, legitimacy in the context of sustainable technologies and eco-modernisation is expected to topologically reside at the level of parliaments, democratic systems, public policy and other political institutions. Indeed, understanding broad sustainability-led transformations cannot be isolated from the underpinnings of state formation and political institutions. A major challenge here is how transitions can be understood in theory and practice, without *a priori* accepting institutionalised forms of sustainability politics. If sustainability transitions are fundamental changes, we should first of all move away from a Westphalian frame on politics and fixations on territorial sovereignty and legal-administrative procedures.

Frame #2: (Neo-)liberal politics

Another often used frame to understand politics in sustainability-led (socio-technical) transformations is based on liberal and neoliberal traditions. (Neo-)liberal frames around transitions and their management try to move away from institutional and statist frameworks. Interestingly, this tradition seems opposed to a Westphalian tradition of sovereign state power and legal-administrative apparatuses. This frame often assumes open and free spaces (including markets) through which transitions might emerge and flourish. There are two types of liberal frames: liberal and neoliberal frames. The liberal tradition argues that individuals should be understood as liberated (free) from external authorities and institutional formations (State, Church, Family, God, The System, etc.). Paradoxically, the only institutions and systems that are accepted are institutions that actually safeguard freedom from external powers and hierarchies⁷⁰. One of the central assumptions of liberal politics is that power relations and legitimacy struggles are irrelevant as long as some procedural conditions are set in place. It should be possible to rationally discuss and come to agreements. Various academic transition discourses understand politics in terms of circumventing dominant regimes and aiming at pragmatic and experimental collaborations. Importantly, a difference can be observed between STIA-based and CORSA-based frames. A CORSA approach argues that even though participants and social actors might disagree, there seems to be a consensus that everyone shares similar long-term objectives and visions of a sustainable future. This seems to take away inherent power relations and struggles regarding this consensus. The CORSA approach advocates a pragmatic approach that translates conflicting problem perceptions into long-term abstractions and consequent manageable and governable practices. To this end, a number of concepts have been developed and experimented with, such as “transition arenas (TA) (Loorbach 2007, Rotmans et al. 2001), transition scenarios (Sondeijker et al. 2006), transition experiments (Kemp and van den Bosch 2006, van den Bosch and Taanman 2006), and a transition monitor (Taanman et al. submitted)” (Van der Brugge & Van Raak, 2007). Such notions are developed to imagine social, economic and institutional alternatives *outside* incumbent regimes. These ‘transition protocols’ often safeguard a pragmatic approach to steer sustainability-led shifts outside administrative and institutional centres (ibid). Such schemes situate the practice of politics outside institutionalised politics, foregrounding ‘alternative politics’ through creative consensus-building, reflexive steering and socio-experimental learning in other and overlapping arenas and spheres (Hendriks & Grin, 2007)⁷¹.

⁷⁰ This frame to transformative change is expressed by Kemp and Rotmans (2009). Significantly, they explain why the term ‘transition governance’ was avoided by Dutch policy makers in the early 2000s, as it would suggest too much ‘central steering’.

⁷¹ Transition arenas, for example, are understood as spaces for deliberation outside market arenas and

Slightly different from CORSA-based liberal politics, STIA expresses a more market-based understanding of liberal politics. This can be understood as *neoliberal* politics, or even techno-capitalist politics. STIA seems to understand market mechanisms and economic practices as assets and crucial ingredients to strategically shape transitions towards sustainable technologies and consumerism⁷². STIA argues that protected market niches and policy-supported innovations in dynamic markets might spur more environmental-friendly technologies (e.g. Caniëls and Romijn, 2008; Schot & Geels, 2008; Smith & Raven, 2012). Niches, here, are considered as innovations distant from power constellations that need smart economic and policy strategies to become fully acceptable technological products or services⁷³. A crucial challenge for the intellectual and social ambition of transition knowledge is that (neo-)liberal frames suggest little or no unequal power relations beyond state sovereignty and institutional systems. As Larsson argues, notions of ‘networks’ and ‘governance’ often operate as depoliticised steering and management, as they are allegedly opposed to institutional steering, state unity and governments (Larsson, 2013). There seems to be an underlying consensus that sustainable technologies and a green future are long-term objectives for everyone and that cooperations are struggle-free. For an adequate understanding of transition politics, we need to account for the (uneven) power-laden nature of all activities *outside* - and in relation to - the realm of state institutions and authorities.

Frame #3: Anthropocentric politics

The third political frame that is employed by virtually all transition scholars is an anthropocentric frame. One of the underlying assumptions of anthropocentric politics is the Cartesian split between human consciousness and matter. In this frame, there is an unbridgeable gap between human beings and their cognitive capacities (to think, to reflect, etc.), and everything else in the world (matter, animals, etc.) (cf. Wolfe, 2010). Anthropocentric politics is often embedded in the humanist romantic tradition of the 18th century and extends this frame to the sphere of culture and nature. Again, the Cartesian split is maintained and rearticulated. Human beings are seen as special species, imbued with agency and freedom, whereas social structures and non-human

policy arenas (Loorbach, 2007). This scheme is based on the classical (holy) liberal trinity of state, market and civil society as separate spheres.

⁷² Importantly, even though CORSA tries to bring alternative networks to the fore, remote from incumbent regimes and policy circles, a pragmatic understanding of politics through market dynamics still dominates.

⁷³ Despite differences between liberal and neoliberal transition politics, it seems that both STIA and CORSA assume that the spaces outside sovereign power and institutions, and the management of transitions through ‘niche support’ are about pragmatic politics in terms of negotiation and power free speech and ‘non-political’ practices (Loorbach, 2007, 2010; Hendriks, 2009; Grin, 2012). Often used dichotomies that support such (neo-)liberal transition frames are top-down vs. bottom-up, regime vs. niche, system regimes vs. self-organisation, state vs. civil society, public vs. private, policy arena vs. transition arenas, system vs. people, political vs. social, etc.

entities do not enjoy these privileges. The political dimension of this frame refers to the emphasis or accent on the human. STIA highlights the entanglement between social and technical features through socio-technical systems. The underlying ontology of ANT refers to the interrelated nature of socio-human realities (institutions, policies, codes, norms) and technical tools and artefacts (engines, cars, pipelines, etc.) (Rip and Kemp, 1998; Geels, 2002, 2005). However, STIA seems to privilege the human side and human realities of such systems, at the expense of the non-human. The complex notions of system innovations and *socio-technical* regime transitions are, often, *human and society oriented*. Creating new technological markets (solar panels), improving policy conditions (new regulations) and pursuing environmental innovations for human societies (green economy), are examples of this human privilege in technological and socio-technical transitions (Schot & Geels, 2008; Smith & Raven, 2012). Similarly, CORSA privileges the human over the non-human. Even though, ontologically, complex systems and societal regimes also refer to physical systems, ecological conditions and the built environment (as adaptive and co-evolving systems), there is a focus on issues of human governance and values (e.g. human learning and human wellbeing). Even though ‘system elements’ and attractors can indeed be anything (both human and non-human), such notions are usually translated into e.g. societal systems or human frontrunners (Loorbach, 2007; Rotmans & Loorbach, 2009). The Cartesian and romanticist human/non-human divide that haunts CORSA and STIA privileges human complex systems, social actors and the social in socio-technical systems. We need to move away from this old European legacy as it restricts the intellectual and practical imagination of transition discourse.

3.4 Spatialising transition politics:

The urban as a spatio-historical setting

In order to address and tackle these challenges, we should take a different starting point. In grasping sustainable transition politics beyond nation-state arrangements, (neo-)liberal deliberative settings and human hegemony, I argue that we should radically *spatialise* transition politics. More specifically, I argue that sustainability transitions and their politics should be approached as complex processes that are deeply entangled with *urban* spaces and geographies. This specific spatial focus is relevant given the historical role of cities in accommodating both unsustainable systems and sustainability discourses (see also Chapter 1). In order to grasp this logic, we first need to understand the significance of urban spaces in sustainability transitions.

The urban nature of sustainability transitions

Even though most transition scholars acknowledge that transition processes take place at multiple analytical levels (MLP, TM), their specific spatial and geographical aspects have been overlooked for a long time. Only recently, a number of contributions have started exploring geographical variations and spatial issues in the context of (socio-technical) sustainability transitions (e.g. Lawhon & Murphy, 2011; Coenen & Truffer, 2012; Hodson and Marvin 2012; Truffer & Coenen, 2012; Hansen & Coenen, 2013)⁷⁴. Even though Bridge et al. explicitly state that the “low-carbon energy transition is fundamentally a geographical process” (2013: 331), spatial and geographical accounts of transitions lack proper attention. In particular, the specific locality of cities and urban settings has been overlooked in transition research⁷⁵. There are several reasons for this. First, there has long been a *temporal* focus associated with an a-spatial and a-geographical understanding of socio-technical transitions and transition management. As Coenen et al. argue: “what is gained in a historical treatment has come at the expense of a neglect of spatial dimensions. In particular, transition analyses have overlooked where transitions take place, and the socio-spatial relations and dynamics within which transitions evolve” (2012: 968-969). Second, related to urban spatiality, many contributions do not address ‘sustainability’ and ‘transitions’ as a particularly urban concern (cf. Nevens et al., 2013: 112). Nevertheless, some contributions have paid attention to urban environments. Some of these contributions focus on a particular sectoral issue, such as sustainable urban water systems (Bos & Brown, 2012; Ferguson, Frantzeskaki & Brown, 2013).

Most transition scholars that focus on urban contexts emphasise the *cross-sectoral* nature of sustainability transitions. In 2000, Rotmans and Van Asselt already called for the need to investigate the integrated nature of societal concerns and systemic problems at the level of (European) cities. They developed a planning tool to assist monitoring of innovations and interventions towards ‘sustainability cities’. The authors argue that adequate planning for sustainable city planning depends on the integration of ‘traditional’ physical interventions (housing, pipelines, etc.) and more environmental and cultural issues (diversity, information). More recently, a focus on ‘urban sustainability transitions’ has been addressed as a ‘new’ field of study for a number of reasons. As Coenen et al. state “[e]ven though the opportunities of investigating transitions in urban context or bringing in the spatial element in transitions studies are arguably relevant and valuable both socially and for policy” (Coenen et al., 2012). Cities, then, are often framed as places where great socio-technical

⁷⁴ See also Avelino, 2011; Coenen, Benneworth & Truffer, 2012; Späth & Rohracher, 2012; Bridge, Bouzarovski, Bradshaw & Eyre, 2013.

⁷⁵ However, whenever space and place is indeed addressed, often there seems to be a non-urban focus (cf. Raven, Schot & Berkhout, 2012; Hodson & Marvin, 2010).

systems emerged and developed since the mid-19th century (sewers, pipelines, energy and mobility infrastructures, etc.). The interlocked and complex relationships between these socio-technical systems in view of contemporary energy and environmental concerns requires a more integrated, nested and spatialised approach. Cities, from this angle, operate as e.g. ‘mediating spaces’ for technological transitions (Hodson & Marvin, 2009, 2012), understood as ‘experimental labs’ for urban renewal (Nevens, et al., 2013) or in terms of adjusting ‘urban regimes’ (Quitau, et al., 2013).

I argue that cities are not simply contingent ‘analytical choices’ to understand sustainability transitions, but perhaps even *constitutive* for sustainability transitions as such. One could even say that other scales (e.g. sectors, national, European, global, neighbourhoods) through which sustainability transitions are understood, conceptualised and pursued, are not only linked to the urban remotely, but are deeply *entrenched* with socio-historical processes of urban space-making. To put it unequivocally, urban spatialities are to be considered as a necessary condition to understand technological system innovation and sustainability transitions discourses.

Complex cities and socio-technical networks

Recently, a number of academic works have examined the *urban* nature and setting of socio-technical transformations (Bulkeley, et al., 2010; Bulkeley, et al., 2014) and complex sustainability-led shifts in cities all over the world (Dixon, Eames, Hunt & Lannon, 2014; Murphy, 2015; Loorbach, Wittmayer, Shiroshima, Fujino & Mizuguchi, 2016). Naess and Vogel (2012) have argued how transition research, in particular STIA (cq. the MLP), relates to ‘sustainable urban development’. Their intervention is of particular interest here. Naess and Vogel argue that cities offer interesting sites to understand how sustainability transitions come into being and develop. An urban transition, from an MLP point of view, refers to “changes in the ways in which urban structures change” (Naess & Vogel, 2012: 6). They suggest that the MLP is ill equipped to actually understand such urban transitions. The spatial nature of cities and urban processes significantly differ from socio-technical systems and technological innovations relying on a specific regime. Naess and Vogel state that:

“Unlike a technical invention, such as an automobile, cities are shaped in very different ways dependent on the natural, social, cultural, economic and political conditions. Cities vary very much in population size, composition of trades, affluence level, positions in hierarchies of central places, access to national or international transport infrastructure, etc., as well as in climate, land use in the hinterland, etc.” (Naess & Vogel, 2012: 7).

Even though technological and socio-technical (conceptual) frames are very helpful in some contexts, addressing the interrelated and complex nature of urban spatialities

requires a different conceptual apparatus. The ordinary vocabularies that emerged with transition knowledge since the late 1990s, especially on system innovation and socio-technical transitions, seem to meet their limits in confronting complex urban spatialities. As Naess and Vogel put it:

“The complexity of cities implies that an assessment of whether or not a transition towards sustainability is taking place must be based on a range of indicators rather than just recording whether one kind of technological system is being replaced with a new system. The differences between ‘technologies’ (for example low-density versus high density urban form) are often gradual, not categorical” (Naess & Vogel, 2012: 8).

Consequently, it is unclear when an urban transition actually occurs or has occurred. A more *gradual* understanding of urban discontinuities is required. Naess and Vogel call for a more fine-tuned sensibility to understanding (socio-technical) regimes and niches:

“When it comes to urban spatial structures and mobility patterns, the situation is less clear-cut. Several different ‘technologies’ for e.g. housing, neighborhood design and urban transportation often exist alongside each other with relatively stable market shares and without clear signs of some solutions replacing their competitors” (Naess & Vogel, 2012: 8).

Even though Naess and Vogel mostly focus on mobility and housing, their argument is clear. They seem to suggest that transition research, in particular MLP (or broader: STIA), requires a conceptual reframing of how the interrelated nature of urban technologies (e.g. housing, mobility), and (neo-)liberal markets and lifestyles are associated with urban transformations. Modern urban spaces can indeed be understood as the nodal points of complex technological innovations, socio-technical regimes and epicentres of societal functional systems and everyday practices. As Luke argues:

“Today’s “global cities”, then, are entirely new built environments tied to several complex layers of technological systems whose logistical grids are knit into other networks for the production, consumption, circulation, and accumulation of commodities. Along with sewer, water and street systems, cities are embedded in electricity, coal, natural gas, petroleum, and metals markets in addition to timber, livestock, fish, crop, and land markets. All of these links are needed simply to supply food, water, energy, products, and services to their residents” (Luke, 2003: 12).

Following Luke, and Naess and Vogel, I argue that a simple scalar analytical focus is problematic, given the many historical urban-related traces embedded in socio-technical innovations, sustainability concerns and modern societal transformations.

Discourses and practices around sustainability transitions are deeply entangled with *spatial and historical processes of urbanisation*. As Monstadt (2009) argues: “urbanization has only become possible by sociotechnical innovations in water supply, sanitation, energy supply, transportation, etc.”. Similarly, Hommels conceives cities as “gigantic living organisms [that] embody the greatest concentration of technical networks” (2005: 324). This means that there is an explicit historical conditionality of socio-technical systems innovations and urbanisation. Significantly, renowned urban scholar David Harvey explicitly links (historical) technological innovations to urban spaces and processes. His insight on this is worth quoting here:

“Many, if not all, of the major waves of innovation that have shaped the world since the sixteenth century have been built around revolutions in transport and communications: the canals, bridges and turnpikes of the early nineteenth century; the railroad, steamboat and telegraph of the mid nineteenth century; the mass transit systems of the late nineteenth century; the automobile, the radio and telephone of the early twentieth century; the jet aircraft and television of the 1950s and 1960s; and most recently, the revolution in telecommunications. Each bundle of innovations has allowed a radical shift in the way that space is organized, and therefore opened up radically new possibilities for the urban process” (Harvey, 2001: 20).

So, we can argue that cities and urban areas are not to be understood as a ‘specific scale’ or a ‘contingent geographical location’, but as socio-historical spaces that have produced the very conditions for and concerns around the management (or governance) of ‘(un)sustainable’ socio-technical systems and practices.

The political in urban sustainability transitions

If we pull apart the notion of ‘urban sustainability transitions’, we have to consider the historically embedded political nature of urban sustainability concerns. The historical concern of urban (un)sustainability can be traced back to over 10.000 years when agricultural revolutions triggered the emergence of human civilisations and the birth of cities as socio-ecological formations (Soja, 2000), and - more recently - around modern urbanisation in the 18th and 19th century. As urban and critical geographers have shown, metabolic processes embedded in urbanisation processes since the industrial revolution have increased tensions within the economic system (Harvey, 1985). Even more recently, ‘urban globalisation’ (Rusteikienė, 2008) has created environmental concerns since the 1970s, triggering tensions between economic and ecological values and judgements, but also many other concerns (Hall & Hubbard, 1996; Davidson & Martin, 2013). The many uneven political, economic and cultural developments at the intersection between globalisation (as transnational and inter-spatial processes) and urbanisation shaped conditions for sustainability transition

discourses (Appadurai, 1996, 2001; Perrons, 2004; Harvey, 2008; Heynen, Kaika & Swyngedouw, 2006; Kreuger & Gibbs, 2007). Some scholars even argue that one cannot understand changes related to sustainability without understanding how human ecologies, industrial societies and cities co-emerged and developed throughout history (Rees & Wackernagel, 1996).

This suggests that, today, the development of technologies and socio-ecological systems in the city are also *political* issues. It is instructive to quote Naess and Vogel in this context:

“(…) in contemporary (*neo-liberal* European societies, sociotechnical regimes are increasingly becoming multi-modal rather than single-modal: there should be ‘something for every taste’. Combined with the inherited material structures facilitating different modes of housing and other urban functions as well as transport, this speaks in favor of characterizing *multi-segmented regimes* as typical for urban land use and transportation in many European cities” [italics, SJ] (Naess & Vogel, 2012: 9).

Neoliberal urbanisation feeds on differentiation and multiplicity. Multi-directionality and especially *uneven* spatial developments are never natural phenomena. As Kaika argues: “The idealized visions of how nature would sanitize the city - both materially and spiritually - celebrated a particular imagining of a manufactured ‘nature’ as a healing force while condemning the ‘nature’ of the capitalist city as dehumanizing” (2005:19). Shelter, food, hygiene, medicine and consumer commodities were broader emancipatory means for big rural populations and the urban poor (ibid: 17). As such, broader historical urban transformations cut across local, national and global ties and “occur in realms of power in which actors strive to defend and create their own environments in the context of class, ethnic, radical, and/or gender conflicts and power struggles” (ibid: 25).

Erik Swyngedouw nicely portrayed an image of this radical entanglement of social, environmental and physical relations in contemporary cities, and what this tells us about the transformations of urban space vis-à-vis *sustainability* concerns:

“Imagine, for example, standing on the corner of Piccadilly Circus in London, and consider the socio-environmental metabolic relations that come together in this global-local place: smell, tastes, and bodies from all nooks and crannies of the world are floating by, consumer, displayed, narrated, visualized and transformed. The “Rainforest” shop and restaurant play to the tune of eco-sensitive shopping and the multi-billion pound eco-industry while competing with McDonalds’ burgers and Dunkin’ Donuts, whose products – like burger, coffee, orange juice, or cream cheese – are equally the result of processes that fuse together and interconnect social and biochemical relations from many places, near and far away. Consider how human bodies – of migrants, prostitutes, workers,

capitalists – spices, clothes, foodstuffs, and materials from all over the world whirl by. The neon lights are fed by energy coming from nuclear power plants and from coal-, oil-, or gas-burning electricity generators. Cars, taxis, and buses move on fuels from oil-deposits (now again from Iraq) and pump CO₂ into the air, affecting peoples, forests and climates in places around the globe. All these flows complete the global geographic mappings and traces that flow through the urban and “produce” London (or any other city) as a palimpsest of densely layered bodily, local, national and global – but depressingly geographically uneven – metabolic socio-ecological processes. This intermingling of material and symbolic things produces the vortexes of modern life, combines to produce a particular socio-environmental milieu that welds nature, society, and the city together in a deeply heterogeneous, conflicting and often disturbing whole (Swyngedouw, 1996)” (Swyngedouw, 2006: 20).

This image elucidates that many of the concerns about ‘sustainability’ are inherently conflictual and come together in very concrete urban realities. Significantly, since the mid-1990s, literally thousands of networks (including policy makers, politicians, scientists, citizens groups, businesses, etc.) have taken up initiatives to address local sustainability challenges (Birch & Wachter, 2008). It has become virtually impossible to find a large city that does not have a strategic plan concerning sustainability (cf. Nevens, et al., 2013; Frantzeskaki, et al., 2013; Duffy & Jeffries, 2011; Loorbach 2009; Vergragt & Szeijnwald Brown, 2010; Bulkeley et al. 2010). However, urban sustainability has predominantly been considered as a technological, social, economic, ecological or cultural issue, not as a *political issue* (cf. Levy, 1997). The argument goes, why disagree over sustainability? Who can ever be against being ‘sustainable’ and living in a more liveable world? This, again, fits in our broader post-political *Zeitgeist* (see above). The burgeoning narratives and practices around ‘sustainable cities’, I contend, can be situated at the centre of urban transition politics.

3.5 Re-politicising transitions through the urban

We are now able to glue together our problematisation of transition politics and urban spaces. I argue that cities offer interesting sites to further explore sustainability transition politics, both theoretically and empirically. Unfortunately, however, many spatial accounts in transition research are also based on depoliticised notions. In reviewing the role of space and geography in transition literatures, Hansen and Coenen conclude that “[g]enerally, a distinction can be made between studies that take a perspective in line with more traditional approaches in *economic* geography, stressing the positive influence of geographical proximity in stimulating network formation (e.g. Coenen et al., 2010), and studies that draw heavily on the relational approach,

highlighting that space is *socially* defined (e.g. Raven et al., 2012)” [italics, SJ] (2013: 13). The spatiality of transitions seems to be approached from an economic or social point of view. In both cases, the inherent *politics* associated with the socio-material (re)making of places and spaces seems to be absent or marginal(ised). Alternatively, we should politicise the spatial (and spatialise the political) by reframing urban space-making. The socio-material and complex histories of cities offer many entry points. Importantly, this means that even though I consider sustainability discourse and speech to be ‘symbolic’ frames that recently emerged, they also refer to specific technological, economic and socio-ecological transformations.

If we want to conceptualise the transition politics of urban spaces, we should reframe how transition research currently understands this problematic. Most importantly, resonating with STIA and CORSA, my general understanding of ‘a transition’ refers to the rise and normalisation of a specific phenomenon. One can examine electric cars, the Internet, ideal body images, fashion, cultural codes, etc. in terms of transitions. In our case, however, we aim to understand the emergence and normalisation of the phenomenon ‘sustainable cities’ and ‘sustainable urban spaces’. As we have seen, this does not imply identifying and reporting on natural or teleological processes of ideal sustainable urban environments. Our more political focus here seeks to understand transition politics in terms of conflicts and struggles associated with the emergence and establishment of a phenomenon. We should be able to address such struggles beyond the contingent political character of ‘Westphalian’, ‘(neo-)liberal’ and ‘anthropocentric’ politics. Furthermore, an adequate understanding should also move away from insights from economic and social geography, which in transition research often downplays the primacy of struggle and uneven power relations in processes of urbanisation. We should not approach transition politics of cities in terms of socio-economic geographical differences, or in terms of state legitimacy, deliberative democratic debates and market-models.

Fortunately, we do not have to come up with alternatives out of thin air. A number of scholars in the field of transition studies provide us with hints for this endeavour. In order to move away from understanding politics as nation-state politics and as deliberation among equal human beings, we should more radically centre-stage the urban. In line with the challenges I discussed earlier, I present some hints and clues to move beyond Westphalian, (neo-)liberal and anthropocentric transition politics. In some instances, there are linkages with issues of urbanisation and sustainable cities, in other instances not. In any case, these hints are the basis for an alternative vocabulary and understanding of the transition politics of sustainable urban spaces. I briefly present three types of hints that together provide pathways for a conceptual reframing: (1) *spatiality*; (2) *antagonisms*; (3) and *the post-human*.

Spatiality in sustainability transitions

If we focus on urbanisation processes to grasp transition politics, we are able to overcome more traditional politics in terms of the Westphalian system and (neo-)liberal discourse. A more decentred spatial understanding of legitimacy and politics may support “disclosing the institutional contingencies and particularities of the various spatial contexts where transition pathways take place and, consequently provide an important explanation of the spatial unevenness of sustainability transition pathways” (Coenen & Truffer, 2012: 369). Hansen and Coenen envision what an inter-spatial approach to transitions and its governance might entail:

“The geography of sustainability transitions captures the distribution of different transition activities across space. Transitions are constituted spatially and unpacking this configuration will allow us to understand better the underlying processes that give rise to these patterns. This requires both contextual analysis of the particular settings (spaces) in which transitions are embedded and evolve while at the same paying attention to the geographical connections and interactions (i.e. the spatial relations) between that space and other spaces” (Hansen & Coenen, 2013: 6).

This means that we have to radically move away from looking at the nation-state and centralised power structures. We must sensitise the micro-dynamics of space-making and transformations. Regarding the politics of transition processes, a number of scholars have explicitly addressed *uneven* geographical developments that require further exploration. Similarly, Coenen et al. (2012) state that in order to more adequately understand the spatial dynamics of transitions we should understand that “scales are actively constructed through socio-spatial struggles by actors seeking to achieve their ends” (2012: 976). Instead of taking electoral politics and legal-administrative bodies as starting points, multiple spaces and power-laden nodal points are assumed. This inter-spatiality of transitions as well as the inherently uneven dynamics and multi-territoriality of transition (management) practices require further elaboration. To this end, we might have to say goodbye to rigid social ontologies and conceptions embedded in transition research (systems, levels, structures, etc.). Alternative labels such as multi-scalarity (Coenen & Truffer, 2012), trans-locality (Brickell & Datta, 2011) and assemblages (Bridge et al., 2013) seem more promising in this regard. Such spatial notions account for the intersections and uneven differentiations between different spaces. Hansen and Coenen propose a preliminary definition of what such a geography-informed understanding of transitions means:

“When asking the ‘bigger’ question why transitions unfold unevenly across space, it becomes obvious that further empirical and theoretical research is needed. (...) the consensus is still *that* context and scale matters while there is still little generalizable knowledge and insight about how

context and scale matters for transitions. Moreover, most studies on the geography of transitions seem to have been mainly layered on top of existing theory in the transitions literature, relying heavily on concepts and frameworks such as MLP, TIS and SNM. Very few studies in the geography of transitions field suggest alternative frameworks to study sustainability transitions and thus challenge current theorisations of transitions and its geographies” (Hansen & Coenen, 2013: 17).

These ‘hints’ do not only allow me to understand sustainability transitions in a spatial way (i.e. urban), but also promise a radically different understanding of transition politics (beyond the Westphalian and (neo-)liberal frames). In their work on practices and social theory in the field of transitions towards sustainable agriculture, Duineveld and Dix (2011) highlight how Foucault’s approach to power and discipline could reframe our understanding of the ‘transition manager’ in terms of his/her academic engagements and everyday practices. While provides a nice example of how such a perspective might look like in urban settings. Aidan While puts it like this: “if urban planners have been described as ‘doctors of space’ (Levevre, 1991: 99), urban managers will increasingly be seen as ‘doctors of carbon flows’ charged with securing a carbon fix within limits set by targets and the costs of carbon” (While, 2011: 48). Management arrangements of urban (carbon) flows reshape the relationship between cities, but also the distributional politics within cities (e.g. different health effects for poor and wealthy residents). Such hints allow us to look into the everyday and the mundane as potential expressions of political practice. Furthermore, Avelino suggests going beyond functional and sectoral systems, and to explore dynamics of geopolitics and transnationality in transitions (Avelino, 2011: 363). Decentring struggles and power in this way enables us to go beyond conceptual statism.

Antagonisms in sustainability transitions

In line with hints to account for a more decentred and spatialised understanding of legitimacy and politics, we have to look for other clues that challenge Westphalian and (neo-)liberal transition politics. Take for example the hints provided by Hendriks (2009) on ‘discursive and agonistic (conflictual) versions of democracy’. This post-deliberative framing of transition politics understands ‘discourse’ and ‘politics’ as follows: “To be clear, the term [discourse, SJ] is *not* being used in its Foucauldian sense to describe a shared set of constructs. Rather discourse is used in a loosely Habermasian way to refer to a social communicative process where actors dispose and discuss different viewpoints, ideas, stories and arguments” (2007: 337). Hendriks and Grin, however, seem to flirt with a combination of Habermas and Foucault, stating that “discourse is used here descriptively to capture a whole gamut of communication that extends well beyond rational argumentation and consensus to include story telling,

rhetoric, agonism, contestation and dissent¹²⁷ (ibid)⁷⁶. Such a broader conception of politics, based on a ‘conflict ontology’ and struggle (Geels, 2010), also resonates with Voß en Bornemann (2011) who define politics by highlighting struggle beyond institutional politics and governance arrangements. Geels very briefly mentions “Hegelian Marxists, critical theorists and Foucault[ian]” approaches in relation to the “ideological dimension of power” (Geels, 2010: 506). However, Geels seems to equate the latter with “influencing the preferences of subordinate groups [so] that they do not feel the urge to place issues on the agenda” (ibid). Unfortunately, it is unclear why and how this refers to Hegelian Marxism, critical theory and/or Foucault-informed approaches⁷⁷. We might take another hint from Avelino’s work on power in transitions, which addresses issues of unequal forms and relations of power embedded in transition management (Avelino, 2011). Interestingly, she calls for further explorations in terms of political theory, ethics and democracy in transitions. She employs insights from Foucault but also notes, “[t]he challenge (...) is also to translate the highly abstract notions in political philosophy into a more accessible language, by applying them to real life dilemmas in sustainability politics, and by mapping different approaches to ethics that decision-makers could choose from when dealing with these dilemmas” (Avelino, 2011: 359). As Avelino herself suggests, her reading of ethics literature is “rather shallow” and “there is still a large field of more philosophical political theory on power that needs to be explored further (e.g. Nietzsche, Foucault, Arendt)” (ibid). These hints might also help us understand transition politics without liberal frames, including the challenge of niche markets outside politics and power struggles. This nicely resonates with a more *political* reading of sustainability, that is to say, beyond its traditional technological, environmental, social and/or economic connotations (Levy, 1997).

The post-human in sustainability transitions

A post-human (or post-anthropocentric) politics in sustainability transitions might be explored on the basis of the ‘politics of things’ as addressed by Hendriks (2009) and Vellema’s reference to ‘politics of materiality’ (Vellema, 2011). Vellema, for example, draws from Benton who, in turn, tries to “overcome the persistent dichotomies or categorical oppositions: mind-body, culture-nature, society-biology, meaning-cause

⁷⁶ However, it seems that their analytical understanding of discourse and politics is mostly Habermasian – and not Foucaultian – intersecting with a Benhabibian “discourse model of public space”, as they elaborate in footnote 12. In other words, a more radical frame of politics might be productive to go beyond institutional and especially (neo-)liberal frames, as is indeed the case in the work of Foucault and others. Hendriks and Grin hint upon these works without actually engaging with the work and legacies of Foucault.

⁷⁷ Given that these labels are used without any reference or explanations, one cannot help but think that these references exemplify exotic name-dropping in a milieu of relative laymen.

and human-animal” (2011: 83). Vellema, also referring to a Marxist understanding of technology and labour, invites us to further our understanding of materiality and social change without “an over-socialised view of transitions”. Such Over-socialisation of *socio*-technical regime innovations and sustainable development “then essentially becomes a matter of politics and morals, analytically remote from the reality in the interface between human social practices and their material conditions and consequences” (Vellema, 2011: 85). I consider this as an invitation to further investigate the politics of (sustainable) technologies and *material* networks in relation to urban dynamics. The linkage between social and physical distance/proximity in transition processes needs further elaboration, especially “in order to comprehensively understand in which situations and for which purposes relations at different scales matter” (Hansen & Coenen, 2013: 15). We should also mention Lawhon and Murphy’s work on the politics of socio-technical systems and participating materialities (Marres, 2012). They state that “[a] particularly promising direction for the analysis of linguistic power, and its relational and socio-spatial manifestation in socio-technical regimes, can come through an engagement with Foucault’s governmentality (cf. Watts, 2003b) or environmentality (cf. Agrawal, 2005)” (Lawhon & Murphy, 2012: 367-368). Such specific hints might open up a new conceptual horizon. Another hint in this context comes from Hodson and Marvin (2012), who argue that an actor-network perspective bears a number of theoretical entry points to further such accounts, circumventing reified analytical categories such as ‘regimes’, ‘niches’ and ‘arenas’ (which indeed contain spatial connotations), especially in material contexts of urban landscapes. Actor-network theory might be a fruitful entry point to deconstruct the non-geographical assumptions underlying socio-technical (and complex) systems thinking and transformative practices (Hodson & Marvin, 2012). Such “alternative frameworks” concerning the “geography of transitions” (Hansen & Coenen, 2013: 17) can indeed be explored and elaborated further taking into account other strands within the fields of spatial studies and geography (e.g. critical geography and urban sociology).

3.6 Conclusion: Advancing transition research

This chapter aimed to introduce transition research and critically assess how it conceptualises politics in urban settings. We have seen that transition research emerged in tandem with policy planning in a variety of domains (e.g. energy, mobility, agriculture). Transition research has proven to be quite fruitful for contemporary policy making and multi-actor governance. However, issues of conflicts and politics are often downplayed and threatened in a post-political fashion in transition theories, as evidenced by the (post-)political frames discussed in section 3.3. I have argued that

spatialising sustainability transitions might overcome these challenges. In particular, urban spaces enables us to fruitfully reframe conflicts and struggles associated with sustainability transitions. Transition research seems somewhat limited to actually grasp urban (transition) politics, but a number of hints and clues allows us to further our understanding of urban politics of sustainability transitions. The next chapter seeks to explore an analytical vocabulary of transition politics that sensitises how antagonistic struggles, everyday power dynamics and post-human politics are engrained in sustainable urban space-making.



Chapter 4

Politics of urban space-making

Conceptualising a transition analytics of urban spaces

Chapter 4. Politics of urban space-making: Conceptualising a transition analytics of urban spaces

*“I hold it that a little rebellion now and then is a good thing,
and as necessary in the political world as storms in the physical”.*

Thomas Jefferson

*“True power does not need arrogance, a long beard and a barking voice.
True power strangles you with silk ribbons, charm, and intelligence”.*

Slavoj Žižek

“Every revolution evaporates and leaves behind only the slime of a new bureaucracy”.

Franz Kafka

4

4.1 Introduction

During the process of critically reviewing the transition literature, my motivation to rearticulate sustainability transition discourse increased. My quest to deconstruct work in transition research on the politics of urban space-making resulted in disclosing an alternative conceptual vocabulary and analytical gaze. This chapter seeks to explore a conceptual vocabulary to understand the struggles associated with the rise of sustainable urban spaces.

This chapter is structured as follows. Section 4.2 discusses theories on radical urban politics in relation to sustainability transitions. I first review radical political theory and critical urban research to understand how sustainability transitions can be conceived in terms of social antagonisms and urban struggles. Specific work in the field of ecological urbanism and urban political ecology then informs a more focussed discussion of how radical urban *ecological* politics relates to urban conflicts and struggles. These insights allow me to understand transition politics beyond Westphalian, (neo-)liberal and anthropocentric assumptions. Importantly, we need to link these radical theories on urban politics to *everyday* governmental

concerns in urban contexts. Therefore, section 4.3 draws on Foucaultian research on governmentality tailored to urban settings to highlight the pragmatic and technical aspects of urban politics (urban governmentality). Foucault's work offers a means to sensitise and historicise how issues around (un)sustainability emerge as objects for urban governing concerns (e.g. hygiene, health, socio-economic conditions, environment). Again, this perspective moves away from Westphalian, (neo-)liberal and anthropocentric frames of government and politics. Section 4.4 brings key insights from transition research together with literature on radical urban politics and urban governmentality, in order to re-conceptualise transition politics in urban settings. I introduce a *transition analytics of urban spaces*. This analytics conceptualises how struggles and negotiations shape the transformations of urban spaces. An analytics also enables me to sensitise uneven developments associated with the recent emergence and establishment of so-called 'sustainable cities'. In more methodological terms, it presents a heuristic to critically describe and explain the rise of sustainable urban spaces. Finally, section 4.5 reflects on the contribution of this chapter before moving to the empirical studies.

4.2 Politicising (un)sustainable cities:

Transitions and radical urban politics

As discussed in Chapter 3, some scholars in the field of transition research provide hints to move beyond deliberative and liberal modes of democracy and politics (Hendriks, 2009; Avelino, 2011; Jhagroe & Loorbach, 2015). Perspectives on radical and antagonistic politics might illuminate how dissensus and transformative struggles relate to urban systems. This section aims to understand how sustainability transitions can be understood in terms of radical politics in general, and in urban settings specifically. Here, I draw on *radical political theory* and *critical urban theory*.

Transitions and radical politics

Political thinkers like Laclau, Mouffe, Rancière, Lefort and Badiou argue that politics does not refer to 'who gets what, when and why' in 'the political system'. They move away from conflicts and struggles in terms of aggregated and institutionalised politics or horizontal consensus-building. Rather, they focus on social antagonisms and marginalised voices by foregrounding the radical contingency of any system of power (economy, law, language, race, gender, etc.). Such scholars highlight the *contingent* 'foundation' of political institutions, democratic procedures and political agents on the basis of the distinction between 'politics' and 'the political'. This politics/political difference

is important for any radical political theory and practice⁷⁸. From this differential perspective, politics refers to struggle and conflict captured by and inscribed in institutions, procedures and public debates. As such, politics, by definition, downplays radical dissensus and fundamental conflicts and turns them into manageable concerns. Whenever closure occurs and radical contingency disappears, society actually begins anew on the basis of ‘sedimented’ norms, institutions and practices. Informed by Gramsci’s notion of hegemony, Laclau and Mouffe (2001) argue that every discourse relies on nodal points that translate socio-historical contingencies into ‘meaningful’ categories and practices (e.g. economic relations, legal entities or city life). Anytime there is a fixation of this kind, it downplays and leaves behind a discursive struggle and ‘social losers’. In the words of Laclau and Mouffe: “Any discourse is constituted as an attempt to dominate the field of discursivity, to arrest the flow of differences, to construct a centre” (Laclau & Mouffe, 2001: 112). Importantly, this does not mean that struggles simply disappear whenever social norms and structures are established. The political (as different from politics) refers to uncaptured and un-institutionalised forms of social struggle and conflict. This non-inscribed (or presocial) nature of the political foregrounds the ways in which radical contingency of the unheard and unseen insists and persists in the hegemonic order (the poor, homeless, immigrants, sweatshop workers, animal lives, etc.). Since society is never a given ‘fact’, we should account for the ways in which it structurally excludes certain forms of life and experience. Such an approach suggests that what counts as ‘politics’ might be inscribed in a separate social sphere (i.e. in political institutions and procedures), but ‘the political’ is actually *opposed* to all kinds of social life (Torfing, 1999).

The relationship between institutionalised and captured politics versus antagonistic struggles of the political is crucial. If we aim to understand radical politics in relation to transitions (as long-term transformations), we should be able to understand politics as a means to challenge society and institutions that govern life. To me, this is an adequate starting point to grasp transition politics, i.e. as long-term transformations of governing social life through series of struggles, conflicts and negotiations. The politics of sustainability transitions, from a radical political perspective, cuts against the grain of how transition researchers (and beyond) normally make sense of political action, democratic procedures, deliberation and society (Loorbach, 2007; Hendriks, 2009). Society can be indeed transformed, so goes the argument, but only insofar as antagonisms and radical democratic emancipatory forces are accounted for *within* social and political institutions. I argue that if we adhere to this framing of institutional

⁷⁸ Thinkers such as Lefort, Rancière, Laclau, Nancy and Badiou (but also others such as Žižek, Lyotard, Deleuze & Guattari and Derrida) use a ‘politics/the political’ scheme in *different* ways (in French, this difference is signified by the terms *le politique* and *la politique*). Nevertheless, all radical political theories are grounded in such a frame.

transition politics, there is simply little to no transition *politics* taking place. In line with radical political thought, actual transition politics highlights the radical contingency of social, economic and political *institutions* and challenges the ways in which systems, spaces and practices *have become* normal. Let's illustrate this with an example. If a network that presents itself as 'democratic' and 'open', but can only be accessed by certain humans from a number of social classes in certain regions of the world, it is clear that it excludes non-humans (birds, ants, trees, etc.), other social classes and other regions. These 'excluded others' cannot be accounted for within the discursive parameters of the realm of politics. The ways in which these excluded others are marginalised, but nevertheless impinge upon the alleged 'democratic decision-making process', can be sensitised with the notion of the political.

At a more general level, this focus on radical contingency and the alterability of regimes of representation resonates with some conflictual elements embedded in transition research (Geels, 2010). Even though most transition scholars have rarely sought to conceptualise the relationship between radical politics and transitions, it is clear that both CORSA and STIA (as the dominating transition approaches) also try to highlight the contingency of dominant societal regimes and technical systems. Interestingly, using insights from e.g. complexity theory, reflexive governance and strategic niche management, the transformability of hegemonic order is also addressed in transition research. In fact, the practice of transition management can be considered 'radical' (at least in theory), insofar as radical niches and transition arenas seek to transform incumbent constellations and regimes. However, as discussed earlier, the underlying conceptual frames of politics are often based on institutional logics or (neo-)liberal negotiations. This downplays the political potential of transition thinking and transition practice.

Alternatively, radical politics does not simply wants to 'get rid of' Westphalian institutions and deliberative debates, but rather opens up the horizon by accounting for the people, objects, ideas and experiences that are marginalised by hegemonic structures of power. Put simply, not everything and everyone is sensed, observed, included and governed *equally*. Therefore, radical politics critically examines how this unequal distribution and circulation of meaning and roles is and can be interrupted for a more pluralist, democratic and just order. From this perspective, long-term change does not rely on long-term goals or discursive notions ('sustainability', 'justice', 'green', 'democratic'), but precisely on the hegemonic struggle over what these notions mean in everyday material practices. Transitions can then be understood through radical struggles between opposing groups and ideals over how we experience, imagine and know society in the first place. Understanding transitions from a conflictual perspective means that apparent a-political spheres such as social, cultural and technological practices should be seen in relation to their underlying radical contingency and

transformative potential. Now that we have explored a general understanding of radical politics (vis-à-vis transitions), we can address the question: what does this mean in an *urban* context?

Urbanising radical politics

Understanding radical politics in urban settings requires a critical approach to urban histories, places and spaces. The field of critical geography has developed approaches and concepts to frame space, place and geographical locations in dynamic and dialectical terms. Space, according to virtually all critical geography scholars, is never neutral. It is embedded in unequal relations of power (Crang & Thrift, 2000; Baunder & Engel-Di Mauro, 2008). Importantly, spaces, from this point of view, are not empty containers that are waiting 'to be filled'. Rather, spaces are erratic trans-local processes that are always already filled with people, materials, humans, relations, symbols, etc. As Massey puts it, spaces are products of interrelations and heterogeneity, and are always 'works-in-progress' (Massey, 2005). Importantly, many critical geographers not only interrogate the making and unmaking of spaces, but also highlight the radical contingency of the meaning and materiality of urban spaces. Similar to radical political theorists, such scholars problematise and open up taken-for-granted spatial categories (e.g. street, city, region, nation) and accentuate the possibility for more just and democratic spatial organisations. This is especially significant as traditional state-bounded territories have been radically restructured in the previous decades, creating a 'disoriented state' and decentred spaces of government (Arts, Lagendijk, Van Houtum, 2009).

One of the disciplines I find particularly inspiring to understand urban places and spaces, is *critical urban theory*. Critical urban theory emerged in the post-1968 period from critical urban thinkers such as Lefebvre, Harvey, Castells and Marcuse. Critical urban scholars argue that heuristics that depoliticise urban space should be discarded. As Brenner states:

"Critical urban theory rejects inherent disciplinary divisions of labor and statist, technocratic, market-driven and market-oriented forms of urban knowledge. In this sense, critical theory differs fundamentally from what might be termed 'mainstream' urban theory – for example, the approaches inherited from the Chicago School of urban sociology, or those deployed within technocratic or neoliberal forms of policy science" (Brenner, 2009: 198).

Likewise, Lefebvre, a critical and neo-Marxist urban theorist, maintains that space is structured in very specific ways (e.g. in the name of public health or housing), always at the expense of other ways to organise the urban. Instead of seeing space as a given static entity, Lefebvre draws attention to the ways in which spaces are constantly

produced and reproduced. The production of space, for Lefebvre, is political because it is imbued with contradictions, conflicts and the struggle for domination and hegemony (Lefebvre, 1996, 2003). Space can indeed be a strategic tool to control and shape reality in specific (and therefore ideological) ways. In relation to the city, Lefebvre argues unequivocally:

“To claim that the city is defined as a network of circulation and communication, as a centre of information and decision-making, is absolute ideology; this ideology proceeding from a particularly arbitrary and dangerous reduction-extrapolation and using terrorist means, sees itself as total truth and dogma. It leads to a planning of pipes, of roadworks and accounting, which one claims to impose in the name of science and scientific rigour. Or even worse!” (Lefebvre, 1996: 98).

For Lefebvre, the city is the spatial organisation *par excellence* to address ‘modern progress’ and its paradoxical and conflictual dynamics. There is nothing harmonious about the city. In Lefebvre’s words: “The urban presents itself as a place of conflict and confrontation, a unity of contradictions” (Lefebvre 2003, cited in Brenner, 2014: 49). Resonating with the critical work of Lefebvre, some scholars have explicitly used the work of radical political thought (see above). For example, Hankins and Martin employ the radical political theory of Rancière to understand urban politics. They state that “Rancière’s ‘police’ includes, for urban politics, the ordering and naming of territories such as neighbourhoods as specific, bounded, often very local sites of participation in urban governance” (Hankins & Martin, 2014: 28). Such urban sites of government then become interrelated spaces of “ordering, stabilizing and partitioning the sensible” (ibid). Following Rancière’s radical political theory, urban policing refers to *depoliticising* urban challenges and urban life. More radical political dynamics should be located in places that “enable dissensus” and “enable the interruption of ordering” (e.g. destabilising categories of territory, residents, etc.). Adopting a post-Marxist frame, Hankins and Martin exemplify how the shift from modern industrial urbanisation (with its class struggles) to post-industrialisation (with its depoliticised identity politics) does not coincide with the disappearance of socio-urban antagonism (Davidson, 2014: 191).

Marxist geographer David Harvey argues even more insistently that what many called the shift from ‘industrial to post-industrial’ urbanisation was, in fact, marked by antagonistic struggles and unequal relations of power. Economic markets that produced actual material goods were in crisis and slowly evolved into global financial centres that created and intensified unequal capital accumulation (Harvey, 1990). Housing markets were enforced upon city centres, gentrification increased in the global North and South, while markets cooperated with governments to produce attractive cities through city marketing, further shaping neoliberal cities. In Harvey’s words:

“Neoliberalization has not been very effective in revitalizing global capital accumulation, but it has succeeded remarkably well in restoring, or in some instances (as in Russia and China) creating, the power of an economic elite. The theoretical utopianism of neoliberal argument has, I conclude, primarily worked as a system of justification and legitimation for whatever needed to be done to achieve this goal” (Harvey, 2005: 19)

Harvey and Lefebvre share a Marxist background, allowing them to critically theorise how material conditions in cities (working, housing conditions, parks, etc.) relate to socio-economic programmes and governmental interventions. The works of Lefebvre, Harvey (and Castells) inspired many critical geography and political theory scholars. In the context of current developments, they re-conceptualise linkages between transformative politics and urbanisation.

Neil Brenner’s recent work in the field of critical urban research is particularly instructive here. Brenner argues that “(...) critical urban theory emphasizes the politically and ideologically mediated, socially contested and therefore malleable character of urban space – that is, its continual (re)construction as a site, medium and outcome of historically specific relations of social power” (ibid). Importantly, as argued by Brenner and others (2011), the conceptual lexicon of many mainstream social scientists today requires critical interrogation and revision. Instead of speaking of cities as givens, it is more appropriate to use notions of *urbanisation*, i.e. the city as a process. The modern urban fabric and its complex processes should be conceived as ‘stretched’, i.e. covering many interrelated spaces, territories and relations of power. This also means that stable conceptions of town/country or urban/rural rely on hegemonic frames of ‘the city’. We have come to know (and believe) these labels as territorial city boundaries, nation-states and other historically produced ‘givens’. For Brenner, critical urban scholarship today should focus on the “wide-reaching engagements - theoretical, concrete *and* practical - with the planetary dimensions of contemporary urbanization across diverse places, territories and scales” (Brenner, Madden & Wachsmuth, 2011: 227).

Politicising urban socio-environments

If we zoom in on ‘urban (un)sustainability’ issues in this context, two academic disciplines are particularly interesting: *eco-urbanism* and *urban political ecology*. These disciplines centre-stage more radical forms of politics associated with socio-ecological dynamics of urbanisation⁷⁹.

⁷⁹ Erik Swyngedouw coined the term ‘urban political ecology’ in 1996, in an essay called *The City as a hybrid: On nature, society and cyborg urbanization*.

Ecological urbanism or eco-urbanism emerged in the 1960's, when worldwide urbanisation processes led to decreasing air quality and natural resources, as well as impinging concerns of climate change. Since then, ecological urbanism slowly turned into a discipline after critically reflecting on these processes. Eco-urbanism presents itself as a body of knowledge that seeks to imagine “an urbanism that is other than the status quo (...) one that has the capacity to incorporate and accommodate the inherent conflictual conditions between ecology and urbanism” (Mostavafi & Doherty, 2010: 17). This implies a radical *decentring* of ‘the human’ vis-à-vis urbanisation processes. For ecological urbanism, city formation should not be understood as an endeavour advanced by human beings, but as complex socio-material processes in which human agency is only one element. Recent scholarly efforts have drawn from different intellectual traditions to highlight the complex character of contemporary urbanisation and its radical potentialities. Intellectual resources range from Guttari’s eco-philosophy, Bateson’s systems theory, Levebvre’s critical urbanism and Rancière’s views on radical politics (Hodson & Marvin, 2010; Mostavafi & Doherty, 2010). Intersections of these insights enable one to reframe the ways in which today’s cities and urbanisation processes unfold unevenly and through socio-ecological struggles. Eco-urbanism also seeks to reflect on empirical contexts. For example, the distribution of ecological urban ‘goods’ and ‘bads’ (e.g. garbage, waste, fast food, architecture, public parks) is critically reflected upon in cities like Paris, New York, and Mexico City.

The discipline of urban political ecology should also be briefly discussed here. It directly relates to eco-urbanism, but with a more explicitly focus on *uneven* urban developments and the potential of democratic politics. Urban political ecology emerged at the intersection of science and technology studies, political economy, political ecology, urban studies and Marxist geography (cf. Heynen, 2013). This cocktail produced a set of concepts that focus on structural socio-economic inequalities associated with modern urbanisation (financial districts, ghettos, favelas), adopting a more Marxist approach. Some scholars criticise such a (Marxist) reductionism as a ‘first wave’, expressing “an overly deterministic emphasis on the production and meaning of urban nature, and in some cases, weakly conceptualized readings of nature itself” (Gandy, 2012: 735, cited in Heynen, 2013: 4). Consequently, other urban political ecologists (the ‘second wave’) adopted non-Marxist vocabularies and were inspired by post-humanism (e.g. actor-network theory), in order to “make it possible to circulate new associations of entities, to generalize social orders, and to situate actors within a social context – that is, to socialize them in particular ways (Holifield, 2009: 639, cited in Heynen, 2013: 4). For our purpose, it is instructive to understand urban political ecology in its broader sense, without ‘choosing’ either the first or second wave. Urban political ecology, can be illustrated by Harvey’s well-known quote, namely “[i]t is in practice, hard to see where ‘society’ begins and ‘nature’ ends...[I]n a fundamental sense, there is in the

final analysis nothing unnatural about New York” (Harvey, 1993: 28, 31). This simple idea assumes that the culture/nature and social/physical divisions that structured many social theories and institutional operations since modern urbanisation, can no longer be maintained. The idea that “urban nature is deeply political” lies at the heart of urban political ecology. (Heynen, Kaika & Swyngedouw, 2006: 2). As Heynen et al. explain:

“To the extent that cities are produced through socio-ecological processes, attention has to be paid to the political processes through which particular socio-environmental urban conditions are made and remade. From a progressive or emancipatory position, then, urban political ecology asks questions about who produces what kind of socio-ecological configurations for whom” (2006: 2).

Urban eco-politics, then, highlights the ongoing making, remaking and unmaking of urban natures. In the words of Heynen et al.:

“Whether we consider the production of dams, the making of an urban park, the re-engineering of rivers, the transfiguration of DNA codes, the making of transgenic cyborg species like Dolly the cloned sheep, or the construction of a skyscraper, they all testify to the particular social relations through which socio-natural metabolisms are organized” (ibid: 8).

Stressing the importance of the political, urban political ecologists also argue that many aspects of urban life today have become common sense and imperceptible, without us knowing it (analogically, a fish in water does not know it is water). This makes it also less tangible to understand (violent) relations of power and to actually challenge the urban fabric more radically. As Kaika and Swyngedouw convincingly argue:

“(…) urban networks in the contemporary city are largely hidden, opaque, invisible, disappearing underground, locked into pipes, cables, conduits, tubes, passages and electronic waves. It is exactly this hidden form that renders the tense relationship between nature and the city blurred, that contributes to severing the process of social transformation of nature from the process of urbanization. Perhaps more importantly, the hidden flows and their technological framing render occult the social relations and power mechanisms that are scripted in and enacted through these flows” (Kaika and Swyngedouw, 2000: 121).

What do these bodies of knowledge (eco-urbanism and urban political ecology) teach us? Importantly, ‘the city’ refers to a set of erratic spatial processes, not a geographical thing. Urbanisation processes stretch well beyond urban geo-administrative boundaries. The interweaving of social, economic, material and physical processes,

implies that political agency is also embedded in complex non-human, or rather post-human, apparatuses. This spatio-political dynamic bring with it a focus on the *uneven* distribution inherent in socio-material transformation processes. Questions about the so-called “right to metabolism” or the “right to the city” signify that “environmental transformations are not independent of class, gender, ethnicity, or other power struggles” (ibid: 9). Politicising the city, then, goes hand in hand with transforming the city towards radically democratic and pluralist directions. Importantly, these insights suggest that ‘sustainability’ and ‘the environment’ are not isolated technical matters that require management or governing regimes. Rather, they designate fundamental tensions and deep-seated conflicts about how cities are organised, including uneven developments associated with global urbanisation.

Multiple conflicts and splintered urban spaces

All scholarships I discussed above pay attention to the ‘dark side’ of technological networks and urban space-making. These insights suggest that urban spaces often rely on a form of ‘policing’ the city that backgrounds contestation and conflict. Importantly, they attune to the scholarly and ethical importance of being able to call into question the ways in which urban spaces and populations are governed. Understanding the political dimension in relation to contemporary urban transformations, for Brenner et al., does not mean “absolute territorial expansion”, but rather understanding the:

“(…) emergence of absolutely new, genuinely planetary forms of urbanization in which a densely if unevenly urbanized fabric of sociospatial and political-economic interconnectivity is at once stretched, thickened and continually redifferentiated across places, territories and scales, throughout the space of the entire globe” (Brenner et al., 2011: 237).

Transition politics of urban spaces should be localised and framed “across the multiplicity of networked relations that (re) make that city” (Davidson & Martin, 2014: 6). This frame of politics radically breaks with institutionalised, (neo-)liberal and anthropocentric frames of urban politics. In contrast, it underscores a more fluid and vitalist notion of politics that is related to, but not bounded by, territorial sovereignty (e.g. departments, ‘city authority’) and decentered struggles (e.g. expert meetings, NIMBYism).

These insights allow us to sensitise how sustainability transitions can be understood in terms of radical politics in urban settings. In all instances we have to radically move away from pre-given notions of nation-state politics, liberal negotiations and human-centred conflicts. Alternatively, ruptures and radical shifts of entangled urban spaces emerge in and through conflicts and struggles. In this sense, these literatures often understand the dynamics of urban spatiality without an explicit

focus on everyday technical and governing practices. I argue that struggles over (un)sustainable urban spaces should be understood *in direct relation* to more technical modes of governing spatial regimes.

4.3 Governing urban spaces and city life: Urban governmentality

As observed in Chapter 3, the work of Michel Foucault can be very fruitful to grasp the everyday making and governing of urban spaces. Before understanding Foucault's contribution in this regard, we should understand his idiosyncratic take on politics, power and government (at least, for mainstream social scientists).

Exploring a governmentality approach

For Foucault, government does not refer to The State or a legal framework in a Weberian sense, nor to a Habermasian liberal democratic negotiation. Government, for Foucault, is a historical notion. It has been used in many different contexts, in philosophical debates and many political, religious, medical and pedagogical texts (Lemke, 2002). Government should be understood as the set of means through which one governs oneself and others, using relations of power. This can refer to a household, a business, a ship, a population, a society, a country, a city, one's body, one's posture, one's soul, etc. (Lemke, 2002; Rose, O'Malley & Valverde, 2006). A Foucaultian understanding of governing is referred to as *governmentality* and highlights the heterogeneous and historically situated problematisations, negotiations, contingencies and new frames that shape spaces, practices and regimes of power (Dean, 2010)⁸⁰. Foucault introduces the neologism 'governmentality', which literally refers to a specific mentality of governing oneself and/or others.

This approach is first and foremost a rejection of oppositions between war and struggle or between forceful coercion and liberal consent. It also reproaches a classical Marxist understanding of economic determinism. Rather, it takes Nietzsche's 'microphysics of power' as a starting point. As Nadesan puts it: "governmentality recognizes that social fields – the state, the market, and population – are in fact heterogeneous spaces constituted in relation to multiple systems of power, networks of control, and strategies of resistance" (2008: 10). An important Foucaultian *conceptual innovation* regarding government practices and politics is that he:

⁸⁰ The work on 'hegemony making' through governance in the field of public administration comes close to a governmentality approach (Howarth, 2010; Davies, 2011). Whenever I use the words 'government' or 'governance', they are based on a Foucaultian understanding of governmentality (Dean, 2010).

“offers a view on power beyond a perspective that centres either on consensus or on violence; it links technologies of the self with technologies of domination, the constitution of the subject to the formation of the state; and finally, it helps to differentiate between power and domination” (Lemke, 2002: 51).

A combination of struggles and subtle forms of self-persuasion provides the basis for understanding government. Foucault’s approach on the politics of governance can be seen as a mix of vertical ‘government’ and horizontal ‘governance’ as it “deconstructs social givens by exploring their historical constitution as objects of government not by totalizing regimes of governance but by circulating and decentering technologies of power” (Nadesan, 2008: 6). Governmentality scholars praise a governmentality approach for its analytical power and rejection of liberal and rationalist frames of governance that dominate in social sciences and humanities⁸¹. Even though many governmentality researchers have different definitions of governmentality, they agree on the fact that a governmentality approach is flexible and investigates:

“mechanisms of conduct of ‘people, individuals or groups’ (Foucault, 2007: 102, 120-122), extending from management of company employees to the raising of children and daily control practices in public spaces to governing trans-national institutions such as the European Union and the United Nations” (Bröckling, Krasmann & Lemke, 2011: 11).

In other words, a governmentality perspective moves away from institutional and liberal traditions that ask: ‘*who gets what, when and how?*’ and focusses on *how* power is actually exercised through specific practices and regimes (Methmann, 2011)⁸². As Bröckling et al. state: “[t]he main focus here is on the technologies and rationalities of (self-) government in distinct fields. The knowledge incorporated in governmental practices is always practical knowledge” (ibid).

This understanding of governing society through political rationalities differs from how transition research often understands issues of governing and management. It moves away from nation-state and legalist notions of government, or understanding governance in terms of a level playing field of networked spaces and alleged equal

⁸¹ Bröckling et al (2011) mention five “methodological principles” of a governmentality approach: 1) refraining from dichotomies; 2) moving away from any transcendental a priori such as ‘the state’, ‘neoliberalism’, ‘capitalism’, ‘sustainability’ or ‘the system’; 3) understanding power and knowledge as entangled and co-constitutive; 4) foregrounding the practical, technical and technological aspects of government; and 5) examining the complex interplay between the political and the non-political (social, economic, cultural, environmental, etc.).

⁸² Governmentality is based on the deconstruction of the liberal opposition between government as hierarchical top-down steering of nation-state based ‘centralised government’ in stable and non-fragmented societies versus governance as horizontal network-oriented multi-actor steering in more ‘fluid’ societies. Foucault introduces the notion of governmentality in his 1978 and 1979 *Collège de France* lectures.

participation of human actors. Rather, a governmentality perspective is unequivocally post-institutional, post-liberal and post-human. Importantly, this implies a broader field of analysis, as Nadesan argues:

“governmentality extends analysis beyond the inside of disciplinary institutions to the outside, from specific institutional functions to dispersed, networked technologies of power that circulate across *all domains of social life*” (2008: 5) [italics, SJ].

The focus heterogeneous regimes and practices presumes a certain field of reality “that they [actors, SJ] describe and problematize on the one hand, and in which they intervene - trying to change or transform it - on the other hand” (ibid).

Dean’s analytics of government

Some scholars have categorised dimensions or aspects of governmentality in order to articulate a more tangible analytical framework. As Dean states, an “analytics of government takes as its central concern how we govern and are governed within different regimes, and the conditions under which such regimes emerge, continue to operate and are transformed” (2010: 33). Again, according to Dean, governmentality focusses on the “organized practices through which we are governed and through which we govern ourselves, what we shall call here regimes of practices or regimes of government” (ibid: 28). Interestingly, for Dean practices are forms of (self-)government. Such an analytical starting point also implies that any system, organisation, network or regime is organised through a heterogeneous network of practices of (self-)government. In a similar vein, Lemke argues that when analysing government, one critically addresses “linkages between abstract political rationalities and empirical micro-techniques of everyday life” (Lemke, 2000: 31, cited in Baumgarten & Ullrich, 2012: 11).

Dean offers a simplified (especially for ‘hardcore Foucaultians’) but instructive so-called *analytics of government* to address key dimensions through which governmentalities operate. An analytics of government is based on four dimensions: 1) visibility; 2) epistemology; 3) technology; and 4) subjectivation (Haahr, 2004; Dean, 2010)⁸³.

⁸³ In a sense, some parts of this governmentality approach refers to a sort of government version of communicative framing. Robert Entman (1993: 52), for example, argues that: “to frame is to select some aspects of a perceived reality and make them more salient in a communication text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation”.

1. Visibility

As regards the dimension of visibility, we may ask by what kind of light (drawings, flow charts, maps, graphs, tables, etc.) a field illuminates and defines certain objects and with what shadows and darkness it obscures and hides others.

2. Epistemology

The dimension of the *episteme* of government is concerned with the forms of thought, knowledge, expertise, strategies, means of calculation or rationality that are employed in the practices of governing. How do these practices of government give rise to specific forms of truth, and how does thought seek to render particular issues, domains and problems governable?

3. Technology

The dimension of the *techné* of government asks the question by what means, mechanisms, procedures, instruments, tactics, techniques, technologies and vocabularies authority is constituted and rule accomplished. Technical means, i.e. instruments applied to achieve specific objectives, are in this perspective seen as a condition of governing and often impose limits over what it is possible to do.

4. Subjectivation

A fourth dimension concerns the forms of individual and collective identity through which governing operates and which specific practices and programmes of government are formed. What forms of person, self and identity are presupposed by different practices of government and what sorts of transformation do these practices seek?

This analytics should not be considered as static. It understands the governing of life in terms of “how common rationalities of government and technologies of power align the institutions, authorities, and technologies of every life, the market and the state”, but also “recognizes discontinuities, sites of divergence, and contradictions within and across social realism” (Nadasen, 2008: 4). So, Dean’s analytics addresses dynamics, discontinuities and transitions in modes of governing. As Bröckling et al. note in this context, there is an outside or field of problematisation that requires intervention, which itself “insists in the form of resistance to programming and the programmer’s world is one of constant experiment, invention, failure, critique and adjustment (Miller and Rose 2008: 39; see Malpas and Wickham 1995)” (ibid). This analytics is therefore not only a useful approach to analyse how specific fields are rendered governable, but also to trace how modes of government emerge, normalise over time and are transformed⁸⁴. As Dean explains in terms of his analytics: “transformation of

⁸⁴ Foucault’s work offers a frame to understand the politics of government, starting with Ancient Greece to the age of modern neoliberalism (Lemke, 2002: 50)⁴⁷.

regimes of practices may take place along each or any of these [four, SJ] axes, and the transformation along one axis may entail transformations in others” (Dean, 2010: 44).

Current and historical problematisations are important ingredients here. As discussed in Chapter 2, these are methodological tools, but are also part of a governmentality perspective. As problematisation starts with critically observing how certain acts, ideas or objects become matters of concern. They enable sensing and seeing objects that need intervention or improvement. As Foucault memorably formulates it:

“Problematization doesn’t mean the representation of a pre-existing object that doesn’t exist. It is the set of discursive and non-discursive practices that makes something enter into the play of the true and the false and constitutes it an object for thought (whether under the form of moral reflection, scientific knowledge, political analysis, etc.)” (Foucault, 1988, 257, cited in Bacchi, 2012: 4).

So, problematisation is critical in that it renders possible the government of a problematised phenomenon or field. Problematisation highlights the contingency and heterogeneity of political rationalities. Importantly, the *historical* contexts within which objects of government emerge and technologies of power operate cannot be isolated. This genealogy is equally important to fully understand the emergence and everyday operations of current political rationalities. Genealogy unites “the struggles of past and present over the ownership of truth, in a ‘history of the present’, in other words an analysis of how the present came to be” (unknown). Historical reconstructions, from genealogical points of view, sensitise the making of history through relations of power and domination to understand the stakes of the present (cf. Rose, 1999). In doing so, a genealogy pays particular attention to shifts, discontinuities, displacements and “jolts and surprises of history, the chance occurrences” (Flynn, 2005: 34).

Governmentality in context

It is instructive to briefly illuminate how technical politics and struggles on the one hand, relate to radical political theory on the other hand. Von Eggers nicely captures this relationship by contrasting the definition of politics according to Foucault and radical political theorist Rancière:

“(…) when Foucault speaks about politics as a ‘domain or type of action’, it is certainly not in a Rancièrian sense as something that disrupts the dominant order as an ‘extremely determined activity antagonistic to policing’. What Foucault refers to, is politics as the domain of government, and a governmental type of action” (Von Eggers, 2013: 5).

Thus, police refers to a form of political management and can be understood as “the concern about the health and reproduction of men [sic!], with the infrastructure and circulation of goods, men, and capital, with the environment, with the security of the state and its subject, etc.” (ibid: 6). But how, then, can we account for radical politics in transition processes? If we follow Rancière here, we could argue that politics is *opposed to governmentality* as a form of policing and managing. According to Von Eggers, this marks a clear difference between policing as a governmental concern, and politics as disruptive force: “[i]n Foucault’s work, human beings are rarely conceptualized as political subjects. Instead Foucault tends to see “bodies and populations as objects of power. Not subjects, but objects” (ibid: 11). One of the ways in which Foucault understands politics as a governmental concern, is the framing of politics as ‘caring’ for a certain demographically mapped group (i.e. feeding individuals, caring for them, securing offspring, etc.). Struggle and conflict are less of a focus for him⁸⁵. As Von Eggers puts it:

“Whereas politics to Foucault is very akin to what it is to Rancière, a disruption of the dominant order by a group that cannot be (easily) encompassed through the logic of the existing order, there is doubt that Foucault is more preoccupied with the logic of the dominant order than with disrupting it. And with Rancière we of course find a preoccupation with disruption, with how to break the dominant order” (ibid: 11).

Before we move to the specificity of *urban* governmentality, it is useful to briefly assess in what way a governmentality approach relates to the dominant transition approaches. Clearly, transition approaches resonate with *some* aspects of a governmentality approach (Geels, 2010; Duineveld & Dix, 2011; Lawhon & Murphy, 2012). For STIA, for example, there is a link between ‘the social’ and ‘the technical’ in terms of relationality of the human and the non-human. A socio-technical regime relies on a decentred network of agents that together constitute a specific cultural, material and institutional reality (Kemp, Schot & Hoogma 1998; Schot & Geels 2008; Smith & Raven 2012). What is more, the mouldable and contingent nature of regimes also resonates with a broader ontology of process and relationism. For CORSA, a governmentality approach might be related to the ways in which multiple actors co-evolve and how dominant structures and practices are co-produced. The everyday practices of transformative agents, then, are imbued with reflection, self-

⁸⁵ Foucault, for example, is informed by Plato’s understanding of a ‘just social order’. As Foucault puts it: “Plato did admit that the physician, the farmer, the gymnast, and the pedagogue acted as shepherds. But he refused to get them involved with the politician’s activity. He said so explicitly how would the politician ever find the time to come and sit by each person, feed him, give him concerts, and care for him when sick?” (Foucault, 1979: 235). These substantive issues of security, care and flourishing, as political concerns, have become governmental concerns ‘outside’ the instituted political sphere (King, State).

inspection and reorientation (Grin & Hendriks, 2007; Loorbach, Rotmans, 2009; Voß & Bornemann, 2011). The notion of problematisation can even be directly linked to ‘problem structuration’ in transition arenas (cf. Kemp, Rotmans & Loorbach, 2007; Bacchi, 2012). Societal regimes can be considered as complex governing regimes of multiple actors that operate at different levels. However, there are also important differences with a governmentality approach. As argued in Chapter 3, most transition approaches still rely on an understanding of governments and politics that is highly institutionalist, (neo-)liberalist and anthropocentric. Governmentality research shows that the art of governing society does not rely on institutions or free deliberating human agents. Most importantly, we move our attention away from institutional centrism, deliberative platforms and human conduct to the technical and managerial art of governing the livelihoods and lives of populations. This means that some aspects of government in CORSA and STIA require modification.

For STIA, we should translate socio-technical regimes into agential regimes that shape the conduct of individuals and collectives via *technologies of power*. Regimes and landscapes, then, are part of a hegemonic knowledge/power configuration that governs at a distance, employing heterogeneous procedures and practices. Governing is a productive social power that runs in and through landscapes, regimes and niches. For CORSA, we can see that instead of discerning various aspects of societal regimes (‘structures, cultures and practices’) or different levels for transition management (strategic, tactical, operational and reflexive), a governmentality approach focusses on *heterogeneous* governing regimes that problematise and regulate spaces, populations and everyday experiences (Dean, 2010). A governmentality perspective does away with macro structures on the one hand and individual agencies on the other hand. What is perhaps most relevant here is the focus on the production and governing of spaces. Even though social and economic geography has focussed on spatial differences and multi-spatial dynamics in transitions (Chapter 3), a governmentality perspective might be able to push the envelope in highlighting the power-laden relation that both enables and limits the production of spaces in relation to the conduct of individuals and collectives. This takes us to the government of urban spaces and livelihoods.

Taking governmentality to the city: Governing urban spaces

Foucault’s innovative approach highlights the spatial aspects of governing life⁸⁶. This is relevant as it allows us to grasp how urban spaces and practices are observed, crafted, controlled and especially transformed. Foucault’s work has been used to

⁸⁶ As discussed before, notions of management and governance suffer from a number of problems (institutionalism, (neo-)liberalism and anthropocentrism). Therefore, we do not include conceptions of ‘urban governance’ and various urban governance theories (Pierre, Stoker, Jessop, Brenner). Instead, we directly explore and extend what a governmentality might mean in the domain of cities and urbanisation.

examine how cities historically emerged as places for interventions to increase the wellbeing of populations through urban water, hygiene and bacteria (Gandy, 2004). As Crampton and Elden argue:

“From architectural plans for asylums, hospitals and prisons; to the exclusion of the leper and the confinement of victims in the partitioned and quarantined plague town; from spatial distributions of knowledge to the position of geography as a discipline; to his suggestive comments on heterotopias, the spaces of libraries, of art and literature; analyses of town planning and urban health; and a whole host of other geographical issues, Foucault’s work was always filled with implications and insights concerning spatiality” (Crampton & Elden, 2007: 1).

Historically, cities have attracted huge populations to dwell and work, thereby creating conditions to accumulate wealth. Administrating the city depended on nurturing the well-being of its inhabitants and the control of discontent bodies. Modern urbanisation and industrialisation ushered in an age in which the city became a critical site for planning and governing the well-being and productivity of human populations. As Pløger states, “[Urban] Planning und Architectur wurden zu einer Technologie der Macht [*techné*], und sie wurden eingesetzt, um eine gesunde und productive Bevölkerung zu formen”⁸⁷ (Pløger, 2012: 73).

Foucault’s work is very instructive in unravelling how modern urban planning shapes healthy cities and citizens (Pløger, 2008). Appadurai uses the notion ‘urban governmentality’ to examine how civic organisations in Mumbai used local and global political rationalities to strategically shape new ways of addressing and reducing poverty in India (Appadurai, 2001). Urban governmentality, for Appadurai, is indeed political as it refers to specific Foucaultian *political rationalities* and strategies that are both local and global. As Appadurai explains:

“(…) we are witnessing new forms of globally organized power and expertise within the ‘skin’ or ‘casing’ of existing nation states. One expression of these new geographies can be seen in the relationship of ‘cities and citizenship’, in which wealthier ‘world cities’ increasingly operate like city states in a networked global economy, increasingly independent of regional and national mediation, and where poorer cities – and the poorer populations within them – seek new ways of claiming space and voice” (Appadurai, 2001: 25).

An urban governmentality approach thus enables us to historicise urbanisation concerns, address the inherent power relations, and the remaking of the livelihoods of

⁸⁷ In English: Urban planning and architecture became a technology of power, and were deployed in order to create a healthy and productive population [translation SJ].

urban dwellers (Huxley, 2006). The link between urban spaces and governmentality is not contingent, but rather conditional, as governmentality requires and produces particular spatial relations. If we translate Dean's analytics of government to an urban context, the following dimensions can be presented (Dean, 1999; Osborne & Rose, 1999; Haahr, 2004):

1. Urban visibility

As regards the dimension of urban visibility, we may ask by what kind of light (drawings, flow charts, maps, graphs, tables, etc.) the city is illuminated and defines urban objects and with what shadows and darkness it obscures and hides certain aspects of the city.

2. Urban epistemology

The dimension of the urban episteme is concerned with the forms of thought, knowledge, expertise, strategies, means of calculation or rationality that are employed in the practices of governing the city and urban life.

3. Urban technology

The dimension of the urban *techne* asks the question by what means, mechanisms, procedures, instruments, tactics, techniques, technologies and vocabularies urban authorities are constituted and rule accomplished.

4. Urban subjectivation

A fourth dimension concerns the forms of individual and collective urban identity through which governing operates and which urban practices and programmes of government are formed.

The government of urban life itself is at stake here. Historically, different governmentalities have shaped urban experiences and lives. Osborne and Rose nicely show how cities have used (and still use) specific "urban diagrammatics" that highlight how governments have been territorialised in an urban form (Osborne & Rose, 1999: 737). From Ancient and Medieval times, to the Renaissance and the modern era, different regions in the world have used different urban political rationalities that emerged through particular problematisations. Consequently, urban realities and lives have never been the same throughout history. For example, hygienic or healthy cities did not emerge before the dark side of industrialisation in the 18th century, with its overpopulated housing and rampant disease (Pløger, 2008). Only after the problematisation of filthy sites did urban dwellers and populations become creatures whose lives and spatial environments required 'attention' and 'improvement'. This holds for our present urban edifice as well. As Harvey notes: "The way we see our cities affects the policies and actions we undertake" (Harvey, 1996: 38: cited in Brenner, 2014: 52). Specific political rationalities, as heterogeneous governing regimes, resonate

with specific urban genealogies and are often born out of blood, sweat and tears. As our framing of the city shifts, our policies and actions slowly shift with it, not because of a 'historical necessity' or 'a natural law of evolution', but because of resistance, struggles and contingent spatio-political rationalities.

Urban governmentality and (un)sustainability

This approach seems quite generic. So, what is the role and meaning of 'sustainability' in relation to urban governmentality? How should we account for the emerging discourses and practices associated with 'urban sustainability'? Recently, mainly after the 1992 Earth Summit in Rio de Janeiro, cities and urban regions have been emphasised to address socio-economic and environmental concerns. Agreements (non-binding) among nations across the world, labelled as Agenda 21, marked an alleged collective effort to address serious concerns about the future of humanity on planet earth, following prior calls⁸⁸. Subsequent international meetings (e.g. the 1996 UN Habitat II Forum in Istanbul, the 2002 World Summit on Sustainable Development in Johannesburg and the 2006 World Urban Forum 3 in Vancouver, mark a global interest in addressing sustainability concerns at the urban scale (Holden, Roseland, Ferguson & Perl, 2008). In order to understand how sustainability becomes an issue that requires governance, we should first understand the emergence of 'the unsustainable city'.

Metropolitan areas have always been sites where human dwelling and socio-material processes intersected (Deelstra & Girardet, 2000). Modern industrialised cities have been places where a number of preconditions are required, such as ample productive soil, stable flows of food distribution, energy provisions, roads, houses, work force, etc. Socio-economic and environmental concerns related to urbanisation go back at least two centuries, when hygiene, health, housing and labour conditions were problematised (Gandy, 2004; Kaika and Swyngedouw, 2000). A number of new interlocking urbanisation concerns have emerged since the 1960s, such as traffic jams, climate change, food quality, smog, poverty, resource scarcity and social segregation. Since the 1990s, various public debates and everyday concerns have called for a different type of society and/or urbanisation (Bulkeley, et al., 2013; Merrifield, 2014; Bulkeley, et al., 2015). The notion of 'sustainability' emerged as a discursive label in the 1990s to account for a variety of modern societal concerns. It is no surprise that the urban locus emerged in sustainability discourse. Cities are crucial nodal points of modern human civilisation as "world-wide cities are responsible for almost 75% of the global resource consumption" (Nevens, et al., 2013). Cities have become ideal sites to address

⁸⁸ These include the well-known 1972 Club of Rome report *The Limits to Growth* and the 1987 Brundtland Report called *Our Common Future*.

and possibly 'realise' sustainability since the late 1990s. The rise of 'sustainable cities' is both a historically and a late-modern phenomenon. As Hagan puts it: "what's interesting about sustainability is that it can embrace the revolutionary and the conservative, the cutting edge and the traditional" (Hewitt & Hagan, 2001: 23).

Sustainability ideas and practice have rendered governable carbon-neutrality, ecology and modern life more broadly since the 2000s. Ecological networks and material planetary boundaries have become new horizons for ethical and political commitment to 'save the planet' and sustain life on earth (Dryzek, 1997). Specific ways of seeing emerged, through which 'our impact' became a problem and our eco-relations vis-à-vis finite resource and distant populations became visible and knowable. Thus, a new set of governmental techniques problematised the 'unsustainable city' and 'unsustainable urbanisation' (i.e. rampant industrial urbanisation can literally not be sustained). The emergence of this eco-oriented urbanism highlights the range from green capitalism to environmental-led techno-fixes and counter cultural eco-communities (Caprotti, 2014; Mostafavi & Doherty, 2010). This 'urban governmentalisation' of sustainability carves out urban sites to problematise existing regimes and practices as increasingly 'unsustainable'. This is the first step towards rendering governable urban spaces and populations. A wide variety of arenas emerged related to air quality, industrial parks, wind mills, biking lanes, poor neighbourhoods, gated communities, green spaces, intensive agriculture, food miles, carbon emission, oil-based economy, airport expansion, shopping malls, occupied squares, etc. Through numerous trans-local problematisations of the organisation and effects of modern urbanisation, urban governmentalities slowly started shifting. These shifts enabled a novel governability of cities which meant renewed fields of vision, new technologies of power, repertoires of 'knowing' the city and a redistributed sensibility of 'the urban' and 'its environments' (Bulkeley & Betsill, 2005; Whitehead, 20007; Merrifield, 2013, 2014; Bulkeley, et al., 2015). Or as Bialostosky, puts it, urban sustainability agendas have produced a new 'technopolitics of order' (Bialostosky, 2013).

The governmentalisation of urban (un)sustainability entails a specific way of seeing, knowing and technically shaping urban spaces and the lives of populations. By no means should we expect that one regime can govern a sustainable city. There are various expressions of sustainability that might overlap, intersect and co-develop, for example combining market-based models and ecological innovation (cf. Luke, 1995, Fletcher, 2010; Swyngedouw, 2010). The intersections and hybridisations of political rationalities are not special or unique, it is part and parcel of the history of urban government. In Foucaultian terms, sustainability discourses and practices in urban context might actually create 'the sustainable city' as a new ontology of the present. This raises key questions about the transition politics of urban sustainability. How did the shift from sovereign power to modern urban planning transform how ecological life

was governed in cities? And what do recent discourses of ‘sustainability cities’ actually articulate in this context⁸⁹? Does it mean that individuals and populations actually begin to ‘green the grey’ and transform their everyday lives and experiences?

4.4 Connecting the dots: Transition analytics of urban spaces

As we have seen, transition research offers a number of interesting hints to grasp the transition politics of (un)sustainable urban spaces. The previous two sections have extended some of these clues, especially related to the fields of critical urban theory and urban governmentality. We are now able to tease out some of the linkages with transition research. These linkages are crucial because they allow us to understand transition politics *in terms of* radical transformations in how populations and their lives are sensed, organised and governed across different spaces and geographies. In order to grasp this logic, I propose a transition analytics of urban spaces.

Linking transitions, radical urban politics and urban governmentality

Before I present the building blocks of the transition analytics, a number of conceptual moves are assumed. First of all, urban technological systems, structures and regimes are understood in terms of governing regimes and practices, informed by Foucault’s notion of governmentality. Urban governmentality refers to technical translations of urban politics. This pragmatic approach renders possible the governing of urban life and spaces. The transition and historical discontinuities of urban governmentality, can be thematised by the notion of *problematization*. Foucault’s method of problematisation is concerned with the ways in which specific problems emerge as governmental problems, i.e. problems that can be observed, known and governed through various technologies of power (Deacon, 2000; Lemke, 2002; Dean, 2010). The establishment and alterability of urban spaces and fields, then, comes into being through problematisations. Whenever problematisations occur, e.g. ‘climate change’, ‘housing concerns’, ‘animal rights abuse’, these concerns are understood as issues that require improvement and proper government. Consequently, urban governmentality selectively ‘absorbs’ such concerns in order to render the city governable in terms of the wealth, health, hygiene and comfort of its populations. Importantly, these are demographic issues, aimed at improving lives on the basis of specified cartographies.

Even though subjectivity might only emerge through (self-)governmental techniques of power for Foucault, a frame of radical politics argues that radical disruption

⁸⁹ This study focusses on sustainability, but its main analytical implications might also count for proxies such as ‘the resilient city’, ‘the green city’, ‘the eco(logical) city’, ‘the smart city’.

undermines the entire regime through which governmental techniques are employed. Radical urban politics emphasises how conflicts might create a deep sense of political subjectivity. Political subjectivity here refers to agency that disrupts the city and aims at transforming entire governing regimes. Lives are improved and enhanced *unevenly* and governmentalities are confronted with failure on their own terms. This also opens the door for antagonistic politics, even though it is rare. As soon as problems and concerns are articulated as disrupting an entire governing regime, urbanisation concerns may turn into antagonisms. If, for example, businesses offer sustainable food and produce (e.g. through 'green investments') while activists oppose this as a form of 'green-washing', the flow of a governmentality (e.g. concerning sustainable food) is disrupted and becomes an political struggle. Antagonisms open up urban governing practices and present unseen margins, new stakes and material experiences. Radical alternative ideas and practices to envision and shape the city might enter the field, rendering possible unimagined and idiosyncratic forms of urban governing. This, in turn, might lead to other 'labels' (getting rid of 'sustainability' or 'green') or adding another (or substituting a) layer of governmentality. Such shifts take place through series of antagonistic struggles and pragmatic problematisations. This *transition dialectic* is situated in the spectral space between urban governmentality as a technical art of governing the city sustainably, and its never-ending resistance or subversion.

This calls for a more transformative understanding of urban governmentality that also highlights political and (self-)subversive dynamics. I argue that we need a new analytical strategy that I call a *transition analytics of urban spaces*. This analytics accounts for the transformative dialectic between the history, governmentality and radical contingency of urban spaces and life.

A transition analytics of urban spaces:

Genealogy + governmentality + contingency

The basis of my transition analytics of urban spaces is grounded in an assemblage understanding of space. I present urban space as an entanglement of discursive and material aspects, resonating with assemblage urbanism (see Chapter 2). A playground for children, for example, is an idea(l) and imagined mental space consisting of norms (e.g. for kids only, safe space) that is directly related to its material and physical setting (e.g. sandpit, swings, boundaries). Importantly, such material-discursive spaces can be understood in terms of socio-material assemblages that are never 'finished' and can always be contested and remade. MacFarlane's characterisation of urban assemblages, as an ontology of urban spaces, nicely ties together points of contact between transition research, critical urban theory and urban governmentality (MacFarlane, 2011: 667; Magnusson, 2010):

1. “Urban assemblages are more than their constitutive parts (contingent and emergent urbanities). Their depth and potentialities transcend notions of urban systems, spaces and networks;
2. Urban assemblages have no fixed spatial category or formation, but a complex of doings, performances and events;
3. Urban assemblages are structured hierarchically, relying on unequal relations of power, knowledge and legitimacy”.

This spatial ontology underpins the transition analytics of urban spaces. As argued in Chapter 2, this analytics is also grounded in an epistemology of critical constructivism. An analytics is an analytical strategy that aims to problematise, which differs from a framework or a model that claims neutrality (Andersen, 2003). In more methodological terms, it enables me to critically analyse the creation, normalisation and contestation of urban spaces, in terms of emerging political rationalities and correlated struggles. I propose an analytics that consists of three interrelated building blocks: (1) a *genealogy* of urban spaces; (2) a *governmentality* of current urban spaces; and (3) *contingencies* of current urban spaces. These elements are presented separately, before I discuss their entanglements.

A genealogy of urban spaces

The first building block is a genealogy of urban space. Urban spaces do not simply fall from the sky. A genealogical method allows me to situate the historical traces, material forces, social struggles and unequal power relations that shape - and are shaped by - urban spaces. Urban spaces are embedded in historical layers, mixes and hybridisations (Huxley, 2006; Valverde, 2011). A genealogy of urban spaces highlights the ‘history of present urban spaces’ as it is occupied with the history “of a problem” (Flynn, 2005: 36). For this study, it particularly helps me to focus on the conflict-laden histories associated with urban (un)sustainability discourses⁹⁰. Genealogy is as much about historical dynamics and transitions as it is about current spaces and spatial displacements. Engaging in a genealogical method also means putting problematisations and conflicts at the forefront. As Foucault argues: “the history which bears and determines us has the form of a war rather than a language, relations of power not relations of meaning” (Foucault, 1980: 114). Genealogies are therefore able to disclose forgotten histories and inject counter-memories into the collective psyche. To put it more technical, I employ genealogy as a fine-grained sensibility

⁹⁰ As Davidson puts it: “Its [genealogy] central area of focus is the mutual relations between systems of truth and modalities of power, the way in which there is a ‘political regime’ of the production of truth. Following Nietzsche, Foucault’s pursuit of genealogy led him to be concerned with the origin of specific claims to truth, especially the claims, concepts, and truths of the human sciences” (Davidson, 1986: 224).

to analyse historicise current problematisations of (un)sustainable urban spaces, associated regimes of knowledge and practices, and changes therein. This diagnostic and critical historiography of urban spaces focusses on specific socio-economic and environmental concerns that have become objects for intervention and improvement.

Current governmentality of urban spaces

The second building block is the current governmentality of urban space. Urban spaces are complex processes that are governed in almost equally complex ways. In order to systemically understand how current urban spaces are rendered governable, and as such actually created and normalised, it is instructive to employ Dean's analytics of government (2010). These dimensions enable me to systematically examine the rise and establishment of specific urban spaces and their governing regimes and practices. I specifically focus on the government of urban spaces, which consist of four dimensions:

1. Visibilities of urban spaces (how are urban spaces imagined, observed and defined?);
2. Epistemologies of urban spaces (what epistemic claims and repertoires are utilised to know the nature or truth about urban spaces?);
3. Technologies of urban spaces (what practices and procedures are used to intervene in urban spaces?);
4. Urban subject formation (what identities and socio-material relations are produced through urban space-making?).

This focus on the political rationalities that shapes urban space is quite general, in that, it could apply to any type of urban space (e.g. industrial parks, festivals, city centres, canals). As this study is particularly interested in *sustainable* urban spaces, I focus on how 'sustainable urban spaces' emerge as governmental concerns. I find Dean's proposal to systematically focus on four specific features of governmentality very useful for my analytics.

Current contingencies of urban spaces

The third building block articulates current contingencies of urban space. Urban spaces are sites of struggles, contradictions and conflicts. Informed by the Foucaultian notion of problematisation, but especially by more critical urban research, this building block captures novel contingencies of urban governmentalities. This building block prevents a clinical mapping and explanation of the (almost evolutionary or teleological) rise and establishment of sustainable urban spaces. Contingencies refer to new cracks, ruptures and tensions in newly formed architectures of urban space. Contingencies, in this context, can be either technical (referring to new urban problematisations) or radical (referring to new urban politicisations). Technical and pragmatic concerns are the most direct and

tangible contingency of any urban governmentality (*technical contingency*). Therefore, it is instructive to include problematisations in terms of technical governing failures and practical concerns as part of a governing architecture. Critically, problematisation, as a complex process of any government's self-confrontation, navigates between a political rationality that aims at governing spaces, and radical struggles that aim at undermining this rationality. However, and fortunately (I might add), not all urban governing contingencies are technical. An understanding of radical urban politics highlights the *radical contingency* of spatial governing regimes. Politicisation emerges as a result of the 'incomplete' and 'indeterminate' nature of urban spaces and their governing. Urban spaces might be politicised in terms of their 'undemocratic' or 'unjust' characteristics, systemically excluding certain practices and forms of living (Brenner, et al., 2012). Even though politicisations are part of a genealogy, current politicisations add to the understanding of newly emerging urban spaces in two – often interrelated – ways. First, historically downplayed conflicts, antagonisms and contradictions might 'return' in current urban spaces (see below). Second, new and unprecedented conflicts might emerge in current times, without clear reference to genealogical concerns. Importantly, there is a dialectical relationship between technical and radical contingencies. Current problematisations can become radical contingencies and politicisations by filtering in/out, including/excluding and creatively absorbing specific contingencies or governmental elements. Yet, there is always a unbridgeable gap between technical and radical contingency.

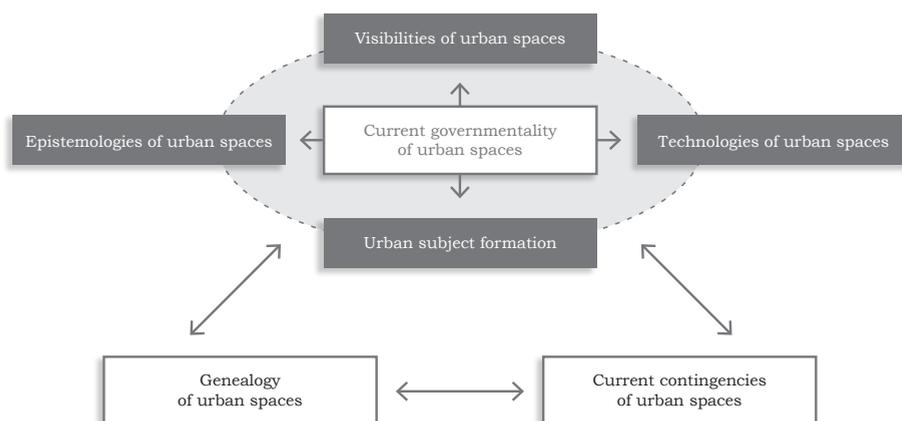
Dialectical entanglements between the building blocks

These building blocks are dialectically entangled, it is a so-called 'trialectic' (Soja, 1996) of genealogy, governmentality and contingency of urban spaces. That is to say, they cannot be separated, but they also cannot be conflated. First, as Dean also suggests, governmentality and genealogy are fundamentally entangled (2010: 53-61). Together they highlight the historical contingency of political rationalities that shape urban space (e.g. industrialisation created separation between working and living areas)⁹¹. Second, genealogy and new contingencies are related through the rearticulation of (historically) repressed and unresolved urban conflicts (e.g. protests against unemployment reappear). Third, new governmentality and new contingencies

⁹¹ Interestingly, in transition research, specifically transition management (CORSA), a similar argument is advanced in more general terms. New (e.g. 'sustainable') visions and expectations/scenarios emerge through moments of strategic problem structuration (Loorbach, 2010). In direct relation to these novel visions, or sensibilities, specific social and material networks are mobilised (tactical level) experimented with (operational level) and reflected upon and re-valued (reflective level). In transition research, such transformations are explained by the emergence of socio-technical niches in the context of broader social and technological changes, slowly 'taking over' dominant socio-technical regimes and everyday practices. The specific focus on urban spaces and the emergence of a political rationality that shapes 'sustainable urban spaces' requires a fine-grained analytical vocabulary.

are related dialectically, or even conflictually. Radical and technical contingencies might undermine and transform normalised urban spaces (e.g. NIMBY activism). These three analytical ingredients allow me to understand how and why specific urban spaces are created, normalised and contested. Figure 4.1 provides a visualisation of the transition analytics (arrow signifies: 'dialectically related to').

Figure 4.1. Transition analytics of urban spaces: linking genealogy, governmentality and contingency



Let's take the example of a city park. A city park is embedded in a complex genealogy in which conflicts between industrial urbanisation and public green flared up. This struggle-based history made possible and created certain visibilities (maps, graphs), epistemologies (urban planning, landscape architecture), technologies (park regulations, fences) and subject formation (visitors, park service personnel). The city park and its governing practices - or parts thereof - can be problematised in a new situation when, for instance, there is nuisance or waste dumping (technical contingency). The city park can also be politicised when its entire presence is challenged and it has to be replaced by a residential area or a parking lot (radical contingency). Such contingencies often spill over and are loosely connected. These new contingencies are also interwoven with the genealogy (historical struggles) and can also intervene in how the city park is currently visualised, known and governed.

So, instead of a theory-driven, method-driven or data-driven starting point, this analytics starts with *problematization* and *struggles*. Problematization starts with critically observing how certain acts, ideas or objects become matters of concern in a given period. I particularly aim at problematising how sustainability-related issues (e.g. ecology, water, energy, climate change, economy) became a theoretical and a

practical concern that require a 'sustainability transition'. A genealogy of urban spaces deconstructs present problematisations and traces us back to their historical conditions of possibility and points of reference. The specific emergence of a new type of urban governmentality (i.e. one that fosters 'sustainable urban spaces') implies a focus on how prior urban spaces have become 'unsustainable', 'problematic' and in 'need of improvement'. Valverde (2011) and Dean (2010) suggest that 'governmental failure' results in new moulding, mixing and experimentation with new forms of seeing, knowing and intervening, thereby shaping new types of urban space. As Valverde argues: "A particular way of seeing, a certain habit of governance, fails due to internal contradictions, leading to the sudden adaptation of its opposite-but without one mode of seeing replacing the other" (Valverde, 2011: 280). So, urban spaces radically transform via the combination of politicisations and technical problematisations. Whereas politicisation refers to the contestation of how the city is organised and governed, problematisation refers to the ways in which contestation is excluded or absorbed to modify and transform modes of urban governing (cf. Glynos & Howarth, 2007: 124). As such, this analytical strategy of urban spatial transitions is dynamic and accounts for the multiple struggles associated with the creation, normalisation and contestation of sustainable urban spaces.

In transition research, there are assumptions and notions that resonate with this analytics (see also Chapter 3). As mentioned earlier, there are many linkages between transition research and research on urban politics. Instead of rigidly positing different academic discourses and discerning 'similarities' and 'differences' here, it is more sensible to loosely speak about how socio-technical regimes and complex systems in terms of contingent and multi-spatial regimes. General notions such as landscapes, systems, structure and culture should be reframed in terms of uneven socio-material unfoldings, and regimes of practices that are connected globally and disconnected locally⁹².

Four ways to establish sustainable urban spaces

I would like to further differentiate this analytics for a more nuanced understanding of the various types of governmentalistion of urban sustainability. As many scholars in the field of transition research have argued, sustainability transition discourses have different meanings and political logics (Hendriks, 2009; Audet, 2014). An interesting contribution that can inform a more differentiated framing comes from Fletcher (2010). Resonating with different modes of governmentalities, Fletcher argues that

⁹² It would be interesting to experiment with new concepts to unravel new analytical fields of vision such as 'multi-spatial regimes', 'hegemonic landscapes', 'urbanisation niches', etc. I consider my analytics already to be somewhat experimental, therefore, such discursive innovations can be take up by others and/or my future self.

there are different forms of environmentality (or environmentalities): (1) *neoliberal* environmentality (commodifying ‘the environment’, based on market mechanisms); (2) *disciplinary* environmentality (creating environmental subjects, based on diffusing ethical norms); (3) *sovereign* environmentality (managing natural resources, based on nation-state regimes (‘fences and fines’); (4) *truth* environmentality (holistic connections with environment, based on evolutionary and indigenous epistemologies) (2010: 177). These environmentalities relate to different *historical* forms of government, and highlight specific accents and technologies of power. As Lakoff argues, it matters how we frame ‘the environment’⁹³ as different horizons and courses of action emerge (Lakoff, 2010).

Importantly, Fletcher states that environmentalities can be mixed and layered. Fletcher’s account of different environmentalities highlights a hegemonic neoliberal frame, but also states that there are alternative forms of environmentality. Or as Whitehead (2008) put it:

“(...) work within environmental governmentality seeks to explore the ways in which different rationalities of the state emerge out of the complex intersection between various political institutions, ecological sciences and environmental events” (Whitehead, 2008: 416).

This means that neither the categories of the state nor the environment are taken as pre-given objects of analysis and normative assessment. And as McGuirk (2012) reminds us, urban neoliberalism is not the ‘only order in town’. Therefore, Fletcher’s account of environmentality is very useful. It sensitises the contingencies and differentiations related to any form of urban hegemony, including the potential hegemony of sustainable cities⁹⁴. If we translate Fletcher’s understanding of environmentality in a broader context of *sustainable* urban governing, a number of urban governmentalities can be discerned:

1. *Indigenous urban governmentality*

Urban sustainability is created by holistically engaging with people, built environments and nature. Indigenous knowledge and holistic eco-evolutionary thinking create a repertoire for spiritual and communal engagement. These mentalities use

⁹³ Lakoff nicely shows how the shift from ‘global warming’ to ‘climate change’ reframed our sense of urgency and human agency vis-à-vis the environment and environmental concerns (Lakoff, 2010: 71).

⁹⁴ As McGuirk nicely puts it: “Building on process-oriented accounts and drawing from theories of governmentality, an assemblage approach explores how heterogeneous arrays of elements and actors, objectives, and techniques are assembled together – often across diverse spatialities – to compose the city, its governance, and politics (see Collier and Ong, 2005; Li, 2007). (...) Understood through assemblage thinking, the city and city politics are relational compositions, always emergent and indeterminate, always laboured at and in process rather than being a resultant formation of urbanisation processes or the working out of any necessary set of relations (Cochrane, 2011; McFarlane, 2011b)” (McGuirk, 2012: 261).

eco-centrist thought to create new types of economic and social practice (Howitt, 2001; Kalland, 2002; Breidlid, 2009; Sveiby, 2009). This type of governing villages, communities and cities emerged in ancient societies, but also stretches to our day and age, especially since the 1960s with the emergence of deep ecology and new age. Examples: ascetic lifestyle, meditation, green spiritualism, eco-villages, etc. This specific political rationality can be symbolised by the label 'spirit and soil'.

2. *Disciplinary urban governmentality*

Urban sustainability is created by diffusing ethical norms and considered a moral duty. Sustainability is moralised and operates through subtle forms of emotive and affective engagement through 'the self' (e.g. shame, guilt). Moral authorities are mobilised for legitimacy and sincere ways of living sustainably (Newton, 2003; Bandura, 2007; Knox, 2014). This type of governing emerged (and was prevalent in) the Middle Ages and societies based on religious and communal traditions. Again, since the 1960s, it has enjoyed a renewed popularity. Examples: eating organic food, being vegan, recycling, carbon footprint, etc. This specific political rationality can be symbolised by the label 'morals and guilt'.

3. *Techno-sovereign urban governmentality*

Urban sustainability is created by state apparatuses and policy practices. State-based programmes and (local) public policies create green areas and increase environmental quality. Regulatory means, urban planning schemes and legal frameworks justify forms of 'sustainable citizenship' vis-à-vis the legal city (Raco & Imrie, 2000; Naess, 2001; Dovers, 2005; Hobson, 2013). This type of governing emerged in the late Middle Ages and sustained until early modernity, ruled by e.g. kings, legal-administrative procedures and public policies. Examples: sustainability policy, climate change programmes, environmental protection agency, subsidising solar panels, fining pollution, etc. This specific political rationality can be symbolised by the label 'fences and fines'.

4. *Neoliberal urban governmentality*

Urban sustainability is created by economic frames and understood as a concern for global markets (e.g. technological niches). Sustainability is commodified through marketisation and individual freedom. Market mechanisms and economic practices are considered as most efficient and adequate means to produce a sustainable city and places (Swyngedouw, 2010; Peck & Tickell, 2002; Brand, 2007; Jonas & While, 2007). This type of governing emerged since the 1970s in the wake of Thatcher-Reaganism. Examples: McDonalds's using green trucks and selling fruit, emission trading, green investments, sustainable consumption,

green capitalism, sustainable growth, etc. This specific political rationality can be symbolised by the label ‘markets and lifestyles’.

Figure 4.2 Urban governmentalities of (un)sustainability

	Indigenous urban governmentality <i>‘spirit and soil’</i>	Disciplinary urban governmentality <i>‘morals and guilt’</i>	Techno-sovereign urban governmentality <i>‘fences and fines’</i>	Neoliberal urban governmentality <i>‘markets and lifestyles’</i>
1. Visibility of (un)sustainable urban spaces	<i>City as a spiritual place</i>	<i>City as a moral space</i>	<i>City as a techno-legal order</i>	<i>City as a market</i>
2. Epistemologies of (un)sustainable urban spaces	<i>‘Ancient’ and ‘indigenous’ knowledge, eco-centrism, systems-thinking, holism</i>	<i>Morality, ecological science, natural laws, environmental ethics</i>	<i>Law, bureaucratic rules, rational planning schemes</i>	<i>Economics, local budgeting, market dynamics and consumer preferences</i>
3. Technology of (un)sustainable urban spaces	<i>Handcrafting, ‘do it ourselves’, community engagement</i>	<i>Ethical arguments, shame and guilt, empathy, moral codes</i>	<i>Fines, rights and obligations, taxation and urban planning</i>	<i>Privatisation, tendering, competition, individual freedom</i>
4. Sustainable urban subject formation	<i>Sustainable creatures and ecological communities</i>	<i>Sustainable residents, ethical people and moral order</i>	<i>Sustainable citizens, law-abiding residents and green spaces</i>	<i>Sustainable consumers, eco-businesses and green markets</i>

Figure 4.2 sensitises how urban (un)sustainability is objectified in a variety of ways for governing purposes. Together they form a complex yet instrumental mentality through which (un)sustainable urban spaces come into being and become governable. Subjects that engage in neoliberal urban governmentality, for example, might not even know what ‘others’ are doing (e.g. indigenous governmentality), but together they contribute to ‘sustainable’ spaces and cities. In order to avoid capturing all urbanisation processes in terms of urban governmentality, it should be noted that this concept does not refer to ‘sectors’ or pre-given spheres such as education, family life, love, medicine, etc., *unless* they are enmeshed in problematisations of how urban livelihoods become unbearable or unsustainable. Such problematisations trigger a cobweb of how environments can be made bearable, liveable, enhanced and optimised for individual and collective lives. Importantly, it should also be noted that these urban governmentalities are all subject to a complex socio-material network of interrelated force, domination, resistance and struggle. Neoliberal urban governmentality depends on fierce market competition and a bodily struggle over preferences for a ‘rational choice’. At the same time, indigenous urban governmentality relies on ‘accepting’ the non-hegemony of man over nature and the ‘natural right’ of animal life to co-exist in the city. In other words, in order to truly move away from Westphalian, (neo-)liberal

and anthropocentric transition politics, we should accept that all forms of urban governmentality depend on strategic forces and subtle manipulations that take place in our communication, our minds, our bodies and our material environments.

4.5 Ethics of transition analytics: Democratising urban spaces

This study deals with the transformation of urban spaces and the production of sustainable cities. It does so without claiming to be objective or neutral. In fact, no theoretical or analytical account was, is or ever will be neutral. To claim neutrality would be indulging oneself in naive and strategic depoliticisation. This is problematic from a critical constructivist viewpoint (see Chapter 2). Instead, I explicitly opt for a more open and accountable position which foregrounds a specific *ethical* horizon. Our ethical horizon should not rest on institutional norms and logics, nor should it assume equal capacities of individuals 'outside' hierarchical authority, or centre-stage human values above the non-human world. What type of ethics, then, could inform the analytics?

I argue that we need a *radical democratic ethics* that carefully privileges the ones that have been - and still are - systemically excluded and marginalised by transnational urbanisation processes. Indeed, this notion slightly resonates with the promise of a transition arena. As argued earlier, the radical political and ethical framing of an arena seems overlooked in transition management literature. Transition arenas in urban settings ('urban transition arenas', if you will) can be considered as a core element of a broader transition ethical commitment. This type of ethical engagement can be grounded more substantially when it is informed by critical urban thought. Informed by neo-Marxist critique of ideology, critical urban theory included insights from 'The Frankfurt School' to address political challenges associated with modern urbanisation. In recent decades, classical Marxist frames of 'capital accumulation through urbanisation' have been mixed with a broader understanding of the ongoing urbanisation at a 'global' or even planetary' scale and its multiple sites and uneven distributions. This allows for new class categories and taking on board issues of e.g. gender, ecology, race and age. The re-configuration of current urban formations (mega-cities, suburbanisation, urban re-generation, etc.) and their everyday implications, has been put in this wider context. As Brenner argues:

"Critical urban theory is (thus) grounded on an antagonistic relationship not only to inherited urban knowledges, but more generally, to existing urban formations. It insists that another, more democratic, socially just and sustainable form of urbanization is possible, even if such possibilities are currently being suppressed through dominant institutional arrangements, practices and ideologies" (Brenner, 2009: 198).

This ethical dimension of critical urban scholarship is symbolised by the demand for ‘the right to the city’ (Marcuse, 2009). The main premise underlying this claim is that urbanisation is an uneven process which benefits some populations (e.g. cosmopolitan middle-class, project developers, engineers and architects, city planners, investment banks, suburban life styles, shopping mall networks) while harming others (e.g. remote rural populations, victims of intensive animal farming, the unemployed and poor in ghettos, immigrant office cleaners, victims of illegal trafficking and prostitution, Chinese sweatshops workers, amazon forests and disposable animal populations). In other words, the economic, cultural and ecological wins and losses of urbanisation are distributed unevenly. Critical urban scholarship highlights this dynamic and its everyday consequences by putting forth approaches to undermine and interrogate the ‘normal’ assumption that urbanisation is a neutral process. Unfortunately, metaphors used in transition research such as ‘niches’ or ‘frontrunners’ might result in the mystification of unequal power relations. Critical urban thought can disclose a more grounded and explicit ethical horizon associated with transition research and practice.

A key concept in this context is *the right to the city*. The right to the city is understood in terms of how the ‘losers of urbanisation’ engage with the city and how their material conditions and interests are foregrounded (Marcuse, 2009). The right to the city is not a legal concern but an ethico-political concern. As the demand for the right to the city “comes from the directly oppressed, the aspiration comes from the alienated” (ibid: 191). Addressing and confronting these ‘oppressed demands’ and ‘alienated aspirations’ in relation to urbanisation processes, is not an abstract concern, but a very specific question about “political action to achieve real change” (ibid: 192). As Marcuse argues, critical urban theory in this sense refers to “(...) the question of whose right to the city is involved, who the potential actors, the agents of change’, are and what moves them either to propose or to oppose basic change” (Marcuse, 2009: 189). As critical scholars argue, this right to the city is not associated to ‘real change’ in a conservative sense (returning to ‘traditional’ cities or ‘ancestral’ village life), but in an emancipatory and contingent manner. That is to say, foregrounding the right of the urbanised oppressed and alienated, implies reconfiguring the hierarchical relations associated with urbanisation processes (city/country, money/people, culture/nature, human/non-human agents, good/bad districts, etc.). As Schmid puts it: “This right [to the city] cannot be simply interpreted as the right to visit or to return to traditional cities. It can only be formulated as the right to a transformed, renewed urban life” (Schmid, 2006: 168). Many critical urban scholars highlight this problematic in a variety of ways, for example Swyngedouw’s political ecology translation of Lefebvre’s ‘right to the city’ to ‘right to metabolism’ (Swyngedouw, 2010). Some scholars actually propose a set of strategic and more practical tools. A more practical perspective proposed by Marcuse to pursue such urban struggles is the following strategic triad:

- 1) *Expose* (analysing and communicating root problems);
- 2) *Propose* (working with the affected and oppressed to come up with programmes and strategies for change);
- 3) *Politicise* (clarifying the political implications of what was exposed and proposed) (ibid: 194).

For Marcuse, critical urban theory is able to strategically support the right to the city and work on the “common cause in pursuit of the Right to the City” (ibid: 195). Today’s right to the city would refer to the right to the techno-capitalist and neoliberal city. Urban spaces are increasingly shaped by technological systems, supported by global capital investments (e.g. malls, city centres). Urban citizenship also becomes part of neoliberal discourse. Citizens are expected to be active, morally good rational individuals, and personally creative as economic subjects (cf. Hindess, 2002). This ‘marketisation’ of everyday life creates high degrees of competition and uneven access to resources, wealth, and well-being, creating bigger gaps between higher and lower classes in cities today (Piketty, 2013; Harvey, 2014). The right to the neoliberal city, consequently, would first of all resist neoliberal urbanisation, and challenge the (spatial) inequalities it produces (Van Schipstal & Nicholls, 2014). Employing Marcuse’s strategic triad here, the subversion of neoliberal city making would expose, propose and politicise this contingent urban formation.

In relation to the right to the city, the ethical horizon of a transition analytics of urban spaces should also be informed by additional micro-revolutionary principles. This more mundane type of radical ethics can be inspired by two Foucaultian notions: *parrhesia* and *heterotopia*. For Foucault, *parrhesia* refers to fearless speech, referring to having the courage to frankly speak about the unchallenged and unquestioned of urban society and oneself. This is related to taboos and forgotten memories with regard to urbanisation. ‘Counter-memories’ (Foucault, 1977) produce a type of knowledge that is strategically forgotten for the sake of ‘normal’ city life. *Parrhesia* in the city, therefore, is fundamentally about the city and the violent production of its formations. Fearless speech about the city is a critical ingredient to counter and transform urban spaces. Next to *parrhesia*, a more spatial account of Foucaultian ethics can be explored by the notion of *heterotopia*. For Foucault, heterotopia are spaces of self-confrontation and self-interrogation, confronting the contradictions of governmental techniques. The spaces that open up through self-questioning enable new fields of vision, types of self-knowing and techniques of self-discipline (e.g. public square, Internet forum, Anonymous Alcoholics). Such spaces emerge at unknown and unexpected places. As Foucault notes, today, traditional *heterotopias* (as ‘different places’) have slowly been replaced by “relations of proximity” (Foucault, 1984: 2). Yet, the problematic character of heterotopias today is underscored by Harvey and others, who suggests that commercial cruise ships, urban night life, Disneyworld and football stations might also be considered as heterotopic,

but fail to be critical or emancipating (Harvey, 2000; Steinkrüger & Zehetmair, 2012). Even though spaces of leisure (parks, cinema, Internet, etc.) or community (e.g. eco-village, food cooperation) can be experienced as heteronormative self-discipline that subvert dominant urban regimes, they can never be isolated from ferocious relations of power. What Foucaultian ethics teaches us goes against liberalist and messianic promises of 'big events' and urban transformations, pointing to the everyday struggle of self-interrogations and experimenting with new modes of knowledge and power. A governmentality approach pushes us to be vigilant and careful in opposing power, violence and ideology against liberty, peace and freedom (Rose, 1999). There is a critical dialectic between power and resistance, which tells us that we need relational power and historically situated struggles (using counter-memory) to govern ourselves *differently* (Grant, 2010). We should not 'kill our gods', but find new gods that govern us in more democratic and just ways; new fields of observation, theories, models and experiences that shape our urban environments.

I argue that the principle of 'the right to the city' and Marcuse's strategy to 'expose, propose and politicise' complement Foucault's notions of *parrhesia* and heterotopia. They are just some of the critical concepts that are developed to be employed ethico-intellectually. Yet, together they enable a type of ethical commitment for a transition analytics that allows us to understand how different urbanisms are possible in the age of techno-capitalist urbanisation. Re-disciplining ourselves, then, refers to a 'collective exercise' in self-interrogation and creating new institutions that discipline us in the name of historical and current resistances⁹⁵.

4.6 Conclusion: Reframing transition politics and (un)sustainable spaces

The objective of this chapter was to propose an alternative analytical method to understand the transition politics of sustainable urban spaces. We moved away from a number of conceptual problems in transition research concerning politics in urban geographies. What does this chapter provide us with? What do we gain and what do we lose?

First of all, we now have an analytical toolkit to understand the politics of urban transitions beyond nation-state, deliberative, market-oriented and anthropocentric frames. We tried to get rid of traditional notions of politics and static images of the city.

⁹⁵ As Humann argues, we have done this before: "Whereas individuals were once urged to take care of themselves by using self-reflexive ethical techniques to give form to their freedom, modern biopolitics ensures that individuals are already taken care of in terms of biological and economic forms of knowledge and practices" (Hamann, 2009: 56).

As such, we have stripped transition knowledge from its natural science assumptions regarding evolutionary and complex systems, and techno-capitalist innovations. However, many entry points within the field of transition research were used and reframed in a way that sensitises long-term transformations, politics and urban (un)sustainability in a radically different way. Struggles and conflicts are now centre-staged, using insights from radical political theory and critical urban (eco-oriented) theories. The concept of urban governmentality provides us with an image and understanding of how urban regimes and practices shape and normalise particular spaces and populations. The notion of urban governmentality offers a language to understand how urban lives and spaces are governed and enhanced through certain problematised (aspects of) the 'unsustainable city'. Consequently, an 'integrated' transition analytics of urban spaces allows us to understand how struggles, contingencies and negotiations actually transform the way in which urban spaces and lives have been (and are) governed *and* contested. Importantly, this analytical strategy permits us to understand urban transition politics more empirically. It is worth mentioning that this analytical vocabulary should not lead to a more 'objective' understanding of the situation at hand. Rather, it enables a critical analytical framing of (and an ethical commitment to) transition politics and contemporary forms of sustainable urbanisation.

Interlude 2: Transition ethics

When we think or talk about power we are not outside hegemony, we are engrained in it. Our current techno-capitalist society and neoliberal culture requires us to be at least minimally reflexive. Speaking and thinking about ‘transitions’ requires one to engage in the ethical dimensions of ‘a transition’. In Chapter 4, I proposed an ethical horizon on the basis of the ‘right to the city’ and ethical forms of self-discipline. This also reframes questions about the ethical commitment of *transition scholarship* that start with persistent technological and societal problems in the domains of e.g. energy, food, water and mobility.

A new ethics for transition discourse

The commitment to understand (socio-technical) niches and allowing them to flourish is political. It implicitly signals a ‘transition ethics’ suggesting that systemic alternatives should be preferred over incumbent regimes. An ethics of urban transition politics, then, refers to a *two-track struggle for another city and another self in the name of the (historically) marginalised and repressed*. Building on e.g. Haraway’s cyborg metaphor, our ontology of urban assemblages allows us to understand how dominant city formations are ‘inside us’ and we are ‘inside the city’. This implies that urban dwellers are partly trapped in and navigate through bodies, words, built environments, institutions and informal networks, which all can become antagonistic arenas to remake the city.⁹⁶ If, for example, an omnivore refrains from eating meat to save energy and food for the sake of the marginalised (global south, animal life, etc.), this struggle takes place at the intersection of his/her body and the city. However, this is not yet an ethical struggle as it mostly refers to the re-disciplining of oneself⁹⁷. To indulge in growing and consuming one’s own food, might also resonate with this form of self-discipline. This is what counter-conduct entails, as an act of transition ethics. Additionally, the right to the city should be taken into account more explicitly. This, for example, might be realised by strategic lobbying, organising demonstrations, approaching old and new media, etc. The right to the city explicitly claims everyone and everything to be significant and sensible *equally*. This Rancière-inspired ethics advocates subverting an unequal social order that downplays the ‘unheard, unseen and unknown’ (animals, poor children in the global south, unpaid sweat shop workers, etc.).

⁹⁶ As Haraway’s figure of the cyborg suggests: we are inside our technologies, but our technologies are also inside us.

⁹⁷ This might be seen as a ‘holy’ struggle against oneself, i.e. strategic self-deceit against one’s investments in neoliberal discourse.

Ethical vs. ideological transitions

But, when are transitions actually ethical? How can scholars, professionals and residents *distinguish* urban transitions that are worthwhile from transitions that merely confirm the status quo? What type of grounding could serve as an ethical orientation for transition discourses? For this classical and complex question, I draw on the distinction that Glynos and Howarth make between *ethics* and *ideology* (Glynos & Howarth, 2007). For Glynos and Howarth, who develop a critical approach to social and political analysis, ideologies are based on naturalised and normalised fantasies that sustain a particular order (in our case, the international neoliberal urban order). Ideology, for them, refers to the ways in which “subjects are heavily invested in fantasies in a way which avoids rather than affirms the radical contingency of social relations (...)” (Glynos, 2008: 12). Ethics, contrastingly, is “characterized by an alternative ethos which signals a commitment to recognizing and exploring the possibilities of the new in contingent encounters” (ibid: 18). This is the difference between ideological and ethical forms of transition. What we gain by this ideology/ethics scheme, is an ethical horizon of transition politics that is able to see, know and act upon the difference between ethical and ideological transition politics. In a more general sense, this implies that we can differentiate between two types of transitions, namely *ideological* and *ethical transitions*. Cities are like a sympathetic monsters, they provide certain populations with all kinds of niceties such as security, welfare, hygiene, happiness and luxury, but some are left out. Cities can swallow everything in their way and produce their own enemies. In more technical terms, if there is no *a priori* ontological promise of system attractors as political heroes or that socio-technical niches upscale ‘by necessity’, we need an ethical horizon to be accountable in some sense. This is especially relevant because, recently, we have seen an increase of unequal accumulation of wealth, health, security, comfort, food, housing and energy sources at a global scale.

Conceptualising and reflecting on sustainability transitions are discursive doings. Consequently, it is quintessential to think and analyse transitions ethically. If we combine these insights with our ethics of transition politics, we get the following simplifying matrix.

Figure I-2 Ideological versus ethical transitions

	Ideological transitions	Ethical transitions
Internal struggle and self-discipline?	‘Internal’ struggle reproducing hegemonic discourse	‘Internal’ struggle countering hegemonic discourse
Using societal contingency?	Using contingency for the privileged	Using contingency for the marginalised

This matrix is not a normative yardstick to ‘measure’ whether a transition towards urban sustainability is actually ethical or ideological. However, it serves as an ethical horizon to be able to sense and know the *degree* to which a transition discourse operates through ideological or ethical devices. In order to counter post-political tendencies in contemporary social theory making, social sciences and public discourse, I believe this approach offers a fruitful basis for critical engagement with socio-economic and ecological issues today.

Transition theory as ethical practice?

What does this mean for transition research and theory? Are certain transition approaches developed to be utilised for ideological transitions? And in what ways are transition concepts ideological or ethical? In Chapter 3, I presented two dominant transition approaches: STIA (socio-technical innovation approach) and CORSA (complex-reflexive steering approach). It would be naïve to suggest that all STIA concepts and applications are inherently ideological, because they always rely on technocratic politics and reproduce dominant social and economic power structures.

Similarly, it does not make sense to consider all CORSA concepts and practical translations as ethical per se, because they always depend on non-mainstream community networks, policy entrepreneurs and social business models. In fact, all STIA and CORSA concepts and practices should be understood in their local and complex translations, which can be both ideological and ethical. In that, both CORSA and STIA can reproduce techno-capitalism and/or neoliberal lifestyles, or could emancipate marginalised groups. However, the genealogies of STIA and CORSA, their specific objectives and discursive orientations, are distinct. Similar to how sociologist Schatzki frames immanent orientations of practices as ‘teleoaffective’ (e.g. guns are not designed to use as a bike), STIA and CORSA discourses have conceptual and socio-political histories and preferences. Since generalisations are both for fools and generals, equating STIA with ideological transitions and CORSA with ethical transitions is unwise and unethical.

PART III - EMPIRICAL MATTER

"We are actually living in a million parallel realities every single minute".

Marina Abramovic



Chapter 5

Muscles, vessels and boulevards

Making Rotterdam's waterfront sustainable

Chapter 5. Muscles, vessels and boulevards: Making Rotterdam's waterfront sustainable

*"When you look at a city, it's like reading the hopes,
aspirations and pride of everyone who built it".*

Hugh Newell Jacobsen

*"Als je straat nog nooit open heb gelegen, ken je geen Rotterdammer zijn".
(If your street has never been a construction site, you cannot be a resident of Rotterdam)*

Mike Bodde⁹⁸

"City life is millions of people being lonesome together".

Henry David Thoreau

5.1 Introduction

This chapter presents the first empirical case of an urban sustainability transition: the rise of Rotterdam's sustainable waterfront. It particularly focusses on the creation and normalisation of governing regimes and practices around floating houses, offices and living environments. Rotterdam's modern waterfront is based on a number of historic 'epistemic periods' or 'episodes' that followed one another through ruptures and discontinuities (cf. Foucault, 1972; Koselleck, 1989; Visker, 1995). The three major 'genealogical episodes' presented in this chapter respond to one another in a complex manner. Episode I (1860-1960) was a period of port-industrialisation and urbanising socio-biological life (*the bio-industrial waterfront*). Episode II (1960-2000) responds to episode I and can be understood as a period of new port-city relations and integration of social and environmental values (*the neo-industrial waterfront*). Episode III (2000-now) signifies a period of further urbanisation of old port areas and the use of market-based strategies and sustainable technologies (*the neoliberal eco-waterfront*). This 'most recent phase' is confronted with

⁹⁸ Policy document *Stadsvisie Rotterdam* (2007: 13).

a number of new contingencies such as techno-legal challenges, marginalised and sceptical residents, and the sheer dynamism of the waterfront’s future.

In order grasp the genealogical complexity and rise of Rotterdam’s sustainable waterfront, I recommend that the reader reads this entire chapter. However, since this chapter is quite sizeable, and in order to assist the reader in selecting ‘most relevant fragments’, (s)he can follow three ‘reading routes’. These routes relate to difference in *time availability* and *interest* by the reader, resulting in different degrees of case knowledge.

Figure 5.1 Reading routes Chapter 5

	Degree of case knowledge	Read
Reading route 1:	Extensive	All sections
Reading route 2:	Intermediate	Sections 5.2 and 5.7 till 5.10
Reading route 3:	Very basic	Sections 5.2 and 5.10

The sections of this chapter are structured on these episodes. Introductory remarks and contexts regarding Rotterdam’s waterfront transformation are provided in section 5.2. Section 5.3 then introduces episode I (*the bio-industrial waterfront, 1860-1960*). This section focuses on the emergence of Rotterdam’s waterfront as a modern industrialised space since the mid-19th century, after presenting how Rotterdam’s waterfront combined its legal and commercial-economic concerns since the late Middle Ages. Genealogical episode I also maps the expanding port industrialisation and modern city planning, aimed at tackling the ‘dark side’ of Rotterdam’s industrial urbanisation (e.g. concerning housing, hygiene and health). Section 5.4 continues into the late 1950s, when Rotterdam’s port expansion and modern city planning further rationalised. Section 5.5 introduces episode II (*the neo-industrial waterfront, 1960s-2000s*). It highlights why and how ongoing rational planning and industrial-economic growth were challenged since the 1960s. Increasingly, environmental quality and space became social concerns. This section focuses on such new waterfront concerns, as well as the further geographical decentring of Rotterdam’s waterfront. Rotterdam’s waterfront restructuring started in the 1980s and ushered in the ‘boulevardisation’ of old city ports. Section 5.7 introduces episode III (*the neoliberal eco-waterfront, 2000s -...*). This genealogical episode, in which we now live, illuminates how new conflicts between port and city ambitions unfolded in the early 2000s. In section 5.8, a new programme is introduced that mediates between port and city developments. This programme, called ‘the Stadshavens programme’, represents different regimes and practices to regenerate Rotterdam’s waterfront in a

‘sustainable’ manner. After presenting the contours and spatial implications of this programme, section 5.9 zooms in on the so-called ‘blue revolution’, highlighting how sustainable forms of floating houses, offices and living environments are rendered governable. Section 5.10 addresses the question of the whereabouts of the actual port, since the old port areas are increasingly urbanised. Section 5.11 explicitly deploys the transition analytical building blocks as proposed in Chapter 4. This, finally, enables us to reflect analytically on the emergence and normalisation of Rotterdam’s sustainable waterfront.

5.2 Welcome to Rotterdam’s port-city nexus...

This first section briefly introduces and contextualises Rotterdam’s waterfront. My engagement with Rotterdam’s waterfront was not only one of critical distance and reflection, but also of embodied experience. To highlight this, I first present a brief ethnographic fragment, after which I provide some context about the genealogical episodes and the overall chapter. This allows the reader to grasp the current dynamics before reading the genealogical episodes. Consider this opening section as the basis for a ‘*déjà vu* experience’ when reaching genealogical episode III (2000s -...).

Opening fragment: Experiencing a Floating Pavilion

Rotterdam, a rainy Saturday morning on the 11th of May 2013 (Fieldnote A). I am visiting the so-called ‘Floating Pavilion’, a floating construction in one of the many city ports (*Rijnhaven*) of Rotterdam, built in 2010. I arrive early, the pavilion is not yet open. I must have mixed up the opening times on the website. The extra time gives me the opportunity to really observe this phenomenon of which I heard many great things (from colleagues, websites, YouTube videos, etc.). The floating pavilion is located at one of the many intersections between Rotterdam city and its port area, located on the Maas River. Before the doors of the pavilion open up, I notice some signs on the gate to the pavilion. One of them states “This place invests in your future. The floating pavilion is co-financed by the European Fund for Regional Development of the European Commission”. Another small sign says that the dock (connected to the floating pavilion) was produced by a boatyard company called Hoebeé B.V., established in 1806. So, traces of an actual historical dock are still here. A different sign shows eight specific (technological) features of the floating pavilion that made it innovative and sustainable. These signs suggest that this floating



object somehow is to be deemed promising and significant. Next to the pavilion, a so-called ‘autarkic floating’ home is visible, with IKEA billboards. This ‘home’ turned out to be sponsored by IKEA to show that they are ‘also’ into innovative ideas and on top of their game.

When the doors actually open up, I am welcomed by one of the two guides. He tells me about the idea behind the floating pavilion, why, when and how it was built, its technical sophistications and how it fits in the wider socio-physical environment of the city harbour area. In a landscape of skyscrapers and concrete jungle, this modern and controversial building is clearly visible⁹⁹. It became clear that this floating pavilion is a stroke of engineering genius and built as a showcase to experiment with a new meaning of the Rotterdam city ports spaces. As the traditional harbour activities moved more into the direction of the North Sea, it was said, this area was to be re-structured and re-organised, without its ‘old industrial aura’. Also, as climate change pushes delta cities to become more adaptive and creative in terms of living with and next to water. Ongoing urbanisation made land scarce, and in a time of competition between international cities for business, an attractive environment was to be created. These rationales were provided and visualised in many ways (plasma screen, flyers, boards, etc.). The floating pavilion looks very clean, almost hospital-like hygienic. It is full of informational signs (about the building process, the materials used, supportive organisations, architects, etc.), interactive media (touch screens, audio visual tours, etc.) and traces of sustainable technologies (recycling bins, C2C tiles, a self-supporting water management system, etc.). The ‘roof’ of the bubble like construction was made by a special type of ultra-light glass, providing a lot of light. There is also, somewhat unexpected, a very modern bathroom with the luxuries one expects in a 4-star hotel. In one of the newsletters of the ‘Floating Pavilion Team’ (4 March 2014) - a small organisation that rents the pavilion - the floating pavilion is introduced to the public as a site for events:

“this business event location with an exceptional appearance is very suitable to host a congress, a meeting, a presentation, a dinner or a party. You can invite your guests in a beautiful environment with a broad view over the Rijnhaven”.¹⁰⁰

⁹⁹ Noteworthy, *De Rotterdam* building (behind the floating pavilion on the picture) is designed by the world famous architect Koolhaas, and is part of the *Kop van Zuid* project, aimed at connecting Rotterdam’s northern and southern part. The aesthetical, financial and political aspects of this building are controversial.

¹⁰⁰ “Deze zakelijke evenementenlocatie met een uitzonderlijke uitstraling is zeer geschikt als congres-, vergader-, presentatie-, diner- of feestlocatie. U ontvangt uw gasten in een prachtige lichte omgeving met wijd uitzicht over de Rijnhaven”. Newsletter 4 March 2014, Drijvend Paviljoen info@drijvendpaviljoen.nl.

This newsletter also indicates the target audience of this site, as “[you can] present your latest products to your costumers, annual figures to your shareholders, or plans to your personnel for the forthcoming years”¹⁰¹.

As I walk to one of the ‘transparent walls’ of the pavilion – it’s May 2013 again - I look outside and stare at the water and the surrounding environment. The water is relatively calm, though waves were clearly visible. As I look outside, observing some fragments of the city, I start thinking about what it is I am experiencing and seeing at the moment. The unmediated relationship with the water of the river made me somewhat nervous and uncomfortable (as I don’t like open water). Yet, it felt very open and a sense of freedom and infinitude came over me as well. There I was, standing on a floating object (not a boat, nor a house or store), with numerous historical traces regarding the traditional harbour activities of the city of Rotterdam and a wide variety of contemporary concerns and technologies, preparing for a different but promising future. I was standing on the intersection of different worlds. The first intersection was spatial, I (literally) experienced a juncture of the Rotterdam city and its port area, which, in a way is the interpenetration of land and water. Second, I experienced a more temporal intersection. I observed how an old world, with modernist and industrial fundamentals, was flirting with a new more elastic world in unprecedented ways.

Stadshavens and waterfront regeneration in the 21st century

This ethnographic fragment is embedded in a number of loosely coupled regimes and practices that emerged in the early 2000s. These initiatives and projects have been clustered with the aim to re-structure the Rotterdam city-harbour area. In 2008, the city of Rotterdam Council and the Port of Rotterdam Authority proposed their common effort to restructure the harbour area, formulating a strategic vision with the document *Creating on the Edge*. This vision was accompanied with a more specific implementation programme, covering a wide range of actors, initiatives and efforts, targeting an area of about 1600 hectares around the Maas River at the intersection of the Rotterdam harbour and the city. The Stadshavens programme enjoys a long and complex history. It can be said that the future plans of the Rotterdam harbour authorities, which mainly focus on economic activities, did not



¹⁰¹ “presenteer (...) uw nieuwste producten aan uw klanten, de jaarcijfers aan aandeelhouders of de plannen voor de komende jaren aan uw personeel”. Newsletter 4 March 2014, Drijvend Paviljoen info@drijvendpaviljoen.nl.

resonate well with the urban development plans for housing in the 2000s. This critical tension emerged, in part, because of the geographical nature of a city-port nexus (i.e. a river running right through the city).

These differing ambitions resulted in a stalemate, which went through a 'reconciliation' by a number of events and insights. First, the establishment of a new harbour area on *Maasvlakte 2* (near the estuary) created possibilities to reframe the harbour areas near the city. Second, the emergence of environmental concerns (mainly regarding CO₂ rates in the Rotterdam region) created a sense of urgency to decrease the traditional industrial harbour-related activities. Third, a new local political coalition and new personnel in project management created the momentum necessary to leave old dichotomies and sepsis behind and start anew (Daamen, 2010)¹⁰². These developments resulted in the urge to transform the city-harbour nexus in such a way that it would strengthen the economic competitiveness while providing attractive living and working environments (Project Bureau Stadshavens Rotterdam, 2008: 2). The main challenges that were formulated as the rationale underlying this programme were: rising sea levels due to climate change, urban CO₂ emissions, maintaining international competition of the Port of Rotterdam and the urban region more broadly, increasing population density and lack of proper accessibility and integrated mobility systems. The vision for regenerating the Rotterdam city-port nexus is presented as both a matter of urgency and opportunity (Programme Bureau Stadshavens Rotterdam, 2011: 18). The Stadshavens Rotterdam website states that it:

"...wants to develop into a quality port and an excellent location, not only for port and transport related industry, but also for innovative businesses and knowledge institutes. Rotterdam is also creating an image of itself as a trendsetter in the fields of sustainable energy and climate adaption, with the aim of attracting professionals and pioneers keen to try out these new trends. Stadshavens can provide them with everything they need for setting up their businesses, along with exceptional residential developments, cultural amenities and good educational facilities"¹⁰³.

The programme is targeted at four geographical districts, as the 1600 hectares were considered as too heterogeneous for a single approach. Each specific area has particular histories, concerns and networks that need to be considered in their own context. The four areas are: 1) *Rijn-Maashaven*; 2) *Merwe-Vierhavens*; 3) *Waal-Eemhaven*; and 4) *RDM-Heijplaat*.

¹⁰² This will be elaborated more extensively later in this chapter.

¹⁰³ Source: <http://stadshavensrotterdam.nl/eng/vision>.

Figure 5.2 Geographical delineation of Stadshavens programme

Throughout the 1600 hectares *five strategies* are discerned that shape the overall transformation (Project Bureau Stadshavens Rotterdam, 2008b):

1. Reinventing delta technology: providing space for experimentation and innovation for energy transition and water management (e.g. for an energy neutral city-port nexus);
2. Volume & value: optimising existing space through innovative logistics for industrial growth and more space for environment and landscape;
3. Crossing borders: (re-)connecting city and port both physically and socially (e.g. by providing cultural and sport facilities near the water);
4. Floating communities: creating floating housing, workplaces, recreation facilities due to land scarcity and to withstand climate change, while restructuring the urban economy and creating new social networks;
5. Sustainable mobility: creating a multi-modal system of mobility that also connects public transportation on land and water.

These interrelated strategies cover the graphical urban space of Rotterdam's waterfront. This particular form of urban development in relation to port areas and activities is embedded in a broader historical and spatial context.

Floating communities, waterfronts and contemporary port cities

Modern modes of urbanisation and economic globalisation heightened the significance and complexity of contemporary port cities. The many relationships between ports and their urban environment have been interlinked and intensified over the past decades (e.g. by logistics, mobility, markets). Even though different definitions highlight different aspects of port-city relationships (Ducruet, 2011), a port city can be broadly

understood as a space connecting international economic and maritime activities with local economies and hinterlands. In this sense, a city port is not so much a space or 'system' on its own, but rather a set of historically situated ecologies between a port and a city (ibid). This historical and local complexity is to be underscored, since each and every port city has its own geographical and physical conditions, as well as its economic, cultural and political institutional cosmologies.

The last decades have shown a number of port city developments, such as skyrocketing container output/throughput ratios, new maritime activities and port urbanisation in cities around the world (e.g. London, Buenos Aires, Vancouver, Calcutta, Hamburg, Rotterdam, Los Angeles, Shanghai, Singapore). These global port cities are shaped by technological innovations, inter-port competition, global market dynamics, and local city-port interfaces. And "in a world where 90% of trade volumes occur by sea, ports and maritime transport remain more important than ever (...)", it is safe to say that the global port cities network push port authorities, political actors and urban planners to be strategic and creative (Ducruet, 2011: 32). 20th century industrialised port cities have increasingly been confronted with a number of challenges revolving around local water management and climate change, urbanisation, de-industrialisation and environmental concerns. This also holds for urban contexts in more general terms, understood as e.g. a 'competitive', 'post-industrial' and/or 'entrepreneurial' city (Jonas & While, 2007). There are different ways in which port cities respond to these challenges.

One of the most salient responses of port cities is called 'urban renewal' or, specifically focussed on port city spaces, 'urban waterfront regeneration'. Waterfront regeneration can be understood as the 'successive stage of waterfront development' (primitive city-port, expanding city-port, industrial city-port, retreat from the waterfront, and redevelopment) (Hoyle, Pinder & Husain, 1988). It can also be considered as "part of a broader growth-oriented strategy agreed by local elites to re-image their cities in an increasingly competitive urban system" (Bassett, Griffiths & Smith, 2002: 1757-1758). Or it can be even evaluated as the 'postmodernisation' of urban waterfronts (Norcliff, Bassett & Hoare, 1996; Klamer & Kombring, 2004). In any case, urban waterfront regeneration is a historically situated and a particular strategic governance response to contemporary port city challenges¹⁰⁴. Port history is not a singular history, but a dual history. It expresses both maritime history and urban history (Williams, 2003). Urban waterfront governance projects are complex but celebrated as a 'worldwide urban success story'. However, they are also seen as recent expressions of elitist capital accumulation with facilities and spatial development for the 'happy few' (Breen & Rigby, 1996; Harvey, 1990; Daamen, 2010). In this sense, urban waterfront governance

¹⁰⁴ One of the first modern urban waterfront development projects was the 1963 Baltimore's Inner Harbour.

does not only refer to a set of economic interventions, but might also create unequal distribution effects, triggering numerous social and political questions.

Before we dive into the history of Rotterdam's current waterfront developments, we need to understand where Rotterdam's modern waterfront concerns actually came from. This takes us back to the late Middle Ages.

'Back then': Pre-19th century waterfront developments

Around 1270, a settlement called 'Rotta' emerged near the river *Rotte* or *Rotta* in order to protect the region's scattered population from floods, in which many people were killed. The geographical locations of the deep-water turning points of the river were ideal for fishing and to anchor ships (Van Dam, 1990: 7). Therefore, a dam was constructed by the local population. The dam also provided a means to tranship goods from big ships that came from bigger rivers to smaller ships fit for inland rivers. In a sense, this basic economic practice served as the foundation for Rotterdam's (successful) port in the next centuries. In 1340, Rotterdam gained the official status of a city, along with the requisite rights, granted by a count of Holland (Willem IV). Such privileges were monarchical means to legally protect a specific site or region in many European countries in the late middle Ages. These selected towns provided strategic advantages for a monarch and the government of his realm (having trading routes, market places or storage facilities). In 1350, the first actual port was built in Rotterdam (now the 'old port', in Dutch: *Oude Haven*). This port mainly focussed on fishing and triggered peripheral economic activities around storage houses, barrel factories, as well as their inspection by local authorities (Van Dam, 1990: 18). City rights ensured some basic foundations for economic and commercial transportation.

Rotterdam's city rights also established court authority and created regulatory capacities. One of these capacities was the authority to make an ordinance to regulate Rotterdam's population in a number of ways, e.g. about the right to be called a 'citizen of Rotterdam', being allowed to use a weapon and the regulation of public behaviour (e.g. preventing fighting, nuisance). As Willem IV e.g. stated in 1340: "whoever beats a man to death inside the city, loses his life and possessions", and "whoever breaks order, loses his life and possessions". Issues of toll and taxation were also explicated, as evidenced by the following ordinance: "whoever lives in Rotterdam or will live there and becomes a citizen, does not have to pay toll over his goods in (...) Holland, Zeeland and Friesland" (Oudenaarden, 2005: 17-18). Furthermore, those who were citizens of Rotterdam, were expected to actually live in the geographical space called Rotterdam (Oudenaarden, 2005: 18). Willem IV explicitly stated that 'his citizens' were protected legally: "(...) my citizens can nowhere be arrested for a legally unproven act". These rules, rights and regulations were written down in specific documents and were the first formal means to protect and regulate the local population.

The geographical position of Rotterdam became even more important in the 15th and 16th century, when fierce competition grew between other port cities such as Amsterdam and Antwerp. Rotterdam became a dominant port economy due to this competition. The waterfront was mainly meant for economic activities such as fishing, but increasingly for ship-building and shipping focussed on season-based produce (e.g. wine). These economic flows were improved by technological means, such as Rotterdam's very first construction cranes in the late 15th century. Rotterdam's waterfront became increasingly populated by merchants and people that directly and indirectly lived off this port economy and its growth. Importantly, such merchants (often with ample capital) obtained authoritative positions in administrative and religious bodies and institutions; enabled by the contacts between merchants, rich elites and governors and led to the increase and intensification of economic activities.

After Spanish authorities conquered the city of Antwerp and its harbour in 1585, the Dutch economic power centre shifted to the north (towards Rotterdam and Amsterdam). This resulted in a period of enormous economic growth for Rotterdam. Again, new workers and merchants moved to Rotterdam for economic reasons. Rotterdam's waterfront grew bigger as new canals were excavated and new ports were built to facilitate better international transportation and economic flows (Van Dam, 1990: 24). Each and every commodity was assigned its own dock and city port: wine port, glass port, beer port, ship-making port, etc. This intervention (or 'urban planning' *avant la lettre*) enabled Rotterdam's economic position to flourish, as part of the broader emergence of Holland's 'Golden Age'. In 1591, Rotterdam officials bought land south of the Maas river (now: Rotterdam Zuid). As Rotterdam expanded population-wise and geographically, some traditional economic activities and kitchen gardens were pushed to the outskirts of the city (Van Es, 2013: 15) (some 'gentrification' *avant la lettre?*).

The period after 1648 ushered in an even more promising and prosperous era for many European port cities, not only in the newly established Dutch Republic, but also in France, England, Spain and Portugal. Port cities increasingly served as economic centres for trade, but their waterways also served as doorways to 'the New World', i.e. the East and West-Indies. European economic expansionism and inter-continental colonial adventures created new trading routes, resulting in new colonies, economic spaces, and import of goods. The ongoing economic growth in the 17th century was based on an international economic network V.O.C. (Dutch East India Company), creating the conditions for financialisation of international economic activities through loans, banking and insurance. As the port became increasingly important, the number of ports started growing as well. Throughout these years the canals and waterways needed to be able to accommodate big ships and boats. Therefore, local authorities and merchants had to fight against the geo-ecological forces of sedimentation (Van Dam,

1990: 12). Rotterdam's population also grew to over 50.000 inhabitants in the mid-17th century. Rotterdam's port-city interaction seemed to follow a relatively familiar port city principle: the more economic activities based on the strategic position of the harbour, the more people it attracts. This demographic growth led to the building of simple houses and living environments in the city centre (near the port), but also made big companies and elites move out of Rotterdam's traditional city centre into less populated spaces.

The 'glorious period' of Rotterdam ended as the successes of the 17th century Dutch Republic declined, primarily through international forces. The 18th century meant the downfall of the hegemony of the Dutch Republic, including Rotterdam, as England and France kept growing economically and developed into advanced maritime powers. And since the Dutch Republic relied on international trade and open markets (e.g. the staple market), the new mercantilist trend of protectionism undermined the economic success of Dutch cities (cf. Ormrod, 2003). The decline of Rotterdam's economy also implicated an intensification of economic deprivation and poverty of the majority of Rotterdam's population, who lived in the city centre. A selection of privileged regents, merchants and industrialists did not have this problem however.

Genealogical episode I: The bio-industrial waterfront (1860s-1960s)

Now that we have a general sense of the historical context of Rotterdam's waterfront and its broader concerns, we are able to enter the first modern genealogical episode.

5.3 Waterfront modernisation and urbanisation misery in the 19th century

Since the late 18th century, the industrialisation of England's and Germany's economies were an important development for Rotterdam's merchants (Klamer & Kombrink, 2004)¹⁰⁵. In order to connect to upcoming industrial economies, modern industrial means were cultivated, such as railroads near the docks and ports, replacing e.g. the horse drawn carriage. Initially, trains and railways were considered as possible competition for boats and waterways (Van 't Wel, 1987). As modernisation and industrialisation developed in accordance with making bigger ships and vessels, new canals had to be excavated or broadened and deepened. New modes of transshipment were created, as train-boat was complemented by boat-boat transshipment. The port expanded towards the west (estuary), e.g. by the 1863 plans of local chancellor Lodewijk Pincoffs, as these areas were less populated. Pincoffs played a crucial role in the modernisation of Rotterdam (Oosterwijk, 2011). He established Rotterdam's Association of Commerce and supported other initiatives that allowed Rotterdam's port to develop and grow in the late 19th century, including excavating a new canal. This was the so-called 'new waterway' in 1866-1872 (*de Nieuwe Waterweg*) and in 1863 the narrow estuary was broadened for new and bigger ships (Neiszen, 1885)¹⁰⁶. Since the mid-18th century, a number of important waterways to/from Rotterdam silted up. The new waterway, initiated by engineer P. Caland, was basically a means to turn land into water in such a way that it offered space to modern big trading ships, strengthening Rotterdam's strategic economic position, with 'trickle down effects' for e.g. the German Ruhr area. This endeavour was supported by the well-known liberal Thorbecke, who stated: "a funnel with which world trade can be connected with half of Europe with all countries behind and next to us, the wider these funnel openings become, the more will go through it" [italics, SJ]. The new waterway, designed by a

¹⁰⁵ Rotterdam's port also benefited from the Belgium independence in 1830, as many ships aimed for Rotterdam as a 'safer' option.

¹⁰⁶ "een trechter waardoor de wereldhandel zich in verbinding kan stellen met half Europa met alle landen die achter of naast ons liggen, hoe wijder men die openingen van die trechter maakt, hoe meer er door zal gaan". Translation SJ (Van 't Wel, 1987: 43).

number of engineers, required dispossession procedures, which resulted in a delay of some years (Oudenaarden, 2005: 85). These port city restructurings were often informed by city plans supported by the state (Van Dam, 1990).

In a letter to King Willem III in 1860, a supporter of the waterway stated that the new waterway would increase the attractiveness of Rotterdam in such a way that the city will be “chosen over any other between Le Harve and Norway” (Oudenaarden, 2005: 85). A more critical support of the plans stated that:

“For Rotterdam, a new waterway to the sea is an existential question, without one a continuous progression of our city is not to be expected and is even in grave danger of seeing her current welfare decrease; for the future of our shipping and trading, in that regard, we cannot be too cautious” (Oudenaarden, 2005: 88)¹⁰⁷.

New ports were also excavated at the north and south side of Rotterdam from the 1870s till after the mid-20th century (e.g. the ports: *Maashaven*, *Rijnhaven*, *Eemshaven*, *Waalhaven*, *Prins Willem Alexanderhaven*). City authorities cooperated with Rotterdam’s trade association (*Rotterdamse Handelsvereniging*) to cover the costs (Van Dam, 1990: 39). These new basin-like ports were specifically excavated to let big ships anchor, so that transshipment and storage could take place more easily and efficiently. Due to these excavations, some places and their populations had to be ‘disowned’ and sometimes rural sites, agricultural spaces, houses, schools and churches had to be removed, e.g. 250 hectares for the *Maashaven* (Van Dam, 1990: 67). Interestingly, the mud and silt that was excavated to create the *Waalhaven*, served as material substance to further develop an urban park and lake (the *Kralingse Bos*).

The smell of modernity: Rotterdam’s modern waterfront challenges

Slowly but surely a totally renewed geographical and physical landscape of Rotterdam’s waterfront emerged. A number of new industrial technologies were introduced such as floating cranes or elevators (so-called: *Jo-Jo’s*). In the transit warehouses, goods were stored and/or processed from all over the world, e.g. coffee, sugar, spices, copper, tin, wool, rubber, fertilisers, animal feed and paper (Van Dam, 1990: 53). Physical labour forces were required to carry heavy goods such as bags with coal or fruit. In material terms, these tons had to be lifted, transported and moved by

¹⁰⁷ “Voor Rotterdam is een verbeterde waterweg naar zee een levensvraag, zonder die is een voortdurende bloei van onze stad niet te verwachten en loopt zij zelfs groot gevaar haar tegenwoordige welvaart te zien afnemen; voor de toekomst van onze scheepvaart en handel kan in dat opzicht niet te veel gewaakt worden”. Translation SJ (Oudenaarden, 2005: 88).

human muscle, horse power, cranes, railways and steam machines¹⁰⁸. Many of the port workers came from the southern regions (*Zeeland, Brabant*) and lived in the southern part of Rotterdam, where new ports had been excavated and new urban areas had been 'reserved' (e.g. *Feyenoord, Charlois, Katendrecht*). These workers were referred to as the poor farmers from Rotterdam South ("*boerenzij van Rotterdam*"). The circumstances that drove these workers to Rotterdam were predominantly the agricultural crisis and the mechanisation of agriculture in southern provinces in the Netherlands in the 1880s. Low-skilled labour workers had many accidents on ships or with heavy material. These working conditions became more and more visible and were problematised by e.g. political parties (mostly socialists and social-democrats). This might seem as a local concern. However, it should be considered as a local expression of 19th century global processes of rationalisation, urban industrialisation and tense relations between socio-economic classes (workers and capitalists).

Rotterdam grew immensely in this period. Rotterdam's population increased from 100.000 (1850) to 450.000 (1913); Rotterdam's cargo space was 3.905.000 tons in 1876 and 25.182.000 in 1910 (Nortier, 1985: 38). In one of the port areas, *Heijplaat*, a company started (RDM, *Rotterdamsche Droogdok Maatschappij*) building seagoing vessels. This specific dock employed over 5000 workers, who all needed housing. In order to provide its workers with housing, RDM built a small village, called Heijplaat. This village, which was finished in the 1920s, would serve all the needs of the working population, i.e. shops, schools for their children, different churches (as workers had various religious backgrounds), etc.

The continuous industrialisation of Rotterdam, however, led to major problems for workers and other poor people that lived in highly populated areas. More and more houses were built, and land for gardens turned into locations to build houses. New ordinances were activated in order to standardise some norms for newly built houses, e.g. the 1857 building rules (Van Es, 2013: 25). In the late 19th century, city authorities started building bridges between different parts of Rotterdam, to disrupt urban fragmentation (between north and south parts of Rotterdam) and to facilitate economic transportation and urban mobility (e.g. *Koninginnebrug* and *Willemsbrug*). Interestingly, people started using bicycles, which were quite expensive and required specific skills. Yet, many parts of the city, especially near the ports and docks, were deprived. These areas (e.g. *Katendrecht*) were quiet and empty when shippers were abroad. Issues of hygiene, fire safety and new economic activities increasingly became issues of concern in the mid-19th century. Concerns of health, safety, child labour,

¹⁰⁸ There were different types of harbour workers taking care of this, based on the flexibility of their contract: permanent contract, semi-permanent contract, un-contracted workers (on call, during peak moments or strikes/protests). The last group often waited until they were called to work, often spending their time in bars (drinking).

employment and housing in Rotterdam were embedded in a broader context as a side-effect of industrialisation (both in the Netherlands and other European countries), understood as ‘The Social Issue’ (*de sociale kwestie*). These issues were not new, but were intensified by urbanisation and industrialisation in the Netherlands¹⁰⁹. Concerns around water were particularly relevant in Rotterdam. The city was historically connected to water in different ways. Sewers were overused and the presence of livestock (e.g. pigs, goats) increasingly polluted the city’s water (Hooimeijer & Kamphuis, 2001:12). After the 1833 cholera epidemic, Rotterdam’s city authority stressed the importance of hygiene and a clean environment. An 1842 ordinance stated:

“Nobody is allowed to throw ash, garbage or any other material on markets, ports, streets, near bridges or anywhere else; the same holds for any garbage or anything alike, inside or outside ports, canals, ditches or city walls, or from houses into the water, or coming or throwing from a river, results in a fine of two guilder. One shall also not throw any garbage into the water from ships or boats, especially no ballast, fined by twenty five guilder”¹¹⁰.

The smell of polluted water (often containing excrement) was very intense in the 1850s. The regional water board (the *Hoogheemraadschap*), which traditionally focussed on regulating and managing problems associated with water, began to take water concerns in urban areas much more seriously.

Modern waterfront plans and trying to improve urban life

Rotterdam started to include some of these concerns in its urban plans in order to re-imagine urbanisation. For example, the architect W.N. Rose was authorised to improve Rotterdam’s water system. Rose’s experience and plans (plan-Rose, which unfolded in the period 1840-1852) nicely illustrate the ways in which Rotterdam responded to modern urbanisation problems. Rose, and his colleague Scholten, considered how Rotterdam related to water, not only in terms of hygiene, water safety, drinking water, but also in terms of mobility and trading routes. Green strips were developed around the outer ring of the city (5.7 km. in total) (Hooimeijer & Kamphuis, 2001:17). In the 1840s, Rose proposed more plans to ‘develop’ certain parts of Rotterdam, but the priorities of the city authorities were mainly on infrastructure and facilities for trade and shipping, especially because big

¹⁰⁹ These concerns were articulated by new (national and European) ideological movements (e.g. socialists and social-democrats) and became concerns for city authorities and the emerged state apparatus.

¹¹⁰ “Niemand vermag Asch, Vuilnis of eenige andere stoff, op de Markten, Havens, Straten, bij Bruggen of elders, te werpen; evenmin eenige Vuilnis of wat zulks ook zoude moge zijn, in de buiten of binnen Havens, Grachten, Slooten of Vesten, of uit de huizen aan het water, of de zijl uitkomende, te werpen, op eene boete van twee gulden. Ook zal men niet van Schepen of Schuiten enig Vuilnis hoegenaamd in het water mogen werpen, en wel speciaal geen ballast, alles op eene boete van vijf en twintig gulden”. Translation SJ (Hooimeijer & Kamphuis, 2001:13).

ships begun opting for other port cities due to a lack of space (ibid). Initially, Rose had difficulties convincing powerful city elites that hygiene, health and drinking water were serious concerns¹¹¹. The health and hygienic concerns remained as many people did not conform to the ordinances, resulting in a new Cholera epidemic (1848-1848) in which 1672 people died.

Critical voices emerged in the 1840s and 1850s directed at the city authorities in order to effectively address water-related hygiene and health problems. A newly authorised committee considered standing water in Rotterdam as undrinkable, thereby addressing water as a serious concern to the urban population. In 1868, finally, a drinking water system was developed and maintained by the local Drinking Water Organisation. It was not until 1883 that a water system was developed that discerned a sewer and a renewal system, inspired by similar methods in Paris and Berlin (Hooimeijer & Kamphuis, 2001:43). In 1887, a local decree stated that all streets should be maintained and that every home should be connected to the sewer. A whole set of norms and criteria were set in place e.g. about distance between facades, the height of homes, differences between main streets and side streets, etc. (Van Es, 2013: 25; Neiszen, 1885)¹¹². During this period of modernisation, the promise of new modes of transportation was seen as progress, comfort and easing everyday distresses. Rose's plans were now taken more seriously and materialised in the so-called 'Water project'¹¹³. In order to realise Rose's water project, a number of city canals had to be excavated, requiring dispossession of property and rural land. People that would be affected, i.e. land owners, were able to voice their concerns in a dispossession procedure. The affected people seemed to be losing a lot, indicated by procedural observations in 1856: 'The land owners suffer big losses, because of the decrease of their properties, as well as their pleasure, losing free view, which now covers until *Delfshaven* as well as its entire environs'¹¹⁴. Efforts were made to increase conditions

¹¹¹ Not only were financial means not allocated, legal tools were lacking to intervene, as some areas were not even property of city authorities. As land was a crucial issue by the end of the 19th century/beginning 20th century, Rotterdam started expanding southwards, excavating new ports and docks (see above) and annexing already populated land (e.g. Pernis, Heijplaat). As Rose's urban plans did not 'land' very well, he put them aside for 12 years. This was also due to the collapse of a newly build dock, designed by Rose (Oudenaarden, 2005: 79).

¹¹² Adjunct-Director J.H. Neiszen wrote a nice report, describing (in rationalist and administrative terms) the development of Rotterdam's Port (1885). He elaborately described ships, docks, lighting, excavation, financial costs, maintenance work, hiring prices of cranes, volumes of goods, tolls, taxation, technical and engineering information about ballasts and bridges, etc. Neiszen's report also includes a number of (handwritten) graphs about aggregated numbers of import and export and technical drawings of new docks and wharfs. *Wie dit leest is niet gek*.

¹¹³ Rose posthumously received recognition for his plans and work for Rotterdam, as his project was only formally approved in 1954 (Hooimeijer & Kamphuis, 2001:43). Rose died in 1877.

¹¹⁴ "De ingelanden lijden grootelijks nadeel, zoowel wegens de vermindering der waarde hunner eigendom, als te opzigte van hum genoeg, door het gemis van vrij uitzigt, hetwelke zich nu uitstrekt to *Delfshaven*, en de geheele omliggende landstreek". Translation SJ (Hooimeijer & Kamphuis, 2001:28).

of health and hygiene, radically decreasing mortality rates from the 1890s to the 1930s (Ekamper & Van Poppel, 2008). In light of this urbanisation, trees, plants and bushes started to be included in plans to restructure Rotterdam in the second half of the 19th century. In 1880, Rotterdam appointed its first official horticulture expert or gardener, D.G. Vervooren (from Leiden). Vervooren, and the emerging administrative arrangement of ‘urban green’, considered vegetation and plants mostly in terms of their aesthetic quality, creating beds or mosaics of flowers. City walls were removed and outer parts of the city were transformed into parks. This ‘urban greening’ aimed at aestheticising Rotterdam and attracting elites to the region. This made the growing contrast between the urban rich and poor less stark.

The further modern development of Rotterdam’s waterfront and its environment was taken up by G.J. de Jong, director of Municipal or Public Works (1879-1910). De Jong was responsible for e.g. connecting different parts of Rotterdam via its roads and streets, planning and spreading different activities in the city (working, home, leisure, etc.). During these years de Jong was confronted with the task to institutionally translate a wide range of modern urbanisation concerns. Similarly, Rotterdam pursued infrastructural ties with other cities and regions by roads and railways. This was important as Rotterdam’s population grew by the end of the 19th century: 100.000 in 1850 to 450.000 in 1913. This immense growth was caused by the fact that Rotterdam, similar to other 19th century cities, spurred economic life in the era of modernisation. This was especially relevant since Rotterdam developed itself as an enormous harbour city with its international flows and local economic activities¹¹⁵. An Italian journalist, Edmundo de Emicis (1846-1908), visited Rotterdam in 1874 and described the modern aura of the city, e.g. the patchwork of streets and bridges. De Emicis mentioned the many lights: “lighting that I have never seen before, of glass/pottery lights on the corners of houses, lights on ships, signal lights on bridges, lights on windows, lights on the bottom of houses, and reflection of all these lights in the water” (Oudenaarden, 2005: 94)¹¹⁶. For De Emicis, Rotterdam seemed to be an intense experience: “What streets, what houses, what a city, what a confusion of new things for a stranger! What a strange spectacle, so entirely different from all what one sees in other European countries” (Oudenaarden, 2005: 96)¹¹⁷.

¹¹⁵ Interestingly, horses and bikers were scared of the emergence of cars and trucks in 1898. Conflicts around these new moving mechanical objects led to new rules about driving speed, driving age, and required skills for driving.

¹¹⁶ “Een verlichting zoals ik nog nooit gezien had, van glaslantaarns aan de hoeken van de huizen, lantaarns op de schepen, seinlichten op de bruggen, lichten aan de vensters, lichtjes beneden aan de huizen, en de weerkaatsing van al die lichten in het water”. Translation SJ (Oudenaarden, 2005: 94).

¹¹⁷ “Wat een straten, wat een huizen, wat een stad, wat een verwarring van nieuwe dingen voor een vreemdeling! Wat een vreemd schouwspel, zo geheel verschillend van al wat men in alle andere landen van Europa ziet!” Translation SJ (Oudenaarden, 2005: 96).

5.4 High-modern city making and displacing waterfront concerns

Despite this modernisation magic, life around the waterfront became an important matter of concern for local authorities as part of broader ideological debates about working and living conditions of workers. Large populations, mostly port workers, lived in poor conditions. Their homes were small, dangerous and had little facilities (for hygiene, safety, water, etc.). The 1901 National Housing Act (in Dutch: *Woningwet*) stated that local authorities were responsible for the conditions of houses in the wake of growing urban populations. After city planners accouted for houses, housing cooperatives were authorised to build, rent and maintain houses¹¹⁸. In these decades, a huge number of legal and regulations were developed (mainly based on national frameworks) in order to ensure that housing, living conditions and spatial development plans were not arbitrary, but were guided by principles of hygiene, safety, equality, health, environment, energy, utility, etc.¹¹⁹. These concerns were associated with a number of institutions and organisations that were to control, evaluate, inspect and intervene in name of these frameworks. In 1903, De Jongh tried to consolidate multiple unrelated plans to develop the city, and combined them into Rotterdam's expansion plan (integrating Rose's canal concept with a concentric approach onion-like shape). However, Rotterdam's council and successor (A.C. Burgdorffer) did not support all of De Jongh's plans, after which De Jongh argued: "the science of modern urban planning was still young, and the legislator left the less-articulated unprotected"¹²⁰. The means to intervene and start building and developing Rotterdam was sometimes prevented by private landowners. The Housing Act gave municipalities a legal instrument to obtain 'private land', without having to pay exorbitant prices. Burgdorffer and his supporters, again, tried to further previous efforts to modernise Rotterdam (1910-1922), indicated by the statement:

"The last traces of a more or less provincial past had to be removed. In accordance with the fascinating development of the port near the Nieuwe Maas a big city had to rise, not only in terms of the number of inhabitants but in broadness of talent and courage of character"¹²¹.

¹¹⁸ See: <http://archive.org/stream/woningwetmetinl00nethgoog#page/n22/mode/2up>.

¹¹⁹ For example: 1901 Public Health Act, 1903 Housing Act 1965 Spatial Ordering Act, 1967 Environmental Protection Act, Building Act 1992, and numerous acts to protect unemployed, disabled and marginalised people.

¹²⁰ "de wetenschap van den modernen stedenbouw de kinderschoenen nog niet had uitgetrokken en de wetgever de onmondige nog onbeschermd liet". Translation SJ (Hooimeijer & Kamphuis, 2001:47).

¹²¹ "De laatste sporen van een min of meer provinciaal verleden moesten worden opgeruimd. In overeenstemming met de wonderbaarlijke ontwikkeling van de haven moest daar aan de Nieuwe Maas een grote stad verrijzen, niet enkel in inwoneraantal, maar in breedheid van aanleg en kloekheid van karakter". Translation SJ (Hooimeijer & Kamphuis, 2001:48).

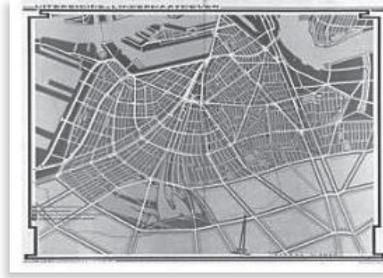
One specific location was highly suitable for this new spirit, namely the Zandstraatkwartier, where the new city hall was to be built. The Zandstraatkwartier was a “... nest of crime, a neglected place, of decay and life misery”¹²². This also meant the ‘removal’ of 587 households. Newly built houses were often not very expensive and built compact and efficiently to keep rents low. As land became increasingly scarce, urban planning and modern architecture (sciences that emerged with these particular objects of inquiry) focused on vertical housing or high-rise development. The ongoing urbanisation and population growth of Rotterdam created concerns about the social and economic prospects of Rotterdam’s inhabitants. Bad working and housing conditions, poverty, child criminality, prostitution and drinking was increasingly linked to Rotterdam’s urbanisation, especially in the southern parts of Rotterdam¹²³.

Rotterdam expanded through the planning of new neighbourhoods and urban areas. As of the late 19th century (1878), a ferry accommodated frequent mobility between the northern and southern parts of Rotterdam. The city itself increasingly became a field that required cultivation and planning. Burgdorffer assigned an urban planner (P. Verhagen) as head of the established unit ‘Urban Planning’ inside the department of municipal works (Hooimeijer & Kamphuis, 2001: 48). Verhagen’s ideas and plans dominated Rotterdam’s urban development up until the 1940s. Verhagen tried to adopt and integrate the previous ideas of Rose, using water canals to connect old and new urban areas. Rich and privileged elites were to be attracted to Rotterdam, also to compete with the city of The Hague. To this end, Verhagen developed plans to build villas (*Rozenburg*). After WW I (1914-1918) new optimism fuelled urban planning. Yet, even though ‘Rotterdam South’ (part of Rotterdam south of the Maas) was being connected to the rest of the city, it received its ‘own centre’ and administrative layers.

The 1920s marked the beginning of the heyday of Rotterdam’s and Dutch modernist planning, indicated by the 1921 expansion plans for its southern areas, and the emergence of the autonomous department ‘urban development’ in 1924. Plan South, developed by architects Granpré Molière and Verhagen, expressed a very rationalist and almost mathematically organised image of streets and building blocks (Mens, 2007; Hooimeijer & Kamphuis, 2001: 49). For example, see the 1921 plans to develop and build Rotterdam South (Mens, 2007: 55).

¹²² “...broeïnest van misdaad, een plek van verwilderding, verkommering en levensellende...”. Translation SJ (Hooimeijer & Kamphuis, 2001:48).

¹²³ The Portuguese writer José Duarte Ramhalho Ortgao (1836-1941) visited Rotterdam in 1883. He noticed the rude manners of the local population e.g. by describing how a group of young women flirted with a group of men of “all classes and ages”, resulting in some sort of carnal interaction: “Never in my life have I seen such a shameless scene! My Latin sophistication is hurt by this public obscenity of the Hollandse people” (Oudenaarden, 2005: 109). “Nooit in mijn leven heb ik zo’n schaamteloze vertoning gezien! Mijn Latijnse fijngevoeligheid wordt gekwetst door deze openbare zedeloosheid van het Hollandse volk”. Translation SJ (Oudenaarden, 2005: 109).

Figure 5.3 Image of a 1921 expansion plan for the south of Rotterdam

Part of the modernisation of the living environment around the waterfront were plans for leisure. The *Kralingse Bos*, for instance, served as a space for leisure for Rotterdam's working-class (e.g. for walks, swimming, rowing, people's kitchen gardens). Newly created green strips were seen as "links" between different urban areas (Hooimeijer & Kamphuis, 2001: 49). The idea to include green areas in the city was planned, as Molière and Verhagen state: "To increase the rural character, now and then some small canals are designed next to roads and behind terrains"¹²⁴. One of the densest urban places was *Hofplein*, which became a crucial matter of concern for city authorities and planners. The city council received 18 different planning designs to develop *Hofplein* (Oudenaarden, 2005: 160). In these years, there were lectures and discussions about Functionalism and New Objectivity or Pragmatism (in Dutch: *Nieuwe Zakelijkheid*) (Oudenaarden, 2005: 181). Port activities virtually stopped during WWI. This also meant a huge increase in unemployment of port workers. In order to deal with this enormous economic challenge, a number of agreements on salary and income were made by worker unions, local and national authorities (again, after strikes and conflicts, even threats of a revolution)¹²⁵. Rotterdam was not involved in WW I, so there was no physical damage, but economic recovery from the war was indeed a concern in the 1920s and 1930s.

¹²⁴ "Om het landelijke karakter te verhogen, zijn hier en daar langs de wegen en ook langs de achterkanten der terreinen kleine singels ontworpen". Translation SJ (Hooimeijer & Kamphuis, 2001: 50).

¹²⁵ During strikes songs were sung with texts based on existing melodies. This text comprises of 12 verses, with sections like: "There is a strike for 8 weeks, there is a strike in the port" (...) "O brave workers-group / express your voice" Er heerscht al sedert een week of acht / Een staking in de haven (Er heerst al sedert een week of acht / Een staking in de haven). Aantal strofen: 12. Refrein: O, dappere arbeidsschaar / Laat je stemmen hooren (O, dappere arbeidsschaar / Laat je stemmen horen). Op de wijs van "Jaapie is getrouwd" (Japie is getrouwd). See: <http://www.geheugenvannederland.nl/?/nl/items/KBMI01:41644/&p=1&i=13&t=28&st=haven%20staking&sc=%28cql.serverChoice%20all%20haven%20%20AND%20staking%29/&wst=haven%20staking>.

The bigger the better? Managing discontent around Rotterdam's waterfront

Rotterdam's port became enormously influential in international transportation and trading. However, a number of incidents and events transformed socio-economic port life around the 1900s. The lives of harbour workers were quite demanding, not only physically and in terms of risks (thousands of incidents per year), but also given their low wages and long workdays. The lives of many port workers consisted of eating sandwiches outdoors, looking for work on one of the hundreds of steam ships or the docks, and then working for 12 or 24 hours (Van 't Wel, 1987: 46). As the profitability of big companies and transit organisations was the bottom line, conflicts arose. Nevertheless, strikes were illegal in the Netherlands until 1872. After legalisation, port workers organised big strikes together with workers unions e.g. in 1883, 1889, 1896 and 1900 (Nortier, 1995)¹²⁶ inspired by English strikes and socialists. Next to better wages, working hours and payment frequencies, child labour was abolished. After 1889 there were still actions organised by workers, also raging against the ongoing (efficient) mechanisation of labour. This, again, seemed to be a economic war of 'man vs. machine' around the 1900s. An example in the lives of grain workers was that "on a boat where 126 men used to work for 7 or 8 days, two elevators could do the job in two days with 28 men"¹²⁷. However, police, backed by military forces, were employed to 'protect workers from strikers'. Or, as Pieter Jelles Troelstra (1860-1930) (an influential socialist) mentioned in 1896 about police forces, they had to "maintain order" and "protect the freedom to work" (Oudenaarden, 2005: 128). During these years, there was more and more collaboration between different actions and strikes, resulting in the reorganisation of a number of port worker unions in the 1910s. In some instances different worker organisations worked together, e.g. Rotterdam and Amsterdam given their similar struggle (Boot, 2011). Many of these protests and negotiations were entangled with the technological innovations of e.g. mechanisation (Van 't Wel, 1987). Little by little, harbour work was regularised by newly established employment agencies. The technological innovations around 1900 primarily meant the substitution of muscle and manpower for steam, electricity and oil (Van 't Wel, 1987: 55). These innovations shaped the further growth of the modernisation (i.e. industrialisation) of the port of Rotterdam, in concert with the rise of the German Ruhr area. Since the 1880s, the first significant technological innovations were e.g. the coal tip (tipping cargo, mainly coal, from a wagon onto cargo ship, almost doubling productivity), the coal elevator or Jacob's Ladder (moving from cargo ship to cargo ship) and mechanical cranes (cranes running on steam, hydraulics or electricity). Following previous technological innovations, one of the most critical technological changes in the 1910s was the so-called grabber crane, which made it easy to literally grab and

¹²⁶ Strikes were organised up until the 1980s (Van 't Wel, 1987).

¹²⁷ "Bij een boot waar voorheen 126 man zeven of acht dagen werkten, konden twee elevators met 28 man het werk in twee dagen doen". Translation SJ (Nortier, 1985: 44).

move cargo. This big hand-like mechanical crane increasingly replaced the coal tipper (Van 't Wel, 1987: 60). Such innovations, as well as previous ones, were particularly designed to transit new raw resources, such as coal, ores and grain. These innovations were of particular economic significance, supporting the ongoing industrialisation and modernisation of Germany as well.

In 1932, the activities of the port were authorised and planned by the newly formed Port of Rotterdam Authority (*Havenbedrijf der Gemeente Rotterdam*). This organisation emerged as a response to the financial debacles that occurred in the 1879 for the Trading Associating Rotterdam (the so-called 'Pincoffs crisis') and the loosely organised role of the municipality between 1880 and 1931. The establishment of a new authority was particularly relevant for the municipality to engage in urban economic politics, thereby navigating between different scales (local, regional, national and international) (De Goey, 1990; Klamer & Kombrink, 2004). It gave the local council formal power to govern the port activities and plans since the 1950s. In a speech for the port authority on 7 March 1939, entrepreneur W.A. Engelbrecht talked about the port and its role for Rotterdam. In this talk, Engelbrecht highlighted the historical position of the city port (referring to Rotterdam's 'birth', city rights, etc.), conflicts with competing cities in Holland, the position of the port in international trading networks since the 16th century, taxation of ships rated by their size, 17th century graphs, and annual number of ships in the 18th century. Interestingly, Engelbrecht stated that the entrepreneurial spirit (literally 'lust', in Dutch: *ondernemerslust*, 1939: 7) decreased in the 19th century because of the protectionist measures of other countries¹²⁸. This competitive spirit is also reflected the mapping of percentages of 'Rhine traffic' and plans for better transportation (e.g. *Maastunnel* connecting north and south Rotterdam, airports, new highways between Rotterdam, The Hague and Amsterdam). Engelbrecht ended his speech by referring to the bright future of the port and that "(...) our port city will maintain its place in world transport"¹²⁹.

Rotterdam's urban plans and waterfront developments were rudely disrupted by the emerging threat of a world war. German troops, led by Hitler's Nazi regime, invaded the Netherlands in May 1940. On 14 May 1940, around 1.30 am, the German Army entered the inner city killing over 800 people, displacing about 80.000 and destroying many public buildings and facilities (Oudenaarden, 2005: 212). As a Jewish boy

¹²⁸ Over 90% of Engelbrecht's 20 page speech construed a historical and 'heroic' narrative of Rotterdam's port, its 19th century expansion and the modernisation of the city. Engelbrecht mentioned the support of Rotterdam's city to the port, i.e. since 1870 – 1938, 143 million guilders (i.e. value = € 1 265 265 985.48 in 2012). Regarding 'the present' (i.e. 1939) and the future, he underscored the economic value of the new docks (e.g. Rijnhaven) and the competition with Amsterdam and Antwerp (p. 15). As Engelbrecht puts it, this is a "competition of ports for traffic" ("wedijver der havens om dit verkeer (...), 15).

¹²⁹ "(...) onze havenstad zal haar plaats in het wereldverkeer handhaven". Translation SJ, Speech Engelbrecht (1939: 20).

wrote about this event: “The street became a forbidden site for German Jews, as well as for their arch enemies: the Germans that lived here in the days of May [1940, SJ]”¹³⁰. Passports of Jews were marked with a big ‘J’. And as the Nazi regime violently occupied the Netherlands, large sections of Rotterdam were turned to ruins. The entire ‘city heart’ of Rotterdam was destroyed, demarcated by the so-called fire boundary ‘brandgrens’. In 1943, western areas of Rotterdam were attacked, again destroying human lives and materials. Allied air forces tried to disrupt critical infrastructure for German's military equipment at the Port, but missed their target because of the strong wind. As a consequence, 400 people died¹³¹. During the war, plans to rebuild the city were already made, even though many of people were deported from Rotterdam and Schiedam (50.000) in 1944. In 1944, German air forces also destroyed a number of cranes and installations located on the city port docks. In the same year, thousands of people died from starvation in Rotterdam (and Amsterdam).

Post-war optimism and waterfront re-modernisation

For Rotterdam, and the Netherlands in general, the most important way forward was recovery (*wederopbouw*). Recovery and reconstruction plans started in 1940 (after the bombardments) and focussed on the recovery of facilities, offices, shops, houses and ports (Hooimeijer & Kamphuis, 2001: 52). Furthermore, the pre-War development was to be continued and even improved upon, both aesthetically and infrastructurally, which meant a further modernist urban planning (e.g. *Lijnbaan* and *Groothandelsgebouw* were built). Ironically, the destruction of the Rotterdam traditional city triangle (*stadsdriehoek*) during WWII, allowed for a city centre renewal. Some of the ruins and rubble of the many homes, schools and cafés were used to fill a number of canals and ports (e.g. *Noorderhaven*, *Blaak*, *Schiedamsesingel*), creating more space to rebuild the city (Bulthuis, 1987: 14). More and more port-based activities and professions on water (e.g. shipping) moved to more land-based professions and practices (using cars and trucks). W.G. Witteveen, the new director of municipal works (*Gemeentewerken*), authorised by German forces to rebuild ‘their city’, aimed at building streets and roads that accommodated the increasing amount of traffic. Witteveen’s plans, approved by Germans and Rotterdam officials, connected land and water in Rotterdam, but many old canals were not rebuilt thereby continuing earlier 20th century urban plans to close canals in Rotterdam to ease traffic (ibid). And again, people had to be dispossessed of their land in order to recover and reconstruct destroyed urban sites¹³². Witteveen’s

¹³⁰ “De straat werd verboden terrein voor Duitse Joden, evenals voor hun doodsvijanden: de Duitsers die hier in de meidagen al woonden”. Translation SJ (Oudenaarden, 2005: 213).

¹³¹ See: <http://www.tweede-wereldoorlog.org/vergeten-bombardement-rotterdam.html>;
<http://www.gemeentearchief.rotterdam.nl/vergeten-bombardement-31-maart-1943>.

¹³² See: <http://www.stadsarchief.rotterdam.nl/adviesbureau-stadsplan-rotterdam>.

plans, however, did not materialise. They were not innovative enough and did not anticipate future growth and urbanisation (Hooimeijer & Kamphuis, 2001: 53). In 1942, the Germans stopped his plans, as were all other efforts to build during the war. In 1944, Witteveen's successor C. van Traa was responsible for Rotterdam's urban plans, which were officially authorised in 1946¹³³.

Housing was one of the most critical concerns in Rotterdam after WWII. Therefore, new districts were built, including rationally planned communities (homes, shops, leisure, etc.) with public gardens geographically located nearby (Hooimeijer & Kamphuis, 2001: 53). As Hooimeijer & Kamphuis state it: "Van Traa considered squares as well-arranged traffic-machines not as classical spaces surrounded by gables" (ibid). A case in



point is *Hofplein*, which was developed with a roundabout to facilitate the many traffic flows, while having a big fountain designating the optimism of the post-WWII period. Urban spaces were to be planned rationally and efficiently, as was the case for many cities in the Netherlands after WWII. Yet, even though this suggests a perfectly planned vision-implementation flow, recovery plans were used quite flexibly and

sometimes criticised for being "a chain of coincidences" (Dutch: *aaneenschakeling van toevaligheden*) (Bulthuis, 1987: 16). Similarly, in 1962, Jan Brokken, who grew up in Rhoon, commented on Rotterdam's south part:

"Rotterdam-South was not a city. South consisted of a number of villages along the river that never clotted together by the end of the 19th century, during the explosive growth of commerce, ports were excavated between different village centres"¹³⁴.

Different parts of Rotterdam were considered as 'differentiated functionally' (districts, housing, shopping, working, leisure, etc.) and connected by means of metros, roads and biking lanes. Some parts of Rotterdam were not as worthy as others, as Brokken noticed about the meaning of a particular 'red light district': "Rotterdamers considered Katendrecht as a necessary evil, as an enclave for seamen who, if they could not go to the whores, would wreck the places around the port"¹³⁵.

¹³³ Plans of C. van Traa: <http://www.brandgrens.nl/wederopbouw/plannen-voor-een-nieuw-centrum>.

¹³⁴ "Rotterdam-Zuid was geen stad. Zuid bestond uit een aantal dorpen langs de rivier die nooit samenklonterd waren doordat aan het einde van de negentiende eeuw, tijdens de explosieve groei van de handel, havens tussen de dorpskernen waren gegraven". Translation SJ (Oudenaarden 2005: 274).

¹³⁵ "Rotterdamers beschouwden Katendrecht als een noodzakelijk kwaad, als een enclave voor zeelieden die, indien ze niet naar de hoeren konden, tot in de wijde omgeving van de havens de boel kort en klein zouden slaan". Translation SJ (Oudenaarden 2005: 275).

The demography of the city also changed in the 1960s, as many privileged people moved out of the city centre (similar to earlier periods). Even though migration flows have been part and parcel of Rotterdam's history since its naissance (cf. De Laar, Lucassen & Mandemakers, 2006), new working people arrived in Rotterdam (and other Dutch cities), coming from countries such as Turkey, Italy, Spain and Morocco. These workers were expected to do low-income jobs. Furthermore, new workers and populations arrived in Rotterdam from Surinam (decolonised and became independent in 1975) and the Dutch Antilles. These populations moved to Dutch cities (often based on a policy of geographical segregation by Dutch authorities, so-called *spreidingsbeleid*, cf. Bolt, 2004) mainly for economic and/or political reasons. These demographic shifts were connected to the more low-income parts of Rotterdam, i.e. mainly the south parts (Hoogvliet, Heijplaat, Feyenoord, etc.). Some of the exemplary images that popped up were Turkish grocery shops, providing the diaspora with familiar products (Oudenaarden, 2005: 298).

In the 1950s, 1960s and 1970s, Rotterdam's urban centre was expanded, mainly to provide housing for existing and new residents. Rotterdam's population increased from 165.000 in 1940 to 240.000 in 1970 (Bulthuis, 1987: 18). Consequently, the problematic of housing intensified as the 'traditional household' had transformed since the 1960s (smaller families and singles in the city). Housing cooperatives became very important in order to 'absorb' Rotterdam's growing population. In the forthcoming years, a gap emerged between new houses and offices, and pre-war buildings, which needed renovation and maintenance. Nevertheless, the 1960s witnessed a boom in cultural life, resonating with the cultural revolution taking place in many Western cities and countries. The city 'offered' numerous dining opportunities, many discos and bars, and become more and more dense by "a chain of parked cars and scooters," as writer Cor Vaandrager noted in 1960 (Oudenaarden 2005: 268). Weekends were introduced in the Netherlands in the 1950, offering more time for hobbies, leisure and other activities¹³⁶. Since the 1950s, next to housing cooperatives, private housing projects (private/commercial real estate entrepreneurs that built houses) became more important to facilitate the increasing demand, which included new office and shopping buildings. Many of such project developers worked together with public agencies to coordinate plans to restructure urban environments. As project development was clearly a commercial endeavour, project developers competed and gradually focussed on new city spaces and deprived areas¹³⁷.

¹³⁶ Weekends resulted from a United States labour unions' struggle around the industrial activities of the Ford Company in the 1930s.

¹³⁷ Engineer Van Traa noted in 1957, about the rebuilt warehouse De Bijenkorf (designed by Naum Gabo): "Gabo's art is strongly connected to a world of technique and science, that has marked modern life and slowly but surely changes our entire world vision" (Oudenaarden, 2005: 261). Van Traa also noted about this building - which was called 'The Thing' - "This represents nothing else than space, and by the double miracle of technique and the creative mind a vision of freedom is expressed" (Oudenaarden, 2005: 262).

Conclusion genealogical episode I: The bio-industrial waterfront

Rotterdam's waterfront in the period between 1860s till the 1960s can be considered as a 'bio-industrial waterfront'. The city has combined legal and commercial means to shape its waterfront since the late Middle Ages (e.g. 1340's city rights). The waterfront slowly emerged as a field of legal order in relation to its growing commercial and transportational meaning (geared towards shipment, storage and cargo). Since the 18th century, Rotterdam's international competition with other port cities was a crucial geo-economic incentive to keep expanding and optimising port conditions for transportation and commerce. As of the mid-19th century, Rotterdam grew demographically (5 times!), especially in relation to port industrialisation. Since the 1860s, a new waterway was excavated for industrial port activities. This growth created unprecedented urban problems around health, hygiene and poverty (cheap labour and bad living conditions for workers). Additionally, Rotterdam's modernisation and port industrialisation created great inequalities among its populations. Not only did many people live and work in poor conditions, people that lived in the peripheries of the city were often dispossessed to make way for an expanding industrial sector. These struggles over land and liveability were typical for late 19th century urban expansionism. A combination of strikes, national struggles and political activities led to a new legal framework to improve and govern housing, health and hygiene. It became possible to know the working conditions, the living conditions and the type of unsafe and unhygienic lives many people had (very material and biological matters indeed). New laws and economic income served as governing techniques to improve the liveability of urban residents. Interestingly, some individual actors 'embody' the institutional struggle associated with modernising Rotterdam's waterfront (e.g. Pincoffs, Rose, De Jong, Witteveen). After the WWII bombardments, Rotterdam furthered its modernisation plans and created a uniquely modern city centre. Since then, struggles around industrial modernisation rarely flared up again until the 1950s.

Genealogical episode II: The neo-industrial waterfront (1960s-2000s)

The 1960s were a tumultuous period in many cities across the globe. Up until the mid-20th century, many European port cities seemed to focus on industrial port systems. Similarly, city authorities seemed to support this development, even though they had plans to improve the working and living environments for port(-related) workers. But in the mid-20th century, Rotterdam's waterfront entered a different era.

5.5 Remapping the city and waterfront displacements

From the 1940s onwards, economic activities soared, indicated by the increase of land reserved for offices (from 300.00 m² in 1946 to 1.000.000 m² in 1970, i.e. from 1/10th to 1/3rd of Rotterdam's land). In Van Traa's so-called Basic Plan of 1964 (*Basisplan*), a number of spatial interventions bridged the gap between the city and the urban harbour area, such as a bended lane (Coolsingel) directed towards one of the ports (*Lewehaven*). Similarly, docks were redesigned into two types: one for ships that needed to anchor and one for pedestrians. Actual space emerged through which one could see the ports and docks from the city, and vice versa (so-called *venster op de rivier* in the plans of Van Traa) (Hooimeijer & Kamphuis, 2001: 55). Rooijendijk (2005: 67) highlights the main elements of the *Basisplan* as indicative of the mentality to reconstruct the city by modernist means. The city centre should be at the top of the urban hierarchy and city functions should be separated spatially. The city would accommodate business services industries, moving away from its traditional industrial economic activities. Rotterdam would also gain a modern road system to facilitate modern transportation¹³⁸. Additionally, the plan included a flexible scheme to allow for unforeseen developments.

The plan contained different elements, which led to different judgements made by different groups; romantic culturalists, progressives and city planners (Rooijendijk, 2005). In the 1950s, these differences flared up and had a significant impact on the meaning of the Rotterdam's main river (i.e. the Maas). The quality of the water was considered a problem, as it could no longer serve as a source for drinking water. Second, flooding of the Maas in 1953 created a sense of urgency to restructure the urban waterfront, i.e. to make it 'future-proof'. This was part of a broader national effort to protect the Netherlands' waterfront from future flooding (Deltaworks). In

¹³⁸ As Rotterdam's rebuilt city centre emerged, the increase of modern mobility was accommodated by the so-called diamond of Rotterdam (Rotterdam's beltway, in Dutch: *ruijt*) and public transportation.

Rotterdam, one person died due to the flooding (via the *Maashaven*). A baker even stated that his ovens were flooded by one meter (Oudenaarden 2005: 256).

After WWII, the ports of Rotterdam and related infrastructure received much attention for recovery, directed by the reconstruction committee (*Reconstructie Commissie*, Reco). Following the efforts of other port cities (e.g. Antwerp) to reinvent port industrialisation after the war, Rotterdam's traditional economic harbour activities started to move to the west, down the new waterway (*Nieuwe Waterweg*) (De Goey, 1990). In the period after the war to the late 1970s, the municipality of Rotterdam clearly tried to shape the port infrastructure to stimulate economic development and growth, especially by attracting industries enterprises and service-oriented entrepreneurs. This economic mix of industrial (e.g. petroleum, resulting in the excavation of two petroleum ports) and service-based activities was deemed crucial to develop a more diversified port economy. The petrochemical industry was particularly important in the expansion of the port. 19th century ship-building was increasingly neglected, as ships could be built cheaper in low-income-countries. New industries materialised west of the city. As the port could not expand near the city (there was simply not enough space), the forthcoming decades witnessed an immense growth of the port¹³⁹. The traces of the war were sometimes very material, e.g. the dredging up of a WWII bomb in one of the ports (*Waalhaven*)¹⁴⁰. Interestingly, in 1950, a national exposition was organised to showcase the finalisation of the recovery of the port of Rotterdam in a new building (*Rotterdam Ahoy*).

An important reason to expand westwards, was that industrial activities would foster employment and yield economic growth to revitalise the Rotterdam region¹⁴¹. As stated in the proposal to realise the *Botlek* plan, on 5 March 1947: "The port serves the industry, yet the industry serves in many instances the port as well, namely by providing her a solid basis for supply of cargo"¹⁴². The gradual transformation from an industrial port was not suddenly halted by the war, yet interrupted the ongoing expansion. For example, during the war, the chamber of commerce held 'secret'

¹³⁹ An interesting info-graphic of the Rotterdam Port Authorities shows how the port has developed since 16th century, including its future plans for 2030. This graphic begins from the first stages of Rotterdam as a city all the way to the present. Since the 1950s, the port expanded, step by step, towards the coastal area of the Netherlands. From the more urban area the *Waalhaven* area (1910s) to less urban areas, such as Pernis (1930s), de Botlek (1950s), Europoort (1950s/1960s) and the *Maasvlakte* area (1970s-now). See: <http://www.portofrotterdam.com/nl/Over-de-haven/haven-rotterdam/Documents/Geschiedenis/index.html>.

¹⁴⁰ Noteworthy is that a whale has been spotted in the *Waalhaven* after WWII, with hundreds of kilos of shrimp in his stomach (Van Dam, 1990: 73).

¹⁴¹ See the visual animation of growth and expansion of Rotterdam (1340-2008), including the port's 'rush to the coast', designed by Mapplusmotion authorised by the Historical Museum Rotterdam: <http://www.debell.nl/groeikaart-voor-rotterdam>.

¹⁴² "De haven dient de industrie, doch de industrie dient in vele gevallen ook de haven, namelijk door haar een vaste basis te verschaffen voor aanbod van lading".

meetings with directors of municipal agencies and entrepreneurs, together forming a plan for port expansion (*Uitbreidingsplan 1944*). This expansion was considered as a crucial “priority” to be realised “urgently” (De Goey, 1990: 59-60). It should be noted that this economic “rush to the coast” took place in a period where global economic relations intensified. Similar developments occurred in other port cities across the globe (better seaside accessibility, non-residential areas for negative industrial effects). However, Rotterdam’s port, by its enormous expansion, became the world largest port. As engineer L.W.G. de Roode la Faille (adjunct-director of the port authority) put it in 1958: “The port became a ‘world port’ and mocked the all-powerful London!” (De Roode la Faille, 1958: 15).

Reconfiguring the waterfront

A crucial driver of the success of Rotterdam’s port is the containerisation and transit, making Rotterdam’s port a crucial node in the period of economic globalisation, especially after the complex geopolitical Suez crisis of 1956. This crisis resulted in the building and employment of super tankers (that could ship massive amounts of oil and other materials), pushing Rotterdam’s Port to design bigger and deeper ports and canals, becoming one of the few ports in the world with the capacity to harbour these behemoths. This was a crucial trigger (or accelerator) for the expansion of the port, in terms of economies of scale (De Goey, 1990). As De Roode la Faille put it: “The economy of the big cargo ship rests on the fact that building costs and the costs of personnel, compared with smaller ships, does not increase proportionally vis-à-vis the tonnage, but becomes beneficial” (1958: 26). The port spurred new economic activities and relations between the petrochemical industry, blast furnace and iron and steel factories. Despite the fact that actual iron and steel industries did not emerge, American (oil) companies were attracted and contracted (De Goey, 1990: 249). Increasingly, the port of Rotterdam was considered an attractive area for industrial companies to settle and develop, given the important geographical location in the post WWII period. This was especially relevant as many European countries focused on economic development and were recovering from the war, indicated by the 1952 proto-EU complex called the ‘European Coal and Steel Community’ (later the European Union). Economic development was considered as a means to circumvent new political conflicts and nationalist tendencies. Companies like BP, Shell, Mobil and Esso became increasingly important, as oil was one the most important ‘fuels’ to rebuild Europe (using cars, industry, trucks, etc.).

In 1957, a working group of national policy makers further developed plans for the port, i.e. the 1947 Plan *Botlek* (WOR, *Werkgroep Ontwikkeling Rijnmondhavens*). New plans facilitated the substantive growth of the port, especially the organisation of the huge numbers of requests by industries and companies to rent a place at

the port. This also meant selecting 'relevant' industries for the region of Rotterdam, which was the responsibility of the port authority. Since the 1960s, the port area received national political attention. In 1966, the national government published a report on 'sea ports', informed by emerging concerns for proper spatial planning in the Netherlands. Issues of environmental quality and safety were particular political concerns, resulting in legal directives and regulations (Klamer & Kombrink, 2004: 85), e.g. by the establishment of the Public Agency Rijnmond (*Openbaar Lichaam Rijnmond*). The same was true for spatially planning the expansion of Rotterdam, in light of the growth of other Randstad cities such as The Hague, Amsterdam and Utrecht (De Roo de la Faille, 1958: 33). After the successful Europoort expansion, the port authority aimed at further expansion: *Maasvlakte* in 1961.

This new expansion was met with much resistance from environmental conservation groups. The port expansion was associated with causing pollution, harming natural environments and air quality since the 1950s. The national government mediated in 1964 between economy-based port expansion and environmental concerns, by partly agreeing with the preservation of nature and partly accepting expansion (De Goey, 1990). The local government had a dual role, as it aimed at reconstructing the port economy after WWII (fostering welfare through employment), while addressing environmental concerns. Yet, the port still claimed more space (literally: land) in order to cope with the economic growth of an industrial port. The genie was 'finally' out of the bottle. Environmental concerns were put on the (local) agenda. Since the 1970s, environmental concerns were increasingly addressed and set as standards for future expansions. This new era was marked by the fact that the municipality of Rotterdam was now expected to be more critical and independent (e.g. more explicit differentiation of roles and responsibilities) (Klamer & Kombrink, 2004). Nevertheless, in 1974, a container terminal on *Maasvlakte* was officially realised (400 hectares), opening up a huge container-based transit area.

Next to new economic and ecological concerns, a number of important technological innovations in the 1960s shaped port expansions. Most important was a shift away from transshipping 'boxes, bales and sacks' to a focus on 'pallets and containers'. This meant an "unitarisation, massification and containerisation" (Van 't Wel, 1987:97) and their associated infrastructures such as trucks and highways. Mechanisation, however, also led to higher unemployment rates. Efficiency and further technologisation of transshipment was seen as critical in the continuous global economic competition of city ports (Nortier, 1985: 63). Products and goods were packed better, and bigger cargo ships were used, making transshipment more efficient on a larger scale.

Against the background of these technological developments, economic practices also transformed. The percentage of uneducated workers was still very high, i.e. 73%, in 1960 and port work was risky, hoists tended to fall; workers would get stuck in

the machinery or even get ‘poisoned’ from the chemical industry (Nortier, 1985: 61). Furthermore, fixed contracts were not the norm and many workers were sacked or could be fired instantly (‘absentee ownership’). This often resulted in conflicts and strikes over working conditions, technological innovations, low wages and loss of paid jobs e.g. in 1970, 1977, 1979, 1984, 1985 and 1986 (women groups also supported port workers, Nortier, 1985; Van ‘t Wel, 1987: 106). Despite that fact that workers became more educated and the communist spirit of the 1960s inspired strikes (Klamer & Kombrink, 2004), conflicts were overcome by the establishment of a ‘representative advisory board’. Over the years (in the 1970s and 1980s), strikes and resistance were increasingly mediated institutionally, via talks with employers and the national government, i.e. by means of ‘collective agreements’. Port authorities and the national government were afraid that strikes and actions could harm the economic stability and growth (Van ‘t Wel, 1987: 121). Significantly, demands for higher salaries (finances) were not as important as job security and employment rates (Van ‘t Wel, 1987: 124). There seemed to be a tacit acceptance of the new situation, influenced by the international crisis of the 1970s and the fact that new technologies and economic powers were ‘here to stay’ (international markets and competition) (Van ‘t Wel, 1987). Even though critical workers were less present in numbers, they were still dedicated. A case in point is Jan van Nispen from a port worker union (*Federatieve Havenvakvereniging*) who stated in 1979: “The bourgeois press does not have a clue about how the working-class thinks and feels”¹⁴³. As traditional labour work decreased and volume-based containerisation and technological skills and knowledge increased, slowly but surely, a new type of port economy emerged.

Urban critique and Rotterdam’s post-industrial waterfront

Technological innovations and mechanisation of port activities were strategic, as the increase of working populations resulted in a number of urban concerns since the 1950s (e.g. housing). Innovations were seen as means to tackle new port city concerns while fostering ‘traditional’ port expansionism (increasing tonnage, indicating world competitiveness), (De Goey, 1990: 250). From the 1950s onwards, however, big infrastructural interventions and public works became less and less means to reconstruct the Netherlands after WWII, and increasingly instruments to ‘modernise’. This modernist approach, and the further drive to expand the port, was expressed in a 1969 plan called *Plan-2000+* in Rotterdam (which was highly technical and engineer driven), meant to transform the big rural area called Voorne-Putte into a port area, including the development of a new city (*Grevelingenstad*, which was actually never

¹⁴³ “De burgerlijke pers heft er geen idee van wat er onder de arbeidende klasse leeft”. Translation SJ (Van ‘t Wel, 1987: 108).

built). This was ‘too much’ to take for many citizens and some public authorities (provinces). As engineer De Roo de la Faille notes about port expansions (towards *Brielse Maas*) in his brief 1958 essay: “It [expansion, SJ] should not result in pollution or silting and one should, consequently, not accept shipping on the river”¹⁴⁴. As De Roo de la Faille also notes, there are means to bridge conflicting perspectives regarding “damage of nature reserve” by e.g. “compensation in land or damage restitution” for farmers. Moreover, new agencies and efforts of “coordination” could be useful in bridging conflicting ideas, also regarding different governmental bodies (local and national) (De Roo de la Faille, 1958). Expansionist plans for international competition might have been legitimate in prior decades, but since the 1960s, the privileges of port growth in the urban context were addressed more critically (De Goey, 1990).

The downsides of a growing port became visible via environmental and social concerns, especially in the wake of ongoing urbanisation of cities like Rotterdam, The Hague, Utrecht and Amsterdam. This period was the predevelopment of a regional environmental protection agency, authorised to scientifically address and report about environmental issues around the health and safety of the population of Rotterdam and its environment (Environmental Protection Agency DCMR). Slowly but surely the face of the ports and the docks changed, not only physically and infrastructurally, but also in terms of their role in the wider environment and social meaning. The industrial port politics of prior decades shifted towards urban economics, focussed on housing, work and wellbeing (Klamer & Kombrink, 2004: 85-86). Since the 1960s, environmental concerns grew about water and air quality, as more democratic voices emerged about public policy. The privileged position of the port was downplayed and the sites of the ports became new urbanisation concerns. Port areas in the city were less about quantitative growth and more about improving the quality of urban life (ibid: 87). An increasing number of critical voices challenged the “monoculture of offices and big companies” in an era of restructuring old districts and low-income areas (Hooimeijer & Kamphuis, 2001: 56). The WW II bombardments, and the consequent reconstruction efforts, created a gap between the ‘river areas’ and the more traditional city centre. In order to re-connect the urban waterways more to the city centre and Rotterdam’s population, a plan for commercial activities (*Wereldhandelscentrum, Leuwehaven*) was cancelled and a housing plan was created. Similarly, plans to develop a roundabout in the old port area were dropped, and a new area was developed by architect Piet Blom for housing and a lively nightlife. These urban planning efforts expressed a new mind-set to diversify the meaning of the water-city nexus spatially (ibid). The architect Jan Hoogstad developed this idea together with the Rotterdam’s Urban Development agency.

¹⁴⁴ “Het mag geen gevaar lopen voor verontreiniging en verzilting en men zou er dus geen scheepvaart op willen toelaten” (De Roo de la Faille, 1958: 34).

Alternative voices and democratic urbanisation?

Since the 1960s, and especially the 1970s, democratic critique increased against urban plans that focused on car-based traffic, ‘officisation’ and the spirit of mathematical urban expansionism. Since the beginning of the 1980s, virtually all urban development plans were seen through the lens of balancing different urban features and functionalities. The voice of urban populations was increasingly introduced via participation practices. A huge number of traditional urban plans were cancelled because of this broader shift, in which urban development was sometimes seen as urban destruction (*stadsvernieuwing als stadsvernieling*) (Bulthuis, 1987: 28). Wentholt, a Dutch professor in social psychology, reflected upon in a 1968 book on the dissatisfaction in Rotterdam in the 1960s about this shift and subtle cultural resistance:

“Rotterdammers protest in another way than Amsterdammers, but they are becoming aware that there is something wrong with their city, that some things should have been done differently, that they miss something and that not all progress is an improvement by any means” (cited in Rooijendijk, 2005: 153).

Wentholt’s comments were seen as critique against the foundations of the 1950s *Basisplan*, implicitly criticising Rotterdam’s post-war urban planning efforts. According to Wentholt there was “absolutely no integration” and the river is not connected to the city. He also provided some alternatives to really integrate the river with the city centre, such as new networks of small squares, roads and alleys around a city port (*Leuvehaven*) (Oudenaarden, 2005: 281-283). These critiques against the modernist fragmentation and technocratically imposed urban landscape were not only expressed by intellectuals and cultural elites (Rooijendijk, 2005), but also by the working-class and journalists (Oudenaarden, 2005). As a poet stated: “What is being destroyed in one place, is rebuilt in another place. It seems as if the city will never be finished” (ibid: 284).

It seemed that ‘integration’ and ‘connection’ were increasingly considered as guiding principles for spatial planning. In 1978, the city plan *Rotterdam Binnen de Ruit* (a plan to develop the urban environment inside the beltway) introduced how Rotterdam would become a ‘compact city’, with high quality living environments, better accessibility (mobility networks) and living spaces. This was meant to counter a growing urban flight, e.g. due to lacking space and suburbanisation (170.000 people left Rotterdam 1965-1983) (Bulthuis, 1987: 22). Deprived areas turned into semi-ghettos (poverty, drug addicts, criminality, etc.) in the 1980s, sometimes leading to actions and initiatives of residents to address these problems themselves (e.g. in the district Spangen, Oudenaarden, 2005: 293). Proceeding with prior plans to link different

parts of Rotterdam in the 1980s, a new bridge (*Willemsbrug*) was built to connect the southern and northern parts of the city. Inside the city centre, cultural organisations were established to revive the city's image and attract new residents (Bulthuis, 1987: 30). New urban life in Rotterdam was to be welcomed as a cultural phenomenon, indicated by the introduction of so-called 'city streets' (in Dutch: *stadsstraten*) in the 1980s, connecting different urban sites (north-south, east-west, etc.) "where people live, shop, lounge around and have fun, in short, where people live" (Bulthuis, 1987: 40). In 1987, a plan from the municipality that anticipated the year 2000, explicitly noted that "the plans for the inner city centre-stages the *fusion* of all urban functions - housing, working, learning, living, culture, leisure" [italics, SJ] (Bulthuis, 1987: 42). This plan also stated that, compared to the 1946 *Basisplan* (see above), the then current plans to develop Rotterdam's city centre were not about "demarcated events in demarcated areas" but that the urban functions are demarcated "less stringent", "a shift from static to dynamic thought" (ibid: 50).

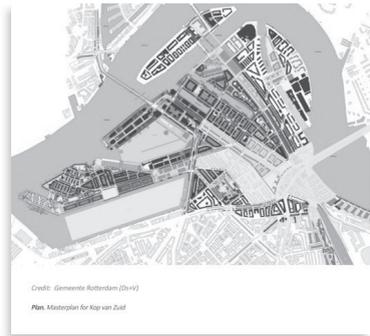
As the port activities moved towards the coast, the old city ports were considered less significant and relevant (urban canals were not deep enough for modern super tankers). Furthermore, mobility-wise, the multi-modal connection between ships, trains and trucks was not efficient. These concerns led to a municipality plan to restructure the city ports in 1976 (*Nota Herstructurering Oude Havengebieden*). This plan, basically, argued that as the port expanded westwards, the old port areas should focus on housing and urban life. Old basins were filled in, thereby literally making land for new housing and urban(isation) projects (Hooimeijer & Kamphuis, 2001:57).

5.6 The old ports are dead...long live the old ports!

An interesting urban plan that should be mentioned here is *Kop van Zuid* (referring to the northern 'head' of the south part of Rotterdam). This plan was an attempt to integrate fragmented ideas and projects that emerged to restructure waterfront areas. A number of international architects (from Italy, Germany, the UK and the US) were asked to make plans to regenerate the waterfront area of the south part of Rotterdam (around the districts *Feyenoord*, *Noordereiland*, *Afrikaanderbuurt* and *Katendrecht*). As Rooijendijk notes about this urban plan:

"The Rotterdam waterfront regeneration plan was mainly based on American plans but also on British and Spanish experiences. But contrary to Baltimore and London, the public sector had an important role in the Rotterdam project. The Kop van Zuid docklands were scheduled to accommodate a large number of offices together with leisure, culture, tourism and expensive luxurious apartments" (Rooijendijk, 2005: 309).

The plans were to be materialised in deserted areas of the city ports, such as *Binnenhaven*, *Entrepothaven*, *Rijnhaven*, *Spoorweghaven* and the *Wilhelminapier*. The *Kop van Zuid* should be seen as an urban area (newly formed districts) as supposed to an urban plan (Daniëls, 1991). Publicly acclaimed designers and architects such as Bakker and Koolhaas took up these ideas in 1986 and 1987¹⁴⁵. As the *Kop van Zuid Masterplan* (in which the municipality invested 100 million euro) suggests, the city port area has become more and more abandoned because of the geographical ‘rush to the coast’ port development, and because of the “financial crisis from 1970-1980”. The main strategy of the *Kop van Zuid* spatial development plan was to transform the area into “an attractive and vibrant urban location”, while “stimulating the economy” (which should become “service oriented”) and “reducing unemployment”. Strategically, these ambitions were to be met by a number of socio-physical interventions to connect north and south and their respective economic developments in forthcoming years (e.g. *Erasmusbrug* in 1996, World Port Centre in 2000, Luxor theatre in 2001, *De Rotterdam* in 2013). The river was to become part of the city centre, instead of a relatively remote area traditionally reserved for industrial and port activities. Not only old docks were regenerated, but also old buildings, such as the Hotel New York. As stated explicitly in an evaluative master plan, the area was to be voided of “noise pollution” while “the unemployed were trained for upcoming work in the new district” (ibid).



Meanwhile, geopolitical forces continued to shape debates about Rotterdam’s waterfront. The 1973 geopolitical oil crisis had severe consequences for the orientation of the port. The oil boycott led to the massive drop of the oil trade and usage in Rotterdam’s port (refinery and petrochemicals) (De Goey, 1990). The port encountered great ‘setbacks’, also because of upcoming competition (from European and non-European port cities) and ‘interference’ of local and national governments. As westwards expansion created possibilities to excavate deeper canals (*Eurogeul*, 74 feet) for the largest cargo ships in the world, port authorities aimed at maintaining port supremacy. In 1971, Rotterdam’s council (for the very first time!) did *not* agree with expansion plans of the port (steel company *Hoogovens/Hoesch*), because of the ‘damaging external effects’ (for public health and the environment) (De Goey, 1990). This was significant and symbolic, as it marked a different attitude and relationship between Rotterdam’s port and city (including their respective authorities). Port authorities slowly shifted their main focus from quantitative growth in the urban

¹⁴⁵ See: http://beyondplanb.eu/projects/project_kop_van_zuid.html.

environment (as well as in other port areas) towards qualitative improvements in the 1970s (ibid). Since the 1960s, the city council - as a political institution - started to address environmental concerns, especially after the 1961 *Maasvlakte* debate, and the 1971 *Hoogovens/Hoesch* rejection. Nevertheless, port authorities were closely connected to many of these urban plans since the 1950s. Since the emergence of the authority of the port in 1934, the main responsibility of this public authority was to control (commercial) port activities, providing information based on a local port decree (*Gemeentelijke Havenverordening*) and the national shipping act (*Nationale Scheepvaartverkeerswet*). To date, this has actually not changed.

Importantly, the 1987 municipality plan moves away from prior plans (i.e. 1946 *Basisplan*) to bring the river to the city (using canals and waterways). Rather, it aims to “bring the city to the river” (Bulthuis, 1987: 53). This plan, called *Leven in de Stad, Rotterdam op weg naar 2000*, together with the *Kop van Zuid* project, were significant efforts that initiated Rotterdam’s urban regeneration. The document romantically states that new plans to revive the ‘water city’ could make Rotterdam the ‘Venice of the North’ (a popular slogan). A number of “noteworthy sites” (in Dutch: *markante punten*) are highlighted, like an exotic swimming pool (Tropicana), museums, attractive buildings, shops, restaurants and nice walking routes down the river (e.g. Maas boulevard). This way, the urban rivers would constitute the “fabric of the big city” (ibid: 54). The plan also envisions the disappearing, merging and transformation of a number of ports, such as the *Wijnhaven*, *Scheepmakershaven*, *Lewehaven*, *Parkhaven* and *Veerhaven*. Additionally, a water tour taxi (by Spido¹⁴⁶) would centre-stage the meaning of water (mobility) in the everyday lives of Rotterdam’s population. New houses were to be built on the Wilhelminapier (including a tramway connections to the city centre), turning the old dock areas into residential areas. Empty office spaces are even envisioned as potential living spaces, understood as “living at the water” (ibid: 60)¹⁴⁷.

The boulevardisation of Rotterdam’s waterfront

If we zoom out a bit, we can consider these urban projects in the light of the 1994 ‘national big cities policy’ (in Dutch: *grotestedenbeleid*), in which the national government together with the four biggest Dutch cities (Rotterdam, Amsterdam, The Hague and Utrecht, so-called ‘G4’) coordinated their efforts. They aimed at addressing and discussing new urban problems in the 1990s, as well as developing repertoires for interventions in economic policy, housing projects and spatial planning. These efforts were co-developed and supported by a number of institutes and originations (scientists,

¹⁴⁶ This organisation emerged in the 1910s as a water taxi and later added leisure and tourist routes, see: <http://spido.nl/nl/spido-geschiedenis>.

¹⁴⁷ Interestingly, these waterfront regeneration initiatives became object for study and academic reflections, published in academic journals (Daniëls, 1991; McCarthy, 1998).

architects, etc.)¹⁴⁸. In this sense, urban projects and interventions such as *Leven in de Stad* and *Kop van Zuid* expressed a new way of seeing how the abandoned port areas could serve as means to tackle issues like congestion, poverty, unemployment rates, carbon emissions, pollution, school dropout, etc. Historically, the port expansion (excavation of new ports and docks) and the annexation of new lands in the southern part of Rotterdam attracted many workers (see above). Since then, these areas urbanised heavily. Since the 1950s, next to the many (low-income) houses meant for workers, there were still agricultural and rural areas (*polders*), which slowly disappeared. As the economic centre of Rotterdam was mainly located in the North region, closer to other big Dutch cities and economic centres (The Hague, Utrecht, Amsterdam, Delft), both north and south did not evolve synchronically since the 1960s (or even earlier). Many plans and programmes were developed to restructure areas of Rotterdam



South since the 1980s, pushed by various organisations (housing associations), local authorities, and increasingly, the national level in the 2000s. The *Kop van Zuid* project was not the only spatial intervention aimed at urban renewal and intertwining the port and the city. Northern areas were also subject to ‘waterfront regeneration’, e.g. the area of the old port, the *Leuvehaven*, *Wijnhaven* and *Zalmhaven*, and the *Scheepvaartkwartier* and *Parkhaven*. In some instances, these old city ports were to be filled in (making land out of waterways), as a means to further build and develop houses and urban utilities. But, instead of filling in and closing down these waterways, bridges and canals, city planners treasured these historic spatial features, integrating them as part of a ‘qualitative development’ of the environment. Old traces of the port are moulded,



merged and absorbed in a modern urban environment with restaurants, shops, discos and other cityscapes¹⁴⁹. Other old ports and docks are developed as housing and office spaces (e.g. *Leuvehaven*, *Wijnhaven*¹⁵⁰). In such areas, big skyscrapers were planned (by big and expensive architects) and built. These environments were developed to attract a certain demographic (mostly middle and high

¹⁴⁸ See: <http://www.grotestedenbeleid.nl>.

¹⁴⁹ See: <http://www.oudehavenzomerfestival.nl>.

¹⁵⁰ See: <http://www.panoramio.com/photo/1125157>.

income groups) and organise social and economic activities for a vibrant city centre. Similarly, other old port areas (*Scheepvaartkwartier* and *Parkhaven*) were developed as means to facilitate green spaces. The northern waterfront of the Maas was not only imagined as a means for attracting middle and high income groups (new houses), business (offices and commercial buildings down the Boompjes lane) and tourists, but also as a nodal point to connect different parts of Rotterdam (Bulthuis, 1987: 72). Additionally, so-called “city boulevards” were planned (Boompjes, Weena) at the waterfront for residents and visitors to walk by and enjoy the Maas river.

These spatial reconfigurations have been a key consideration since the late 20th century. In the 1987 plan, an explicit link is made with the “venster op de rivier” as part of the 1946 *Basisplan*. The relationship between water (the Maas river, waterways and canals) and land is also explicitly made. Water is seen in aesthetic and spatial terms, producing interesting living and working environments in such a way that “the waterfront of the Watercity is entirely intertwined with the city” (ibid: 84). So, these urban waterfront development plans extend existing plans, using abandoned port and dock spaces (ibid: 82). This plan also proudly presents the many tree-lined streets and lanes north of the old docks, as an image of this area is accompanied by the text: “Note the spacious tree lanes”¹⁵¹ (ibid: 82). In more general terms, and expressed in the 1987 plans, the city heart of Rotterdam seemed to move a little to the south by the many (waterfront) development plans:

“Above all, this way [with these spatial development plans, SJ] we have anticipated the changes in the port, that has grown at an increasing pace in more and more places to the West in the direction of the North Sea” (ibid: 94).

Importantly, the 1987 plan was co-developed and authorised by the director of the Urban Development Agency (Rick Bakker) and the director of Development Company (administering and overseeing land and soil in Rotterdam) (Jan Doets) (ibid). These urban plans assumed spatial intervention and new ownership of land (transferring from the port of Rotterdam to the municipality). Consequently, city planners and development companies were expected to cooperate on new issues and challenges¹⁵².

So, a number of old city port areas were also restructured since the 1980s. These new socio-economic spaces transformed traditional economic activities associated with the port (transit, anchorage, storage, etc.) into a social and economic environment, resonating with new urban developments (shopping, housing, leisure, café’s, etc.). In

¹⁵¹ In Dutch: “Let op de ruime boombeplanting”.

¹⁵² <http://www.upcoming.nl/matthijshgsmn/3159/14-rotterdamse-bijnamen-voor-gebouwen>.

the year 2000, one Rotterdammer reflected back on the changes since WWII, and the 1946 *Basisplan* in particular:

“I am an old man now, but my memory and legs still work. I can remember well the discussions about the submitted plan [*Basisplan*, SJ] in the city council and tram balconies, without really transforming the plans. A green city would emerge, with many sunny boulevards, and silent closed courtyards, with nice living and walking places, and special expedition streets, were one could easily load and unload - a traditional working city, but nice and organised. And she has come, even more clean and spacious than the ‘esteemed’ designers assumed”¹⁵³.

Conclusion genealogical episode II: The neo-industrial waterfront

Rotterdam’s waterfront, between the 1960s and the early 2000s, can be understood as a ‘neo-industrial waterfront’. Ongoing modernisation, industrialisation and port expansion led to critique and resistance in the 1960s. Just like the mid-19th century, the dark side of modern city planning appeared again. However, this time the focus on international competition and environmental degradation redefined the waterfront in terms of a post-industrial city-port area. As of the 1960s, Rotterdam’s waterfront expanded westwards, differentiating its industrial and more traditional port activities towards the Dutch coast (*Maasvlakte 1* and *2*) while transforming its old city ports. New but ‘distant’ struggles and concerns over land and environmental quality emerged. Again, new ideas and plans attempted to govern new port spaces. It became knowable that the port’s effects on the ‘the environment’ affected liveability. Slowly but surely, the old city ports de-industrialised and turned into a service-oriented economy aimed at attracting middle-class lifestyles and creative entrepreneurs (e.g. *Kop van Zuid* project). The port economy changed materially, as work and workers were increasingly replaced by machines and computers. This post-industrial waterfront created a de-industrialised city-port environment, aimed at improving environmental qualities and middle-class life.

¹⁵³ “Ik ben een oud man nu, maar mijn geheugen en m’n benen zijn nog goed. Zo herinner ik mij nog levendig de discussies over het ingediende plan in de raad en op de balkons van de trams, zonder dat deze het ontwerp echter ingrijpend veranderden. Er zou een groene stad ontstaan met royale, zonnige boulevards, stille, omsloten binnenhoven, met fraaie woon- en wandelgelegenheid en speciale expeditie-straten, waar rustig geladen en gelost kon worden – een werkstad als vanouds, maar een mooie en een geordende. En ze is er gekomen, schoner en ruimer zelfs nog dat de heren ontwerpers toen alveronderstelden”. Translation SJ (Oudenaarden, 2005: 301).

Genealogical episode III: The neoliberal eco-waterfront? (2000s-...)¹⁵⁴

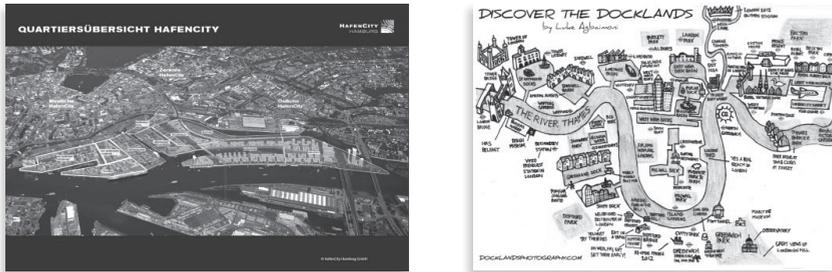
The Stadshavens programme enjoys a long and complex history. Needless to say, this history is not a static and passive ‘piece of reality’ that lies behind us. Rather, it has actively shaped, and is still shaping, the preconditions of the present and the future. The most recent slice of waterfront genealogy covers the period since the early 2000s up until the year 2015 (the year my case research finished). In mid-2000, the municipality of Rotterdam initiated a number of conversations between local political authorities, municipal agencies and three environmental organisations about the development of the port and “the quality of dwelling and living milieu in the region”¹⁵⁵. This local consultation round was labelled *Vision and Daring* (In Dutch: *Visie en Durf*) and the report that captured this process covered the most recent port expansions (*Maasvlakte 1* and *2*), spatial compensation plans (e.g. 750 hectares of green or fishing bans), as well as facilities for environmental enjoyment and recreation. An additional aspect of this effort was to re-develop abandoned city ports in such a way that it enabled urban functions and concerns. The overall vision was to create a “stronger and more diversified economy, more nature, and a flourishing city” (Daamen, 2010: 74). In a sense, the 2000 *Vision and Daring* covenant was the result of prior negotiations at different levels and between different agencies and organisations in order to agree on how the port expansion could be ‘compensated’ socially and environmentally.

5.7 Regenerating Rotterdam’s waterfront: Old and new struggles in the 21st century

In October 2002, a small delegation of the municipality of Rotterdam went on ‘a study’ for ‘inspiration’ in port cities such as Hamburg and London. Both Hamburg and London (and other European port cities) have experienced a comparable port-city history and are confronted with similar developments and concerns. The *HafenCity* project in Hamburg, in turn, was inspired by the London docks project. These projects were particularly relevant for Rotterdam officials, as it gave them insight as to how deprived port areas could be regenerated, how land was re-acquired, and new socio-economic urban activities were developed.

¹⁵⁴ The question mark and indeterminate ‘end date’ of this episode should be understood as a conceptual, methodological and ethical concern. This ‘final episode’ of the ‘here and now’ can simply not be understood, known and grasped as a totality. Rather, it is contingent and part and parcel of micro-struggles and broader socio-material developments. Therefore, this part of the genealogy is more open than the previous episodes.

¹⁵⁵ Agenda voor de openbare vergadering van de Commissie voor Buitenruimte en Milieu (cie. BuMi). 29 juni 2000. 00SOB02672.

Figure 5.4 International inspiration for Rotterdam's Stadshavens (Hamburg and London)

In Rotterdam, plans to further restructure the city centre (similar to *Kop van Zuid* and Old Port plans) were also a political priority of the city authority since the early 2000s. New political priorities, the 2000 *Vision and Dare* covenant and inspiration from Hamburg and London triggered three important and interrelated politico-administrative decisions: “1) the corporatization of the Rotterdam port authority; 2) the financing of the port’s Maasvlakte 2 expansion plan, and 3) the founding of the Rotterdam CityPorts Development Company (OMSR)” (Daamen, 2010: 76). The latter decision takes us to the next step towards the City Ports project.

The OMSR was an integration of the port authority and two governmental agencies (Urban Development and Housing). Its main objective was to have port authorities and city authorities sit together and develop plans for a number of unused and abandoned city ports. Rotterdam’s port authority formally owned waterfront land and had a main interest in maintaining as many port-related activities as possible. The municipality, however, wished to transform this area into an urban space by means of urban development, i.e. housing plans and economic activity. Despite the fact that public interests and private investment interests were both present in the OMSR, its personnel tried to explore future plans for the port areas. One of the initial challenges of the OMSR was the issue of land, as expressed by the local government (B & W) in May 2003:

“A full land transfer was cancelled, because this would immediately give the OMSR a heavy maintenance and operation task for the existing business in the area. This would result in a complicated agreement between the OMSR and the HbR, and cause unnecessary obscurities for port customers” (cf. Daamen, 2010: 84).

In other words, waterfront land was to be transferred from the port authority to the OMSR in return for an exchange fee that would result from new development contracts. In order for the OMSR not to become an extension of local politics and either public or private interests, the OMSR was expected to safeguard the “long-

term objectives of the city of Rotterdam”, as embodied in a so-called port agreement (Daamen, 2010: 85). The OMSR, formally established by the end of 2002, enjoyed the legal status of a Public Limited Company since 2004 (PLC or LLC, In Dutch: *Naamloze Vennootschap*, or N.V.). The OMSR was authorised by a motion called Urban Development Urban Areas in 2003 (In Dutch: *Stedelijke Ontwikkeling Havengebieden*). Formally, the OMSR’s ownership was shared equally (50 - 50).

The OMSR’s main tasks were to create an organisational structure, work on a long-term vision, transfer land from port authorities to city authority, and appoint a number of ‘development managers’ that would be responsible for developing a specific port area (Interview SA). The basic 2003 vision supporting the City Ports highlighted a number of urban concerns such as the housing shortage (mainly private sector housing), lack of business sites and unequal demographic development (low-high income ratio). These concerns were addressed as challenges and opportunities to continue prior urban development plans to boost Rotterdam’s city centre for business and middle- and high-income groups. The specific sites near the water were increasingly ‘celebrated’ as hotspots following international examples of London, Hamburg and Copenhagen (Daamen, 2010: 88). The first plans of the OMSR and the municipality were to start housing projects near the *Waalhaven* and *Merwehaven* areas. Interestingly, due to strict environmental regulations that geographically separate(d) business activities from housing areas and dwelling sites, such plans became problematic. However, legal codes were introduced to circumvent regulations and accommodate the combination of port sites and urban development¹⁵⁶.

A number of long-term explorations and objectives were articulated for these port areas, such as an event centre near the *Waalhaven*, which would be called World Port Area. The OMSR underscored that all activities and functions of the port areas should be a cocktail of working, living and water-based activities. This resonated with previous urban development plans and existing frameworks in Rotterdam. The geographical reach of the OMSR was ambitious and covered the *Merwehaven*, *Vierhaven*, *Waalhaven*, *Eemhaven*, but also *Heijplaat* and the RDM area. Plans and ideas for these sites, as well as potential companies and contracts, became increasingly embedded in a broader set of urban waterfront concerns since 2003. That is to say, there seemed to be two different strategic visions about the meaning of the port areas (embodied in the OMSR) about the degree and speed with which the port should become urban. Some of the debates were quite heated. Port authorities considered urbanisation of old port areas as ‘a loss’, especially the legal transfer of land. Participating actors experienced many stressful moments during these negotiations (Interview SA; Interview SAE). As

¹⁵⁶ See: <http://www.trouw.nl/tr/nl/4324/Nieuws/archief/article/detail/1763415/2003/12/31/Rotterdam-Regels-opzij-voor-huizen-in-haven.dhtml>.

one of the respondents from the city put it: “It seemed as though all the efforts of the municipality were in vain”¹⁵⁷ (Interview SA). As housing and new uses for urban populations was a crucial concern for the municipality, a number of regulatory issues were to be explored and studied in detail (public transportation, industrial nuisances, quality of soil, external safety, environmental issues, etc.). Additionally, the complexity and diversity of all actors made it difficult to develop a focussed vision and communicate with ‘one voice’ (municipal agencies, port authorities, local interest groups, governmental agencies and media attention).

Spatialising synergies and compromises

In 2004, an ‘external’ company called *Inicio* advised the OMSR about the negotiation process and future plans. They stated that businesses and urban planners should be able to trust each other and that “there could be no contradictions or partial aspects in external communication” (Inicio, 2004). In order to get rid of the ‘housing image’ people could “strategically influence media” (ibid). At the same time, a 2004 city council document titled, *Havenplan 2020. Space for Quality*, envisioned Rotterdam’s port developments for the year 2020. This document is informed by the 2000 report *Vision and Dare* and also succeeded a report on material flows and the 1993 plans for port development titled *Havenplan 2010*. In other words, the future planning of Rotterdam’s waterfront was part of a longer process of policy reflection. The 2004 report presents a number of opportunities that were mapped and explored for the city ports, embedded in a cartography of the ‘threats and opportunities’ for the port, the city and the region more broadly. The main argument of the report is to invest in *quality* in order to address the challenges ahead, in terms of ample ‘areas, proper services, and a diversified economy’ (Municipality of Rotterdam, 2004: 7). The report also present six “facets” or “striving images” of the port for the year 2020 (ibid: 8-9).

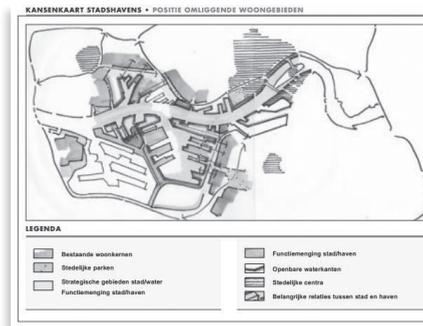
¹⁵⁷ In Dutch: “Het leek alsof gemeente aan dode paarden aan het trekken was”.

Figure 5.5 ‘Striving images’ of Rotterdam’s port (mid-2000s)

Port image	Main goals (selection)	Policy tools (selection)
The <u>multi-faceted</u> port	Covering and connecting industrial, petro-chemical, transshipment, maritime and other modern port activities	Safeguard ample space for port growth, link regional networks and chains, marketing <i>Maasvlakte 2</i> , acquisition and settling of new companies, foster fair European competition
The <u>sustainable</u> port	Cooperation between public and private organisations, reusing materials, using sustainable energy technologies, intensify existing area use	Intensify area use within environmental boundaries, local cooperation (e.g. co-sites), research on sustainable energy and new industries
The <u>knowledge</u> port	Linking educational and port activities, high and low skills for new port economy	Attract business activities for port-city nexus (agrofood, logistics, etc.) and high-tech SME’s, attract and link educational centres and universities, attractive dwelling sites
<u>Fast and safe</u> port	Physical and digital infrastructures facilitate latest material and trading flows; better multi-modal systems that connect trains, trucks, ships, protected against terrorism and illegal activities, etc.	More transportation over water, railroads, pipelines, disperse transportation and integrate material flows, strengthen nautical and port security
The <u>attractive</u> port	Ecological ties with surrounding coastal and spatial zones, compensation of port expansion, recreational use at <i>Maasvlakte 1</i> and <i>2</i> , port activities are linked to recreation, leisure and tourism	Environmental and recreational use of surrounding zones, environmental compensation at port expansion, develop river parks, accessible water fronts at intersection of dwell, work and recreation
The <u>clean</u> port	Linking port activities with reduction or noise, dirt, hazardous materials and better water quality, employing permit policy and regulations focussed on environmental quality, water protection, creative solutions to link industry, living, transportation and recreation	Intensify activities within noise boundaries, contribute to research, projects and regulations that increase environmental quality and safety

These images are important to mention because they merge and cover the port area as a whole. For the specific city port areas, a number of “charts” are presented, mapping the opportunities and potentialities for this area against the background of the six port images or dimensions (Municipality of Rotterdam, 2004: 15-16)¹⁵⁸.

¹⁵⁸ This was the study focus of OMSR 2003 (Daamen, 2010: 90).

Figure 5.6 Map of opportunities for city port areas

The *Maashaven* and *Rijhaven* were initially *not* included in the plan but were envisioned for ‘inland navigation’ and ‘water recreation’. Inland navigation is relevant as these ports have traditionally been sites for transshipment, while water as ‘leisure and recreation’ are quite a new phenomena for the *Wilhelminapier* and *Katendrecht* areas. The area called Stadshavens in this plan merely covers the ports *Waalhaven*, *Eemhaven*, and the *Vierhaven* and *Merwehaven* (the latter two areas are presented together, since they are located north of the Maas river). The report clearly states that different port areas should be understood as ‘partial areas’ (in Dutch: *deelgebieden*) and are to be understood locally, given their specific geographical and historical uses. The following image was sketched for 2020.

Figure 5.7 Geographical scope of waterfront regeneration plans

- *River front area*: new companies, knowledge institutions, housing, recreation and culture, making the “*Heijplaat* area benefit from this”;
- *Waalhaven*: port industry and urban activities (maritime industry and general cargo), docks of inland shipping. This area expresses “innovations with regard to mixed use development” (ibid, 2004: 13), while the 24-hour noise-intensive activities are reduced, making it feasible for dwelling;

- *Eemhaven*: this area could become a “short sea hub” for a 24-hour economy. In order to increase quality of living, housing and dwelling, noise output should be mitigated heavily;
- *Vier-/Merwehaven*: these areas could combine port and city activities. This area operates as a fruit and food-cluster (for transshipment). These activities could be shifted toward *Maasvlakte* or *Eemhaven*.

All of these areas were to be developed in a way that would increase their accessibility. For example, “transportation over water is one of the possibilities” and “biking routes should be improved in western and southern directions across the city ports” (ibid: 14). These plans are developed by OSMR as the responsibility of the *Eemhaven* lies with the port authority. The 2004 report expects that “the majority of the plans are realised” by 2020. Interestingly, the report argues that it would also be instructive to consider how waterfront development plans sit in relation to spatial plans and geographical developments of surrounding urban areas (*Schiedam, Vlaardingen, Maassluis, Hoek van Holland*, etc.) (ibid). As mentioned earlier, the entire port area is subject to the six port images which suggest that port transformations expressed in the ‘2020 scenarios’ are relevant for the wide variety of port spaces in the Rotterdam region¹⁵⁹.

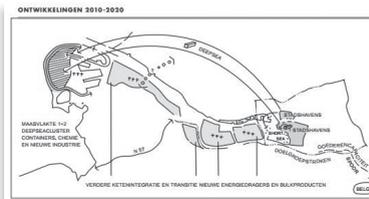
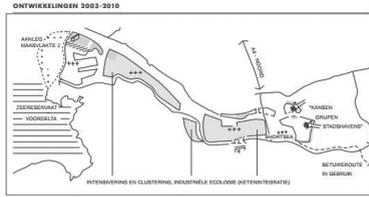
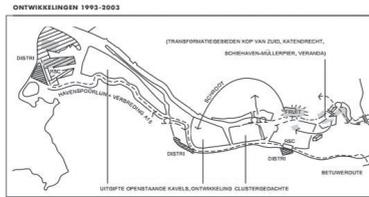
Future waterfront plans

One of the main challenges articulated in the 2020 plan revolves around increasing urban and port transportation, while increasing safety and environmental quality. The same holds for the tension between more port activities and more urban activities in the same or closely related areas. These dilemmas are managed by negotiations between different values and regulatory schemes, but also by diversification and geo-spatial differentiations (ibid: 21-22). At the same time, flexibility, experimentation and “tailor-made” approaches are highlighted in order to create new urban port spaces. This enables the unfolding of local solutions to local concerns around safety, environmental challenges and issues of quality (water, air, noise, etc.). The main shifts that occurred since 1993, according to the 2004 report, were a sensible and tangible port expansion westwards while old port areas were urbanised. In terms of port activities, chains have been integrated and deep sea clusters have been intensifying near the west port areas, while new urban areas have been created with “target group zones” (ibid: 25). Over the years, the municipality of Rotterdam started seeing how other urban waterfront areas could also serve as sites for spatial planning and urban development (abandoned docks, west of previous spatial interventions). Again, this became salient after the traditional

¹⁵⁹ For that matter, this type of port city transformation resonates with other port city plans in London, Hamburg, Copenhagen, New York, etc.

industrial harbour activities moved away from the city area towards the estuary. The municipality had to negotiate with the Rotterdam Port authorities about the plans and ownership of land. In order to plan and execute new plans for the post-industrial harbour area, a newly formed organisation was authorised in November 2002 by the council. However, the future plans of the Port authorities focused mainly on a traditional harbour economy, which, again, did not fit well in most urban development plans. These differing ambitions resulted in a period of discussions and re-orientations (2004-2006).

The two-faced nature of the overall aim to develop the harbour area *as part of* the city resulted in a stalemate. In these years, there were some harsh encounters between people from Rotterdam's port authority and Rotterdam's municipality (mainly from Rotterdam's urban development agency). These discussions included issues of property rights over land, future images of Rotterdam and the meaning of the port for Rotterdam and the region. For example, should these plans focus on technical innovation and economic growth, or on using sustainable materials and social engagement? Should new development plans provide space for surrounding residents, local employment and cultural life, or would the new port economy accentuate its international competition and support port-related service only? There seemed to be little space to manoeuvre or find agreements that fully satisfied all parties involved. After many tense meetings, there seemed to be space for more common ground. The conflicts between Rotterdam's urban development ambitions and the international port economy were considered as mutually exclusive. There were several reasons for this shift. First, the establishment of a new area for harbour activities on *Maasvlakte 2* (near the estuary) created space and possibilities to de-antagonise the harbour areas vis-à-vis the city. Second, serious environmental concerns (mainly regarding CO₂ rates in the Rotterdam region) in the 2000s created a sense of urgency to diminish traditional industrial port-related activities. Third, a new local political coalition and new personnel around the project management created momentum to leave old dichotomies and distrust behind and start anew (Daamen, 2010). These perspectives resulted in a new understanding of how to revitalise Rotterdam's waterfront area.



5.8 Imagining a sustainable waterfront: Rotterdam's City Ports Programme

The main concern between the new role and meaning of the harbour for Rotterdam created the basis for framing the Rotterdam city-harbour nexus in a more focussed and strategic way. The ambitions of the port authorities and the municipality, however, were not aligned, as there were differing views on what should be the main focus (traditional harbour-related economy, or urban development plans to cultivate quality of life). These differing ambitions resulted in a schizophrenic future image. The new political circumstances, limitations of urban expansionism and the rising concern of environmental deprivation (unavoidably) led to a more practical approach. As one advisor of an alderman argued, at some point “you also have to take your opposition aboard”¹⁶⁰. This more pragmatic approach stood at the basis of the new imaginative period to reconnect the city and the port.

The label of ‘sustainability’ plays an important role in this context. It was introduced and seemed to glue together various expectations, interests and actors. Despite the fact this term was used in countless plans and documents, many people related to the Stadshavens project rarely used the term unless I introduced it during interviews. This suggests that the notion of ‘sustainability’ was used as a generic symbol to negotiate and offer a new perspective. In many instances, people simply used the term pragmatically, sometimes to frame funding requests or to frame climate change and environmental quality in terms of big business, as the “RCI was meant for big business”...“sustainability is big business”, enabling some stakeholders to economically restructure the city-port area (Interview SB; Interview SK). Sometimes, people are outright critical of the term sustainability. Someone responded to the term of sustainability in the Stadshavens programme by stating that “it is a bad word, it does not say anything”¹⁶¹ (Interview SC). If sustainability is not makeable and payable, “then it is just blueprint wisdom, it is blueprint sustainability”¹⁶². In one instance, someone told me, quite outspokenly, that “sustainability is the most raped word there is”¹⁶³, as it is used for all kind of (state-based) projects. This critical voice also added that “people do not give a damn about it [sustainability, SJ], they are interested in their own wallet”¹⁶⁴ (Interview SD).

Even though the use of ‘sustainability’ is often symbolic and sometimes sceptical, it is able to flexibly integrate seemingly conflicting and unrelated challenges. These

¹⁶⁰ In Dutch: “Je moet je tegenstanders meenemen in je verhaal”.

¹⁶¹ In Dutch: “Het is een naar woord, het zegt helemaal niks”.

¹⁶² In Dutch: “dan is het tekentafelwijsheid, tekentafelduurzaamheid”.

¹⁶³ In Dutch: “Duurzaamheid is het meest verkrachte woord dat er is”.

¹⁶⁴ In Dutch: “Mensen interesseert het geen zak, dat is lullig, maar dat zijn de feiten. De portemonnee interesseert mensen wel”.

challenges include: rising sea levels due to climate change, urban CO₂ emissions, maintaining international competition of the Port of Rotterdam and the urban region more broadly, increasing population density and lack of proper accessibility and integrated mobility systems. Such concerns are translated and inscribed in a new vision to transform the city-harbour nexus. It promises to strengthen regional economic competitiveness and provide attractive living and working environments (Project Bureau Stadshavens Rotterdam, 2008a: 2).

Re-inventing Rotterdam's city-port nexus

The vision for regenerating the Rotterdam city-port nexus is presented as both a matter of urgency and opportunity. Waterfront regeneration is a politically sensitive subject in the Netherlands. Large spatial planning projects and programmes in the Netherlands (with its many hubs) relate to economic aspirations and development in relation to Europe and global trade. Furthermore, since the Netherlands is a low-lying delta, flooding risks have also made water management and waterfront development of critical import for the Dutch population and government. As Rotterdam's port and city ambitions became less conflicted in the mid-2000s, waterfront development gained new momentum.

In 2007, the city of Rotterdam Council and the Port of Rotterdam Authority established a dedicated temporary office to develop a strategy for the entire area. This office (*Bureau Stadshavens*, or BS) worked independently but adopted a transition management approach, which was introduced and informed by the Dutch Research Institute For Transitions (Erasmus University Rotterdam). The action research oriented approach of transition management allowed stakeholders to reframe existing conflicts in more affirmative terms, opening up new perspectives for the city-port nexus. Quite different from the OMSR approach and objectives, BS started to organise a broad transition arena process involving over 150 participants that were personally invited. The selection was based on achieving a broad representation of different backgrounds (multi-actor) and personal competences and skills. These actors were often non-experts and had unconventional visions and expectations about the meaning, role and future of the city ports of Rotterdam. Over the course of six months, this network discussed different themes framed as 'sustainability challenges', as well as a perspective for a new planning and governing process. The discussions were facilitated by BS and based on the idea that the area could not be developed in a traditional way through blueprint planning. Rather, it should be developed in a more experimental way through public-private collaborations and extra-institutional projects (cf. Frantzeskaki, Wittmayer & Loorbach, 2014). The main ambition of this strategy was to develop the area into a vital working and living environment centred around sustainable innovations in the areas of water, energy and mobility (Project Bureau Stadshavens Rotterdam, 2008a:

2). Even though the plans seemed to be rather ambitious and long-term oriented, the contingency of these plans was also acknowledged. As one of the institutional strategic actors said: “Making a port vision and city port vision is nice, but as soon as the ink dries, there are developments in the world around us one has to account for”¹⁶⁵ (Interview SE).

In 2008, the city of Rotterdam Council and the Port of Rotterdam Authority proposed to restructure the harbour area with the document *Creating on the Edge*. This vision was accompanied by a more specific implementation programme covering a wide range of actors, initiatives and efforts that targeted an area of 1600 hectares around the Maas River. Some administrative ‘barriers’ required creative solutions. To this end, a number of legal requirements and regulatory procedures were bypassed, creating space for ‘experimentation’. This exception was made possible by the so-called Crisis and Recovery Act¹⁶⁶, a national legal framework that enabled infrastructural projects and economic growth to flourish in times of economic crisis. This legal frame accommodated floating projects as it rendered flexible and viable spatial and developments plans (in Dutch: *flexibele bestemmingsplannen*)(Interview SAC). Additionally, knowledge institutes were involved in the design and creation of specific buildings and constructs (e.g. *RDM Campus, Hogeschool Rotterdam, Albeda College*)¹⁶⁷. The Stadshavens Rotterdam website states about the area that it can be developed:

“...into a quality port and an excellent location, not only for port and transport related industry, but also for innovative businesses and knowledge institutes. Rotterdam is also creating an image of itself as a trendsetter in the fields of sustainable energy and climate adaptation, with the aim of attracting professionals and pioneers keen to try out these new trends. Stadshavens can provide

¹⁶⁵ In Dutch: “[Een] havensvisie of stadshavensvisie maken is leuk, maar de inkt is nog niet droog of er zijn ontwikkelingen in de wereld om ons heen waar je ook rekening mee moet houden”.

¹⁶⁶ In 2007, the minister of Infrastructure and Environment commissioned a working group to investigate why infrastructure projects take ‘so long’ from design to implementation and how these processes could be realised faster. In 2008, commission Elverding published a report that diagnosed the ‘slow process’ and proposed a set of solutions. The main problem was located in (1) preparatory work and administrative culture; (2) the design of the governance process; and (3) legal aspects. The key problem with the ‘old approach’, which takes about 14 years on average (from design to an implementation decision for an infrastructure project) concerns ‘legal and administrative barriers’ including among others too many EU environment regulations, and erratic processes with changing plans and perspectives. The Crisis and Recovery Act was politically and legally accepted by referring to deal with the economic crisis. As former PM Balkenende argued in 2010: “We are in the midst of the most severe economic crisis of the last decades. We cannot fall asleep by messages that say the worst part is over. Many negative effects, especially regarding employment, are coming our way with full force. The government believes in a common responsibility of government and parliament, to work on a sustainable recovery and on measures to keep employment on the right track” (Source: Eerste Kamer (Senate document), 2009–2010, 32 127, C., 9).

¹⁶⁷ For an extensive reconstruction of how the Stadshavens programme emerged at an institutional level see Daamen (2010).

them with everything they need for setting up their businesses, along with exceptional residential developments, cultural amenities and good educational facilities¹⁶⁸.

Importantly, each of these areas has its own industrial and urban histories and characteristics, for example in terms of regulatory categories of nuisance (so-called *geur, stank en geluidscontouren*). A number of ports and docks were considered potential sites for development. As many stakeholders told me, the simplest and most traditional solution was to reverse the 19th century excavation by simply filling up the basins for modern urban functions and life. However, this was too expensive and would also damage the unique character of the river (Interview SF). Therefore, the docks and river remained intact.

The programme finally targeted four geographical districts, covering the 1600 hectares. The four areas are: 1) *Rijn-Maashaven*; 2) *Merwe-Vierhavens*; 3) *Waal-Eemhaven*; and 4) *RDM-Heijplaat*. These areas were considered too diverse for a single approach, so the areas were connected strategically. That is to say, a number of strategic logics tie them together, with the overall aim to redevelop the waterfront. The programme articulates *five strategies* that cut across the four areas (Project Stadhavens Rotterdam, 2008a, 2008b):

1. Reinventing Delta Technology: providing space for experimentation and innovation for energy transition and water management (e.g. for an energy neutral city-port nexus);
2. Volume & Value: optimising existing space through innovative logistics for industrial growth and more space for environment and landscape;
3. Crossing Borders: (re-)connecting city and port both physically and socially (e.g. by providing cultural and sport facilities near the water);
4. Floating Communities: creating floating housing, workplaces, recreation facilities to land scarcity and withstand climate change, also restructuring the urban economy and creating new social networks;
5. Sustainable Mobility: creating a multi-modal system of mobility that also connects public transportation on land and water.

In most of these cases, networks and coalitions were considered as means to strategically develop these areas. Instead of using publicly funded programmes, small incremental steps were taken together with heterogeneous actor networks. As someone put it: “forming coalitions is a powerful political means to intervene”¹⁶⁹ (Interview SB).

¹⁶⁸ See: <http://stadshavensrotterdam.nl/eng/vision>.

¹⁶⁹ In Dutch: “Coalitievorming is krachtige interventiepolitiek”.

These heterogeneous networks were often not local citizens and NGO's, but rather private businesses. Non-state engagements, in most of the Stadshavens strategies, were considered in terms of "funds for innovation and investments" in order to "get the city moving again" (Interview SF).

As mentioned before, I am particularly interested the so-called Floating Communities strategy here. Therefore, I now shift to the spatial strategy of Floating Communities.

5.9 A blue revolution: The Floating Communities strategy

The strategic vision for the Floating Communities strategy is framed in relation to the fact that one third of the port area consists of water. Water, the vision states, "gives the city life its own unique character" (Project Bureau Stadshavens, 2008a: 14). The potential of unused spaces of water is highlighted as follows: "Basins where port industry has moved away are ideal locations for floating housing and workplaces. This will further enhance the quality of Stadshavens Rotterdam and benefit all the residents of Rotterdam"¹⁷⁰ (ibid). Such images are supported by arguments about the role floating buildings actually play:

"Floating constructions, like work spaces and pavilions, serve as boosters for development. Floating restaurants and other public facilities will be the centre of attraction in the *Rijnhaven*. (...) There's a superb view from the many footpaths and cycle routes along the waterside, which pass by cultural attractions, floating cafes and restaurants and water sports facilities, including an open-air swimming pool" (ibid).

On the Stadshavens website, the main idea of the Floating Communities strategies is presented quite commercially and brand-like:

"Space will become available in Stadshavens for 5.000 homes on or beside the water. This extraordinary residential environment should attract professionals and pioneers¹⁷¹ who want to stand out from the crowd. These people are needed to inject new life into Rotterdam's economy. The SS Rotterdam, a floating complex of conference, leisure and catering facilities, will be the first step in the process"¹⁷².

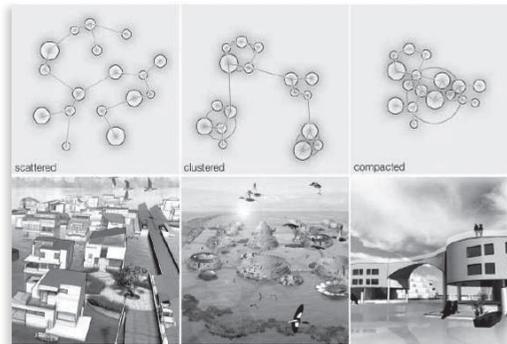
¹⁷⁰ Some pictorial examples of how some elements of the Floating Communities might look like, see Programme Bureau Stadshavens, 2008a: 15.

¹⁷¹ In Dutch the word 'hoogopgeleide groepen' is used, which literally means 'higher educated groups'.

¹⁷² See: <http://stadshavensrotterdam.nl/eng/floating-communities>.

Next to these explicit references to the strategic vision, a variety of other discourses are intertwined with this future image. A number of organisations co-produced a brochure about floating cities (Urgenda, 2008a: 9; Urgenda 2008b). This brochure nicely presents how different urban design concepts relate to different images of a future floating city.

Figure 5.8. Urban design concepts of floating cities¹⁷³



This picture is accompanied by the following (quite telling) text:

“Different town planning typologies are conceivable varying from a compact core to more dispersed configuration. Investigating the two extremes reveals how density affects infrastructure and spatiality. A compact city needs fewer infrastructures but the sense of space and contact with the water are more limited. This is the opposite for a dispersed model where spaciousness comes at the cost of more infrastructures. The dynamic nature of the Floating City makes it possible to begin with a dispersed plan and to develop this further into one or more centres. The best possible use of the available water surface is thus continually achieved” (ibid).

This text describes how houses on water are imagined and made into liveable spaces that connect Rotterdam city and the harbour. The Floating Communities strategy imagines future residents as follows:

“Rotterdam could make a name for itself with floating residences on tidal waterways in a number of Stadshavens outside the dikes. Recent research has shown that there is significant market potential for this sort of housing. Its special appeal could persuade highly educated people to stay in Rotterdam, as well as attracting new people from elsewhere. These groups are important for restoring Rotterdam’s economy” (Municipality of Rotterdam, 2008b: 17).

¹⁷³ These images are designed by Deltasynch.

It is clear that this refers to the ‘target audience’ of the floating houses and the socio-economic status of the future ‘Floating Communities’. The type of people that are attracted here are referred to as ‘pioneers’:

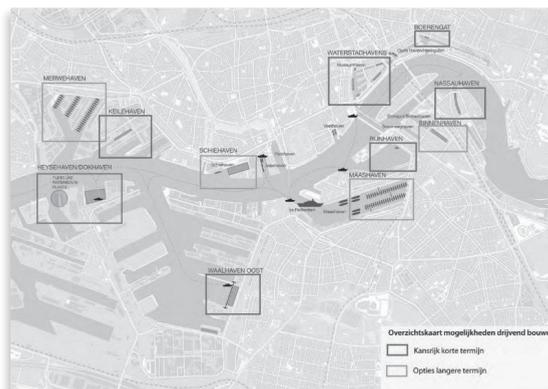
“Pioneers will want to come and distinguish themselves from the masses, people will come to eat, play sport or sleep on a floating facility and businesses will set themselves up on a floating work island. Floating construction can therefore provide a boost for the development of the area” (ibid).

In other words, not only do future water spaces near the Rotterdam city harbour attract pioneers for living, but also networks of economic and leisure activities would shape the meaning of the new harbour. As mentioned before, sustainability concerns are part of the Stadshavens strategy, implying that there are possible conflicts between the economic re-structuring of this area and high quality living spaces. In this context, the Stadshavens programme argues how a sustainable transition is able to bridge these differences:

“The development of the districts will create a sustainable transition for Stadshavens. The City Council, the Port of Rotterdam Authority and the State are putting together a strategy for sustainability, which should help to resolve any conflicts arising where living and working environments converge” (Project Bureau Stadshavens, 2008a: 4).

The implementation of the Floating Communities strategy is supported by imagining the exact location of the floating constructions. Consider, for instance, the image of Floating Communities in the Stadshavens implementation programme (Project Bureau Stadshavens, 2008b: 17):

Figure 5.9 Spatial mapping of possible locations (short-term and long-term)



Since the 2010s, an increasing number of reports and publications emerged that assessed how building and living on water could be realised (Municipality of Rotterdam, 2011a). Water was often framed as a ‘unique experience’ of nature. The *Nassauhaven* (not part of Stadshavens target area) was one of the first areas to experiment with a small living community (12-14 houses). These houses were also envisioned as ‘sustainable’, in that, they should be powered by solar panels and have façades of glass. A great number of technical studies were carried out to account for the expected impact and effects of the Stadshavens plans, depending on different scenarios. These environmental impact assessments were executed by the engineer bureau of the municipality along the lines of different domains and expertise (e.g. sound, smell, sound, culture, etc.) and finished in 2010 (Municipality of Rotterdam, 2010). These studies visualised, mapped and calculated the reach of ‘responsible’ project activities. As I studied this Floating Communities strategy and ideas for floating urbanisation in Rotterdam and beyond, I encountered many small studies from university students (e.g. from Delft, Eindhoven, Rotterdam) that in one way or another tried to understand and support urban floating housing strategies.

It is important to note that the Floating Communities strategy, and the broader aim to make Rotterdam’s city port sustainable, fits into a narrative of urban sustainability advocated by city authorities. In 2011, the city published a ‘sustainability programme’ called “Investing in sustainable growth” (*Investeren in duurzame groei*) (Municipality of Rotterdam, 2011b). Many documents and policy makers suggest that the Stadshavens programme is embedded in a wider strategy to make Rotterdam a cleaner, greener, climate adaptive and more attractive city. Numerous other examples aim at similar results, but employ different means in different areas in the city, for example, sustainable houses (e.g. installing solar panels and isolating thousands of houses to improve energy efficiency), sustainable mobility (e.g. stimulating bike use and electric cars), sustainable energy (e.g. using the surplus warmth of industrial steam pipes), sustainable food (e.g. stimulating urban farming and community gardens), water proofing and climate change initiatives (e.g. green roofs and heavy rain proof squares) (ibid; Interview SA; Interview SG; Interview SH; Interview SI). In many instances, these activities are set up by a variety of actors, including many semi-state and non-state actors. Additionally, some of these ‘sustainability initiatives’ are connected to the Floating Communities strategy (e.g. sustainable energy, sustainable mobility).

Obviously, this is not only a concern for the city of Rotterdam. Many delta and port cities are confronted with similar concerns and have taken up similar initiatives. Rotterdam is part of an international network of cities and is often considered a frontrunner by journalists and cities across the globe regarding issues of becoming sustainable and climate proof (Interview SG). Crucially, this means that notions of economic and port ‘development’ and ‘investment’ are omnipresent in Rotterdam’s

urban plans as well. This is not an implicit objective, but rather part of the design of the Stadshavens programme and the city plans more generally in the 2000s and 2010s (Municipality of Rotterdam, 2003; official city plans, 2006, 2010, 2014; Interview SF; Interview SJ; Interview SB; Interview SL). A more cynical anecdote that circulates among certain professionals associated with the Stadshavens area is that the City Port programme is just a small project for the city to ‘make up for *Maasvlakte 2*’. Even though this might sound pessimistic, there is a telling image in the 2010 Annual Report of the Port Authorities (Rotterdam Port Authority, 2010: 15). This image depicts the entirety of the port area and categorises all port activities (bulk, chemicals, etc.). The city port area is depicted and categorised as “other activities”. This is remarkable, as the urban port area offers only a small slice of the overall port activities, which suggests that port development and growth-based economics dominates ambitions of the port authority. As put in the city plans for 2014-2018: “For the development of Rotterdam, it is important that the typically Rotterdam-minded entrepreneurial spirit gets ample space” (Municipality of Rotterdam, 2014: 2)¹⁷⁴.

Below, I want to reconstruct the materialisation - sometimes painfully challenging - of the Floating Communities strategy as part of the broader transition towards Rotterdam’s sustainable waterfront. Even though I mainly focus on the Floating Communities strategy, floating projects and similar areas should be understood in the broader spatial development context that reconnects land and water. I present how the Floating Communities strategy unfolds in three spatial clusters that characterise the structure of the overall Stadshavens programme: (1) the *Maashaven-Rijnhaven* area; (2) the *RDM-Heijplaat* area; and (3) the *Merwe-Vierhavens* and *Waalhaven-Eemhaven* areas.

Maashaven-Rijnhaven: Some first experiments

As elaborated earlier in this chapter, both the *Maashaven* and the *Rijnhaven* have been excavated in the early 20th century. The small village called *Katendrecht* was mostly deconstructed to make space for new and modern port developments. Residents that remained in this area were predominantly port workers (Project Bureau Stadshavens Rotterdam, 2009a). The *Katendrecht* area has been reconstructed as part of the *Kop van Zuid* project in the late 20th century. Against the background of waterfront reconstruction, the Floating Communities strategy seemed to materialise first in the *Maashaven* area.

One of the first and most concrete material translations is the actual construction of a floating object: a floating pavilion. Two architect bureaus (Public Domain Architecten and Deltasync) designed the floating bubble structured pavilion (see also section 5.2). The floating pavilion project emerged at the intersection of different forces,

¹⁷⁴ In Dutch: “Voor de ontwikkeling van Rotterdam is het belangrijk dat het typisch Rotterdamse ondernemersbloed zuurstof krijgt”.

actors and ideas (Interview SAE). Some students from the Technical University Delft (that later started the company Deltasync) worked on floating objects for their study (thesis) (Interview SM). This idea was part of a broader emerging trend in the field of architecture and urban planning. Dutch water architects also consult abroad, e.g. for an ambitious organisation called Seasteading Institute in the United States striving to build floating cities in the open sea¹⁷⁵. Even though floating houses and objects are not new, some respondents reminded me about the Dutch tradition of houseboats that floated in canals (in Dutch: *woonboten* and *woonschepen*). Some of these ships were replaced by bigger ships after the 1950s, which made them suitable for other uses (Interview SP). The floating pavilion was to become a water-resistant proxy of dikes in a waterfront area. The pavilion served as an experimental showcase and had to be designed in less than one year. The planning and building process was used more reflexively, learning from errors and unforeseen circumstances associated with this new building idea. The floating pavilion was built as a test case and finished in 2010 by a number of key actors, mostly architects, constructors, policy makers and port authorities. In less than one year the project was realised, passionately supported by political and governmental actors against the background of the Shanghai World Expo and the Tour de France in 2010. As one researcher remarked, citing a local business owner: “The floating pavilion was flown in, out of thin air”¹⁷⁶ (Interview SW). Despite this ‘hyper-modernist’ spatial intervention, one could also consider this project as re-using existing places and infrastructures. As some actors associated with inland navigation put it: “existing facilities [docks, SJ] can be reused”. Getting rid of them would simply be “the same as destroying capital”¹⁷⁷ (Interview SN).

Figure 5.10 Building the floating pavilion (2009-2010)¹⁷⁸



¹⁷⁵ See: <http://www.seasteading.org>.

¹⁷⁶ In Dutch: “Het drijvend paviljoen is ingevlogen, uit het niks”.

¹⁷⁷ In Dutch: “Bestaande faciliteiten kunnen hergebruikt worden”, weghalen is “kapitaalvernietiging”.

¹⁷⁸ See also the website of the floating pavilion: <http://www.drijvendpaviljoen.nl/>.

Sources of the images: <http://www.starflood.eu/cities-and-rivers/rotterdam/>, http://www.rotterdamclimateinitiative.nl/nl/100_klimaatbestendig/projecten/drijvend_paviljoen_in_rotterdam_centrum?portfolio_id=19, <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/24443>.

During the realisation of this pavilion, a number of legal and financial concerns emerged. A floating house seemed to be an anomaly in many ways. Legally, Dutch safety regulations state that one cannot simply build on water because in a case of fire or emergency, the same rules apply as with any building. Emergency routes, accessibility and infrastructural support for firemen should be similar to buildings on land. Furthermore, people from the Stadshavens programme wanted to make the floating pavilion available and accessibility to the public. However, for this to be the case there should be no fence and it should be wheelchair accessible. Legally, a floating pavilion can be defined as a built construction or a houseboat. In the case of the former, it would be subject to housing regulations (in Dutch: *Bouwbesluit*). In many aspects, the floating pavilion was not a traditional house that was located on land. In the case of a houseboat, it would be subject to housing regulation after a 2014 decision by the highest Dutch court decision (*Raad van State*). The uncanny nature of floating pavilion is that it is a house and a boat at the same time. This legal tension also created a challenge in relation to financing. Few banks are actually willing to provide a mortgage to houses that are 'mobile'. Since floating houses or living spaces are neither boats nor houses in legal terms, most banks are hesitant to sign a contract and offer a loan for an object or house that does not fit Dutch legal categories on houses and buildings. Mortgages for ships are 15 year contracts (movable property, in Dutch: *roerend goed*), while houses are normally 30 year contracts (for real estate, in Dutch: *onroerend goed*). Nevertheless, the 30 year planning for the *Rijnhaven* project is still a source of financial uncertainty and a risk for a banks. Ship mortgages are perhaps an alternative because they require a shorter time span, but they have high rent and some fiscal disadvantages. Consequently, investors and contractors would like to define the object as a house (*onroerend goed*), while banks are more sceptical of defining floating objects as a standard house (they consider it often as *roerend goed*). Interestingly, I learned that a lawyer defines the specific status of an object on a case by case basis. A more general and practical solution is to differentiate between the fixed geographical area of water (*onroerend goed*, often demarcated on the basis of the size of old boats) and the actual mobile floating objects (*roerend goed*).

On top of these legal-administrative and financial concerns, a wide variety of technical and technological concerns became visible in the process of building the floating pavilion. For example, the 'self-reliant' nature of floating houses and linkages with established pipelines and grids on land (energy and water). The tons of water could serve as an energy source, as a big battery so to say, enabling cooling and heating of floating houses via a water pump (Interview SC). However, it is unclear how these self-reliant and flexible objects would relate to existing socio-technical networks and backup systems on land. Policy makers, engineers and architects reflected on these concerns. Furthermore, students from various Dutch universities studied the

technical, fiscal, legal and administrative conditions that could overcome concerns related to floating houses. Their work and insights shape the project¹⁷⁹.

I noticed that many engineers and architects highlighted differences between land and water in the context of ‘developing on water’. The institutions that regulated water-based living are a major concern. As one architect told me: “Water is not the same as land, at all levels: development, design, building, selling, dwelling, working, living, technique, aesthetics, law and regulation, banking...it does not matter”¹⁸⁰ (Interview SC). Similarly, someone else put it quite playfully: “Water is flexible, but the system around it is not flexible”¹⁸¹ (Interview SO). Or, as another architect stated: “Many people consider living on water as an answer to all contemporary problems, I don’t believe that. If you build on water, you are searching for problems”¹⁸² (Interview SP). Ironically, virtually all people I spoke to were sceptical and unconvinced about the added value of the floating pavilion project for the broader waterfront transition. Even though most people agreed that it was a nice technical piece of architecture, local residents were barely involved and few events were organised in the newly built pavilion (e.g. festival, lectures). Even though events were planned and the pavilion has been hired multiple occasions, some respondents underscored its broader public use.

After 2010, SB opened up a tender for proposals that would further experiment with floating houses and living spaces in another part of the City Port area (*Rijnhaven*). The economic crisis and the newly created vision were conditions to ‘open up the field’ for market consultation. As one research oriented respondent told me: “without the crisis, there would not be a tender for the *Rijnhaven*”. Other projects were also proposed, e.g. a park with parking spaces, the so-called ‘house of design’, a European China centre and temporal floating facilities (Interview SW). Every *Rijnhaven* tender submission was expected to organise its own financial support and time plan for the next 30 years. Even though the economic crisis had led to a delay (few investors, lack of financial resources to build on water), more and more spaces of the City Port area moved into the phase of physical waterfront transformation.

¹⁷⁹ I noticed a kind of ‘ethnographic crowdedness’, as I encountered many student theses (online), researchers, academic references and conceptual reflections about the Stadshavens case more generally. Obviously, this is not a concern in itself, but it raises important questions about the politics of knowledge production in such projects. What, then, was my - slightly passive - role and added value to the project (see also Chapter 2)? I have had a rather passive and reflexive role, rarely intervening significantly, because I did little ethnographic work and have hardly ever communicated with stakeholders besides interviews. Nevertheless, the institute I worked for (DRIFT) has indeed been active in the strategic formative process of some Stadshavens projects.

¹⁸⁰ In Dutch: “Water is geen land, op alle niveau’s: ontwikkelen, ontwerpen, bouwen, verkopen, wonen, werken, leven, techniek, esthetica, wet en regelgeving, banken... maakt niet uit”.

¹⁸¹ In Dutch: “water zelf is flexibel, maar de instituties eromheen niet”.

¹⁸² In Dutch: “Veel mensen zien wonen op water als antwoord op alle eigentijdje problemen...daar geloof ik niet in...als je problemen op wilt zoeken moet je juist op het water bouwen”.

This project seemed quite unique, as it allowed the Rotterdam city centre to reframe its legacy of an industrial port city. As someone put it quite unequivocally: “Rotterdam needs tits, not only big penises that are sky-high and iron balls. That soft, warm, green and fine cosy...”¹⁸³ (Interview SQ). This *Rijnhaven* project could become a first stepping-stone towards a radical transformation and further boulevardisation of the old port areas. The tendering procedure was drafted in three phases: (1) publishing the official tender; (2) selecting the best three candidates of all the applicants; and (3) selecting the winner of the three candidates. In total, seven candidates responded to the tender in 2013 (Programme Bureau Stadshavens Rotterdam, 2013). Some were consortia consisting of big international companies and architect bureaus, while others were comprised of relatively small bureaus and professional groups. A committee that consisted of different people (professors, architects, etc.¹⁸⁴) acted as a jury and assessed all submissions. I noticed that many participants were not happy about the official tendering procedure, because it required competition, secrecy and non-cooperation (so no sharing of information, ideas, ambitions, etc.). The three candidates that were selected in 2014 all had a feasible and inspirational plan to develop and maintain the *Rijnhaven* for the forthcoming 30 years. Importantly, the official criteria of the tender were met, e.g. financial, legal, economic, social and environmental aspects. The final plans were elaborated in detail. Two of the three candidates finally submitted their final proposal in January 2015. After assessing the final submissions, the city of Rotterdam officially declined both plans, since they were not able to meet all the required criteria.

Curiously, in May 2015, the tender procedure was officially halted¹⁸⁵. This seems to be rather ironic, especially because of the many future images, plans and ideas to create Floating Communities and public services on water (floating swimming pool, floating forest, etc.) (Interview SE; Interview SR). Similarly, even though living on water is a unique living experience and business location (unique “sight and light”, Interview SC; Interview SP), it seems to be a rather small niche market as it is quite expensive, especially for investors (Interview SS)¹⁸⁶. I found it interesting that some of the bigger consortia were so heavily invested in international projects, that they did not really mind the cancellation. They will use some new insights, lessons and networks for new projects elsewhere (Interview SJ; Interview ST).

¹⁸³ In Dutch: “Rotterdam heeft tieten nodig, niet alleen maar grote piemels die de lucht in wijzen en ijzeren ballen. Dat zachte warme, groene en gezellige cozy”.

¹⁸⁴ This jury consisted of a number of Dutch and non-Dutch experts that had the ‘authority’ to assess and evaluate submissions.

¹⁸⁵ See: http://stadshavensrotterdam.nl/area_page/ontwikkeling-rijnhaven-heroverwogen.

¹⁸⁶ In some cases, people mentioned successful examples from Amsterdam (IJburg) and Seattle. Rotterdam could be a nice case in which one can “ice skate in the winter, swim in the summer and have boat in front of your house”. In Dutch: “Schaatsen in de winter, zwemmen in de zomer en een bootje voor je huis” (Interview ST). Other respondents even imagined watching a movie from a swimming pool in the River, and creating links with local cultural organisations (Interview SR).

A number of respondents told me that there were few lessons learned from the experiences and challenges in the *Maashaven* and the *Rijnhaven*. This also resonates with critique from local residents and business owners and their marginal role in these plans and governing practices (Interview SU; Interview SV; Interview SW). Another important challenge connected to the *Rijnhaven* area relates to the 150 docks that had to relocate (Schuttevaer, 2011). In this case, a number of inland navigation organisations had to relocate further down the estuary, at the expense of the ‘high quality location’ of the docks and the convenient locations for the families spending time on these docks. Since ships have become (and still are becoming) much larger than before, the number of docks will also decrease (Interview SN; Interview SX).

Critically, the notion of sustainability seemed to be a concern as well. Even though many participants and involved actors seemed to be positive about the strategy, some argued that it should become really sustainable (Interview SM; Interview SY). Building on water should not be a “means to run from the world”, as one architect put it, but one should be able to assist delta cities in creating a new and more sustainable living environment (Interview SM). These floating projects on the *Rijnhaven* and *Maashaven* are related to other Stadshavens projects in this area. Even though many activities and projects were directly aimed at floating or water-oriented developments, an old living environment for port workers was transformed into a more recreational public area (*Katendrecht*). This makes it also possible to wander around the *Rijnhaven* area and experience it as an urban space and not only a port (so-called *Rondje Katendrecht*). Additionally, the *Rijnhaven* area is reserved for entrepreneurial ties between Chinese and European businesses (European Chine Centre) (Programma Bureau Stadshavens Rotterdam, 2011b). A water-taxi was even planned to connect these relatively remote areas to the city centre and other waterfront areas (Project Bureau Stadshavens Rotterdam, 2009a).

RDM-Heijplaat area: Revitalising economic life and recreating a work force

Next to these experimental and challenging initiatives, Floating Community projects also unfolded in the *RDM-Heijplaat* area. The *RDM-Heijplaat* area has a rich tradition of port workers. RDM used to be a company established in 1902 that built and maintained vessels and ships (*Rotterdamse Droogdok Maatschappij*). The RDM actually built a small village (called *Heijplaat*) for its workers. This project was inspired by the so-called ‘Garden Cities’ from the UK in the late 19th century. As one of the RDM involved actors told me, the RDM actually took care of everything: architecture, facades of clocks (in Dutch: *klokgevels*), gardens, housing, football clubs, churches for all religious communities, etc. The work force was taken care of in detail. On its heydays, about 60 busses (from Rotterdam’s bus company *RET*) transported workers

to the RDM company. The *Heijplaat* area was defined as a “strange pimple for living”¹⁸⁷ in the port area (Interview SV). From the 1980s onwards, more and more workers were sacked. In 1995, finally, the RDM went bankrupt (Interview SV). This increased the unemployment rates and socio-economic problems for Heijplaat’s youth (Interview SV). A housing corporation (*Woonbron*) also “used *Heijplaat* as a dumping place for immigrants from the Antilles”, as a Heijplaat resident told me (Interview SU). More recently, *Woonbron* demolished one building expecting to rebuild it. However, this has not yet materialised (as of late 2015). Consequently, a large group of residents moved away, resulting in the dropping of revenue rates by one third at a local *Heijplaat* supermarket (Interview SZ). The port authorities intended to actually break down *Heijplaat*, but the houses remained intact after local protests in the 1990s (Interview SU; Interview SV). There seemed to be different ways to understand *Heijplaat* concerns, especially between local residents and architects and professionals. The jargon of architects did not land well with residents. At one point, during a meeting with different stakeholders, an architect explained that the “panelling of one house should communicate with the panelling of another house”¹⁸⁸ (Interview SV). Such technical concerns were often not shared by local residents, who more often were struggling to paying their bills. This history is crucial to understand the scepticism of the ‘*Heijplaat* community’ towards port authorities and the municipality.

These deprived socio-economic circumstances created an important breeding ground to revitalise the *Heijplaat* area. One of the most important aspects related to the Floating Communities strategy in this area is the connection between new innovative businesses that push sustainable technologies and products on the one hand, and the educational programme of the RDM campus on the other. As many documents and respondents argue, the future of the urban region requires not only new service-oriented businesses and start-ups for the port and the city, but also actual spaces in which new skills and knowledge for this future economy are created and cultivated (Interview SJ; Interview SS). In this way, a win-win has been established, connecting for example students of the RDM campus to the floating forest experiments (developing nautical technologies) (Interview SQ)¹⁸⁹. Similarly, anticipating floating offices and houses, the RDM campus could very well cultivate and educate a new working force that is able to make and maintain these new ‘sustainable technologies’. Interestingly, the rather experimental and flexible nature of these initiatives made it possible for privileged participants to contact a professor, engage with students, and then start a crowd funding project. This latter example stresses that in some instances money is not a driver for activities. Sometimes, communal and trust-based commitments are

¹⁸⁷ In Dutch: “rare woonpuist”.

¹⁸⁸ In Dutch: “beplating van ene woning moet communiceren met beplating van andere woning”.

¹⁸⁹ See also: <http://www.copdrijvendbouwen.nl/Opdrachten>.

critical (Interview SQ). However, not all start-ups and economic activities are accepted. As a local government official told me, there is a certain selection taking place as to what kind of technologies, products and services the Stadshavens region actually needs (Interview SS). This particularly holds for the so-called AquaDock project. This project is based on a cooperation between the city of Rotterdam, the port authority, *Hogeschool Rotterdam* and Clean Tech Delta. They aim to further unfold experiments with floating objects and facilities: floating roads, a floating atelier and even a floating hotel (Interview SS)¹⁹⁰. Small networks, so-called ‘communities of practice’, aim at developing these ambitions¹⁹¹.

Again, the actual presence of these imaginaries highlights a move towards increased boulevardisation of Rotterdam’s waterfront more generally. These plans and proposals can actually be seen as a means to expand Rotterdam’s city centre towards the south. The RDM-related activities and plans are also framed as an imaginative marketing area by port authorities (Interview SE) (Project Bureau Stadshavens Rotterdam, 2009b; Programme Bureau Stadshavens Rotterdam 2011b). As one respondent said: “ambitions are easily articulated verbally (...) I know little successful projects on water”¹⁹² (Interview SZ). Another respondent, rather pessimistically, stated that “sailing over water is allegedly sustainable, but it just leads to less traffic jam on the A15 [a highway, SJ]”¹⁹³ (Interview SS). Next to these neo-industrial ideas and activities, *Heijplaat* also engages in more social projects. As mentioned earlier, socio-economic conditions have not been prosperous, especially for local youth. A number of local projects that were set up by resident associations and others, aimed at improving perspectives for vulnerable groups and youth, and the liveability of the *Heijplaat* area more generally (Interview SU; Interview SV). In the past years, a combination of local organisations and city authorities were able to stimulate some events (e.g. inter-cultural festivals)¹⁹⁴.

The *RDM-Heijplaat* area suffers from a number of problems regarding its demographical scale. Because of its small scale, few investors are willing to develop the area. Furthermore, the sceptical attitude of many local residents makes it difficult to agree on future plans and alternative RDM imaginaries (Interview SS; Interview SZ). The working-class history of *Heijplaat* vis-à-vis the city centre also makes it difficult to create a different urban culture (Interview SW). Various types of conflicts manifested between port activities and urban life, especially in this part of Rotterdam’s waterfront. Some respondents mentioned that a new warehouse would be built in front of a high apartment building. This, obviously, has led to protests of residents (Interview SU; Interview SV;

¹⁹⁰ Source: http://stadshavensrotterdam.nl/area_page/aqua-dock-in-ontwikkeling.

¹⁹¹ Source: <http://www.copdrijvendbouwen.nl>.

¹⁹² In Dutch: “ambities zijn makkelijk uitgesproken (...) ik ken weinig succesvolle projecten op het water”.

¹⁹³ In Dutch: “Varen over water is zog. duurzaam, maar het scheelt gewoon files op de A15”.

¹⁹⁴ The European Commission also financially supports the social, cultural and economic impetus of this area.

Interview SZ). The warehouse is expected to block the nice open view on water for some residents. One respondent highlighted the utter impossibility of negotiations and co-creative sessions “when there is a conflict of interest” (Interview SZ). These conflicts are also about class differences. Many *Heijplaat* residents are traditionally not enthusiastic about environmental issues, unless they are directly related to socio-economic living conditions. This is mentioned by one of the respondents, who said: “Till this day, I believe that we are not able to make sustainability hip for people with a low income. It is still too much of an elitist party for people with a high education”¹⁹⁵ (Interview SV). Even though there are some successful projects, *Heijplaat* is an area with socio-economic challenges that seem to persist (Interview SZ).

Merwehaven-Vierhavens/Waalhaven-Eemhaven:

Open source urbanism and industrialism

The Floating Communities strategy seems to be most advanced in the areas *Rijnhaven-Maashaven* and *RDM-Heijplaat*. This raises the question: how did (and does) this strategy actually materialise in the two remaining Stadshavens areas: *Merwehaven-Vierhaven* and *Waalhaven-Eemhaven*? It would be safe to say that as of 2015, these two areas have barely materialised the Floating Communities strategy.

The *Merwe-Vierhaven* experienced a similar history as the *RDM-Heijplaat* area. In the early 20th century, these port areas were excavated to accommodate bigger vessels and traditional port activities such as storing and processing fruit and juices. Parallel with the intensification and growth of this port area, a working force settled in the areas around the port (*Het Witte Dorp*, *Oud-Mathenesse*, *Spangen*). After the 1980s, the increased mechanisation and automation of the port became more and more isolated from the surrounding urban places (Drift, 2011). The port activities are expected to move towards the new port areas (towards *Maasvlakte 2*). The revitalisation of this area actually emerged via a number of stakeholders (e.g. DRIFT, city and port authorities, and individuals with outspoken ideas about the future of Rotterdam). An associated team of policy makers and experts also took care that the land was officially ripe for redevelopment (Interview SE). Many of these initiatives have been explicitly welcomed by city authorities, based on a kind of ‘open source’ process in which initiatives could be proposed by small businesses, local groups and, basically, everyone who is interested¹⁹⁶. The *Merwe-Vierhaven* was initially meant to become a place with 5.000 floating houses and housing functions near the water. This

¹⁹⁵ In Dutch: “Tot nu toe ben ik van mening, dat we niet in staat zijn duurzaamheid hip te maken voor mensen met een lage inkomen. Het blijft nog teveel hangen in een elitair feestje voor mensen met een HBO-opleiding”.

¹⁹⁶ See: http://issuu.com/stadshavensrotterdam/docs/ows_m4h_tbv_issuu_18_11_14. Interestingly, there seems to be real-time monitor device to observe developments in the area: <http://stadshavensrotterdam.nl/webcam>.

ambition, however, was not maintained. The main reason for this was the economic crisis and, relatedly, the lack of investors and financial means (Interview SS). So, instead of big governmental programmes, a strategy emerged with the logic of “large-scale application of small measures”, symbolised by the phrase: “Tile out, green in”¹⁹⁷ (Interview SAA). In this way, the *Merwe-Vierhaven* transformed its history of old industrial port areas (to process fruit and juices) by turning them into areas for leisure and culture, accommodating for example tango dancing, and a jazz festival. This advanced the ongoing boulevardisation of Rotterdam’s waterfront areas.

This waterfront boulevardisation is directly linked to the focus on sustainability-related initiatives such as an urban farming project with its own commercial restaurant, stimulating the use of clean technologies (e.g. solar panels) and the development of a big ecological park on top of a shopping mall (the so-called *Dakpark*). Interestingly, the role of ‘sustainability’ seems to filter in (and out) certain initiatives and activities. The river water accommodates activities that seemed ridiculous 50 or 100 years earlier. For instance, a sail competition was organised to attract local youth and to create a sense of identification with the river and the new waterfront (Interview SX).

Figure 5.11 Image of potential Merwe-Vierhavens (Drift, 2011: 50)



As there are many initiatives, ideas and candidates, city authorities are able to steer the economic activities. Similar to the *Rijnhaven* area, there is no lack of ambitious ideas regarding floating facilities. Greening rooftops is an interesting small-scale intervention broadly related to climate change. City authorities (e.g. Rotterdam Climate Initiative) strategically ‘greened’ more and more rooftops in order to ‘cool the city’, but also to absorb rainwater and prevent an overload of the urban water system (sewers, etc.)¹⁹⁸. In addition, as one of the respondents told me, more public

¹⁹⁷ In Dutch: “Tegel eruit en groen erin”.

¹⁹⁸ Climate change is also anticipated with so-called ‘water squares’ (in Dutch: waterpleinen). These innovative squares are able to maintain tons of water, thereby countering peak-moments pressure on the water system (during heavy rain) (Interview SAB), see: <http://www.rotterdam.nl/benthemplein>.

and visible green also increases the value of real estate (Interview SAB)¹⁹⁹. In many of the projects in the *Merwe-Vierhavens*, public-private-partnership contracts formally established cooperation between different actors, so there were no tender procedures as in the *Rijnhaven* (Interview SB). This idea of networked relations and cooperation runs across many city programmes²⁰⁰. This project also informs the public and welcomes new initiatives via social media, such as Facebook. Since the Floating Communities strategy is materialised to a lesser extent, it is instructive to mention that the *Merwe-Vierhaven* area is ‘enriched’ by some of the other Stadshavens spatial strategies. Next to the *Dakpark*, new waterfront projects and communities are shaped by semi-regulated areas for innovative and creative business areas, art and exposition areas (*Haka gebouw*, *Marconi Freezone* and *Keilehaven*) (Project Bureau Stadshavens Rotterdam, 2009c; Programme Bureau Stadshavens Rotterdam 2011b).

Lastly, the *Waal-Eemhaven* area. The *Waal-Eemhaven* area was traditionally designed for petroleum, which moved outside the city area in 1912 (to Pernis). Since the mid-20th century, more and more cargo and container companies were established in this area. The *Waal-Eemhaven* area is historically linked to transportation networks (train and highways), thereby connecting the port to Rotterdam’s urban structures. Stadshavens plans for this port area focused on connecting a bridge between this area and the Southern part of Rotterdam by literally constructing the so-called *Charlois-Waalhavenboulevard*. This boulevard, albeit not yet built, is intended to improve the physical and socio-economic mobility of residents living in the less well-off district *Charlois* (Interview SAD). Few floating projects are actually imagined for this area, other than some floating offices and waterbus routes to the city centre (Project Bureau Stadshavens Rotterdam, 2009d; Programme Bureau Stadshavens Rotterdam 2011). Overall, the average Rotterdammer seems to be isolated from these port areas and waterfront developments. Even though many creative entrepreneurs and start-ups have started their business here, local (young) residents are rarely involved. One of the major reasons for this is the physical fence and dike between the residential area and the port area. People that do work in this port area are considered the cultural elite by local residents (e.g. *Oude Westen*). So far, it seems to be difficult to attract and involve local residents. Most initiatives in the area are aimed at further urbanising the *Waal-Eemhaven* area to create half city, half port (Interview SF; Rotterdam Port

¹⁹⁹ Interestingly, over the years, a new folder/hyperlink emerged on the Stadshavens website that focused on ‘real estate’, suggesting an open invitation to investors and project developers for the entire Stadshaven area: <http://stadshavensrotterdam.nl/vastgoed-terreinen>.

²⁰⁰ An interesting example of a more bottom-up oriented approach for policy initiatives is called the ‘City Initiative’ (*Stadsinitiatief*). This is a process in which citizens (often a consortia) can propose an plan to revive or improve the city. The idea is that the plan with the most votes becomes eligible and gets funded. Some examples of 2013 are a floating swimming pool or ice skating track (Rotterdam, 2013). Even though this seems like an open democratic procedure, many candidates already have these plans and are semi-professionals and it is quite hard for all Rotterdam residents to submit a feasible project.

Authority, 2012). Port-related activities are still part and parcel of the new plans. What is more, 15 to 20 docks are reserved for more traditional inland navigation and businesses that use transportation networks for port and maritime-related companies (i.e. A15, *Maastunnel*) (Municipality of Rotterdam, 2011c: 35). The *Waal-Eemhaven* area is also 'developed' by other Stadshavens projects, as other sites are reserved for maritime and port-related businesses and services (e.g. *Sluisjesdijk*, *Shortsea hub Eemhaven*, *Coolport* and *Waalhavenboulevard*). These port areas are evidently meant to further Rotterdam's port economy, making more efficient use of available hectares (e.g. *Distripark Waalhaven Zuid*) (Project Bureau Stadshavens Rotterdam, 2009d; Programme Bureau Stadshavens Rotterdam 2011).

5.10 So, where did the port go?

It is important to note that even though it seems that ideas and plans to develop on and near Rotterdam's water areas mushroomed since the mid-2000s, relatively few actual floating objects were realised as of 2015. It seems, however, that new investment opportunities might present themselves in the near future (e.g. Next Economy project, World Expo 2025) creating a window of opportunity to further unfold the Floating Communities strategy in the Stadshavens territory. Nevertheless, Rotterdam's port expanded and its old port areas were urbanised (or perhaps 'colonised') since the 1980s. The old port areas have gained a new meaning and function in the broader urban fabric. But, the port did not simply disappear. Where did the port go, and what kind of concerns, problems and struggles were associated with this dislocation?

While the traditional port economy in the city decreased since the 1970s, this seemed to be 'compensated' by new port expansions westwards (see above), and also on *Maasvlakte* to facilitate growing containerisation and transit capacities (ECT-terminal) in 1985. This company ECT (container transit) moved from *Eemshaven* (1967) to *Maasvlakte* (1985), symbolising the transition of the traditional city ports - and its geographical move - since the 1960s and 1970s. Even though *Maashaven* plans date back to 1960s, conflicting interests prevented its actual realisation. In view of the 'new era', this expansion was not solely focussed on quantity, but expressed a shift 'from tonnage to value port' (Klamer & Kombrink, 2004: 88). This transformation of the port, this literal move away from the city ports, marks an era which focussed on international markets and competition with other port cities. Even though this has been the case for centuries, the modern peak of the port (since the 1970s) is driven by rational management, efficiency and deregulation. Consequently, the port seemed to be decoupled from the city in a number of ways (economically, politically and culturally).

Urban entanglements and the techno-waterfront

As suggested earlier, *Havenplan 2010* was seen as the “strategic vision in relation to the development of mainport Rotterdam”²⁰¹. Even though the port was seen as a critical economic mainport/hub in the 1990s, it was not until 2004 that the port officially transformed legally to a N.V. (*naamloze vennootschap*), a Public Limited Company (PLC) or Limited Liability Company (LLC). This legal status meant, among other things, that Rotterdam would now own 70% of the port, with the Dutch state owning 30%²⁰². A number of national ambitions have been integrated with the focus on the port, as the municipality ‘lost’ control (from 100% to 70%). As the port grew immensely since the mid-20th century there is a national (even European) ‘interest’ at stake as a mainport. This also denoted the possibility for more independent and commercial activities, as the port now could compete in a highly complex global market with novel digital and transit technologies.

The port authority gained a board of directors to control its management. Shareholders could also be involved. Furthermore, by providing some organisations or actors shares, the new port could direct what type of economic activities were prioritised or downplayed. Importantly, as noted in the port statutes (legally anchored), these shares can only be issued to public agencies or other PLC’s/LLC’s (Rotterdam Port Authority, 2014). Significantly, in 2004 the established port of Rotterdam was still owned by the municipality, but had a monopoly over the economic ownership of the land (Daamen, 2010: 78). Commercial and entrepreneurial legal frameworks, including European regulations, became more important, as well as the creation of new procedures (land rental, tendering, etc.). Investors could be attracted, which was especially relevant for future development plans, such as new expansion plans. This takes us to the most recent expansion of the port, the new *Maasvlakte* area (*Maasvlakte 2*).

Figure 5.12 Maasvlakte as a displaced port area²⁰³



Even though there was a lack of actual ‘productive’ land near the estuary or coast for expansion, this did not hamper the imagination of port authorities. With a history of

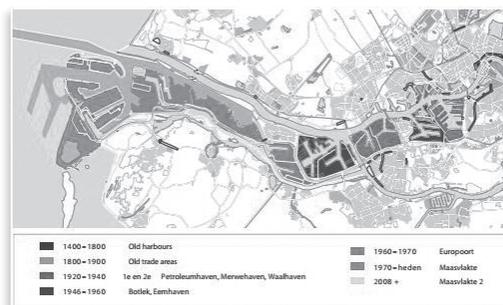
²⁰¹ Ibid.

²⁰² See: <http://www.portofrotterdam.com/nl/Havenbedrijf/organisatie/Pages/juridische-structuur.aspx>.

²⁰³ See: <http://www.ect.nl/en/content/image-gallery>.

creating land out of canals (e.g. filling in of city docks) and waterways out of land (e.g. *Nieuwe Waterweg*), the new expansion plans imagined land that was not yet there. First ideas and sketches of *Maasvlakte 2* started in the late 1980s, while the first phase actual building *Maasvlakte 2* took place from 2008 to 2013 (finalisation planned in 2014, total costs: 3 billion euros). This expansion should not be understood in isolation, but in a world of growing port cities and fierce competition (mainly Asian port cities). The shipping routes, waterways and docks of *Maasvlakte 2* are able to handle the biggest and deepest (future, not-yet-existing) ships (sometimes 400 meters long and 20 meters deep!). The basic idea was to create land, made up of sand derived from sea beds, and ‘rainbowing’ the sand next to the estuary/waterfront, thereby extending the land (in fact, making the Netherlands bigger with 11 km. of coast). The port area grew by 2000 hectares, which is 20% of its space. These 2000 hectares have been used for port activities but also for water safety (sea wall) and infrastructure. The so-called PUMA-consortium (Dutch dredging companies *Boskalis* and *Van Oord*), who won the tender, defeating two others, actually built *Maasvlakte 2*. This consortium has international experience with this type of land-building in the sea, for example in Dubai (world renowned ‘Palm Islands’). *Maasvlakte 2* was celebrated as a ‘landmark’ and fantastic ‘Dutch piece of water engineering’ that could foster the Rotterdam region and the Dutch economy in the 21st century. The so-called Masterplan focused on a number of things: economic activities, sea wall (11 km.), shipping (sometimes 400 m. long), anchoring and docks (13 m. deep), infrastructure (14 km. railroad and 13 km. road) and hinterland, and landscape and leisure (beach)²⁰⁴. In July 2012 the Dutch queen Beatrix symbolically started the first building phase of *Maasvlakte 2* by closing of the sea wall. Her presence reflected the importance of the port as a national main port²⁰⁵.

Figure 5.13 Rotterdam’s port expansion towards the coast over the centuries (1400-2008+)²⁰⁶



²⁰⁴ See: <http://www.nationalgeographic.nl/fotografie/serie/maasvlakte-2/rainbowing-1>.

²⁰⁵ See: <http://www.geschiedenis24.nl/speler.program.14606449.html>.

²⁰⁶ Source: Project organisation Maasvlakte 2 (2007).

Displaced struggles: A deconstructing city

One of the many organisations that fiercely opposed *Maasvlakte 2* was *Milieudéfensie* (literately ‘Environment Defence’ but officially translated in less militant terms: Friends of the Earth²⁰⁷). This (global) environmental protection NGO - together with citizens - officially sued the port authority, in order to cancel the entire plan. In 2005, *Milieudéfensie* opposed the plans, arguing that they would produce environmental harm and air pollution for the region Rotterdam (extra cargo ships, trucks). After numerous meetings, negotiations and responses to permit texts and development plans, *Milieudéfensie* went to the highest national court (*Raad van State*) in 2009²⁰⁸. Their intervention was based on estimates and scenarios about the increase of transportation and economic activities and its harmful effects on human and non-human environments²⁰⁹. In the end, *Milieudéfensie* withdrew their case after agreements were made with the port authority about reducing emissions by 10% (PM10, SO₂ en NO_x). This official withdrawal cleared the (legal) way for the court to approve the *Maashaven 2* project.

As the *Maasvlakte 2* project encountered fierce critiques since the plans were published in the 1990s (not only from environmental NGO’s, also from public agencies and local governments), port authorities tried to ensure that many concerns were addressed, for example by highlighting “sustainability” (interestingly, two main substantive themes are discerned: ‘economy’ and ‘sustainability’²¹⁰). Noteworthy, archaeologists (from the municipality) could use this area as sites for new discoveries about early animals, human hordes and cultures, showcasing some to the public (*FutureLand*)²¹¹. Dredging was even labelled “green dredging”, referring to digging sand 11 km. from the coast, thereby ‘protecting’ local ecosystems. Almost a dozen ‘liveability projects’ (in Dutch: *leefbaarheidsprojecten*) were proposed (use of industrial heating, nuisance reduction, creation of ten river parks) (Municipality of Rotterdam, 2015)²¹², while environmental compensation was concentrated in the estuary and northern dunes²¹³. These compensation plans, however, do not fall under the category: ‘all’s well that ends well’.

²⁰⁷ See: <https://www.milieudéfensie.nl/english>.

²⁰⁸ See: <https://www.milieudéfensie.nl/publicaties/factsheets/chronologie-tweede-maasvlakte-de-procedures-op-een-rij>; <https://www.milieudéfensie.nl/publicaties/factsheets/informatieblad-procedures-tweede-maasvlakte>.

²⁰⁹ See: <https://www.milieudéfensie.nl/publicaties/bezwaren-uitspraken/beroepsgronden-maasvlakte>.

²¹⁰ See: <https://www.maasvlakte2.com/en/index>.

²¹¹ Visitors can attend a tour/expedition about the geological history of the area (*FutureLand*). <https://www.maasvlakte2.com/nl/futureland>, and even submit their own findings (eg. bones, skulls, etc.): <http://www.oervondstchecker.nl/pages/vondst-indienen>.

²¹² See: <https://www.maasvlakte2.com/nl/index/show/id/46/bestaand-rotterdams-gebied>.

²¹³ See: <https://www.maasvlakte2.com/kennisbank/2001-11%20Advies%20over%20natuurcompensatie%20bij%20een%20tweede%20Maasvlakte%20.pdf>.

One of these compensation plans, turning agricultural land into environmental and leisure spaces, was opposed by some farmers in March 2010²¹⁴. This project, near the city of *Rhoon*, would make rural spaces more diverse, and would be directed by province authorities. As one of the protesting farmers, whose family lived on that land for three generations, told a newspaper journalist: “Nature, leisure and agriculture? These things do not go together”²¹⁵. During the protest action, organised farmers blocked some roads in *Rhoon* with tractors, with a sign that stated, “Keep your hands of our polders. No support, a waste of money in times of crisis”. This “crisis” refers to the economic crisis and the severe austerity measures in the Netherlands since 2008. A local city councillor (of the municipality *Albrandswaard*) struggled with this project for over 16 years.

Figure 5.14 Protesting the impact of Maasvlakte 2



If we zoom out again, we can see that the port moved into the 21st century with a totally new face, a new terrain (literally), using state of the art technologies (ICT, terminal, nautical and maritime techniques), operating in a highly complex international market with fierce global competition while having local spatial, environmental and political concerns. Annually, the port activities and results are reported and compared with previous years and other world ports in the port authority year reports and statistical reports²¹⁶. There is a competition going on (maybe even an ‘economic war’) between port cities worldwide, as each and every port city and their respective national governments try to attract entrepreneurs and businesses for economic growth. This competition is not new, of course, but is starting to become very intense in the 21st century as

²¹⁴ See also petition and protest: http://www.petities24.com/stop_project_buytenland_nu. <http://www.redpoldersrhoon.nl>.

²¹⁵ See: http://www.refdag.nl/nieuws/regio_2_210/boeren_blijf_van_onze_rhoonse_polders_af_1_395929.

²¹⁶ See: <http://www.portofrotterdam.com/nl/Over-de-haven/havenstatistieken/Documents/Haven-in-cijfers-2012.pdf>.

upcoming economies (mainly China and Latin America) are competing in terms of city marketing, attracting investors, employing state-of-the-art port technologies, multimodal infra-ecologies, cargo shipping and anchorage capacities, land annexation and transformation. These events and activities transformed the port's profile and role in general, and the link with Rotterdam's city centre in particular²¹⁷.

5.11 Analytical reflection: New waterfront regimes and new struggles

This chapter reconstructed the rise of Rotterdam's 'sustainable waterfront'. I dove into the history of Rotterdam's current waterfront as a nexus between port and city, between water and land. Since the mid-19th century, Rotterdam's waterfront has been radically transformed, resulting in the emergence of Rotterdam's modern industrial waterfront. High-modern modes of urban planning and waterfront governance enabled Rotterdam's port development, working and housing conditions. After a series of politicisations and problematisations, this waterfront regime showed more and more cracks and was slowly transformed into a neo-industrial waterfront. Since the 1960s, this type of waterfront became more and more receptive to social and environmental concerns. The increased urbanisation of the waterfront and its boulevardisation intensified since the 1990s.

Since the 2000s, the waterfront was confronted with a growing number of old and new problems. Old concerns around urban expansion, housing concerns and environmental quality were mixed with climate change challenges and new economic activities. Rotterdam's authorities aimed to further transform the 'old port' and industrial port areas. The waterfront emerged as a field of visibility to combine various concerns and experiment with new economic activities, connecting local schools to businesses and advancing energy technologies. The city ports were imagined as clean delta areas that were attractive for creative classes and new start-ups. This should not be seen as an isolated and local governing regime to restructure Rotterdam's city-port nexus. Rather, the ongoing 'creative boulevardisation' of port cities (e.g. floating offices) seems to be a global trend. Port cities combine concerns around climate change, carbon-neutral energy, increasing environmental quality, economic restructuring and creative classism. Land and water, then, become part of the same

²¹⁷ See: http://www.bds.rotterdam.nl/Bestuurlijke_Informatie:7/Raadsinformatie/Vorige_raadsperioden/Raadsperiode_1990_1994/Commissies_1990_1994/HEZ/1993/Kwartaal_3/Havenplan_2010_concept_definitieve_versie;
http://ruimtelijkeplannen.rotterdam.nl/plannen/NL.IMRO.0599.BP1008Parkstad-/NL.IMRO.0599.BP1008Parkstad-oh02/t_NL.IMRO.0599.BP1008Parkstad-oh02_2.3.html#_2.3.3_NotahoogbouwbeleidRotterdam2000-2010dSV2000.

new waterfront governmentality that moves away from classical urban planning but foregrounds contingency, surprise and out-of-the-box thinking. Furthermore, a set of more pragmatic concerns emerges, such as the actual legal and administrative status of 'floating objects', attracting investors for new waterfront projects (to connect Rotterdam's city centre with its southern districts). I call the mixing of a neoliberal logic of an entrepreneurial waterfront, aimed at boulevards, creative-class lifestyles and sustainable technologies, and environmental-friendly imaginaries, a 'neo-liberal eco-waterfront'. This current political rationality emerges in the most recent *genealogical episode*, but in response to the bio-industrial and neo-industrial waterfront. It is instructive to analytically reflect on this new spatio-political rationality, using the transition analytics as presented in Chapter 4.



Visibilities of the neoliberal eco-waterfront

What new visibilities, imaginations and fields of observation emerged through the Stadshavens programme? In what way were waterfront areas and floating sites imagined so that they would become a neo-liberal eco-space? As part of the 'previous era' (i.e. the neo-industrial waterfront era), port expansions towards the coast were prepared in relation to a set of 'compensations'. As preparations started in the 1980s, the port expansions (mainly *Maasvlakte 1* and *2*) were now being materialised, opening up a new field of visibility and possibility for the old city port areas. As automation and computer-based port operations intensified, the port authority seemed to focus mostly on commercial trading routes, geopolitical concerns regarding resources, ICT and logistics, large-scale transit, new industrial and largest cargo vessels. The port authority simply did not consider the old port area as that significant, after they secured their new port areas. In a sense, this suggests a continuation of a more traditional merchant and industrial port. However, the old waterfront areas became potential space to further increase urban functionalities and decrease port-based activities. Since the early 2000s, port authorities and city authorities had quite different framings of the urban waterfront. After a number of discussions, multi-stakeholder meetings, institutional confrontations and personnel changes, it became clear that both port expansion (or rather conservation) and further urbanisation could not be an either/or game for both parties. Rather, a number of challenges were explored to assess on what grounds port and city authorities could cooperate. In 2002, the OMSR was established to scan, explore and articulate feasible waterfront scenarios. It became clear that a variety of challenges were expected, such as international port competition, technological innovation for port services, scarcity of land and housing opportunities, bad environmental quality, and rising water levels (due to a new phenomenon called 'climate change'). Since the mid-2000s, these challenges were consolidated into port

and city ambitions (mainly in texts), among others by a term called ‘sustainability’. It became clear that various ambitions could be projected onto the city port areas, creating a (since then called) ‘sustainable’ image and future of the waterfront. Despite fierce struggles and conflicts about property rights, a geographical area was negotiated and established that covered both northern and southern parts of Rotterdam (i.e. 1400 hectares). In 2007, a so-called Stadshavens programme was assigned the task to regenerate the waterfront and materialise the overall ambitions. The waterfront area was expected to become part of the new extended city centre. Dozens of explorations and visualisations of the environmental quality (soil, air, sound, pollution, nuisance, etc.), made by official city engineers, shaped a new sensibility to further render visible the waterfront as a liveable urban site. The waterfront was projected as a renewed service-oriented port economy (not industrial) as well as an urban environment meant for work, living and leisure. Many drawings, photos and scenarios of the ideal waterfront were articulated, fine-tuning the prior boulevard image of ‘Venice at the Maas’.

One of the ways to transform the waterfront was by reframing the meaning of water, and projecting all kinds of challenges and ambitions onto the water of the Maas River and the old basins. Many technicians, engineers and urban planners explored options to urbanise water areas. Water was not a static and stable unused phenomenon, but a medium to work with and develop in a variety of ways. The potential initiatives and projects related to water comprised the Floating Communities Strategy. A number of locations were explored by an ‘external party’ to explore short-term and long-term opportunities. Finally, seven feasible short-term options and four long-term options were articulated, covering different parts of the city ports area. From this moment on, dozens of explorative and technical studies and reports were written in order to explore specific options for floating objects and services. The Floating Communities strategy (the texts, the images, etc.) conveyed a solution for a number of challenges, such as creating a service-economy and creative entrepreneurs, providing housing and offices, becoming climate change-proof (outside Rotterdam’s dikes), connecting north to south Rotterdam, reducing carbon emission, and becoming ‘sustainable’. These ambitions were considered as material opportunities that could be realised through a variety of floating phenomena on water: restaurants, sport facilities, offices, self-supportive (autarkic) houses, forest, swimming pool, etc. Interestingly, different areas were considered as non-generic, since each area had its own history, specific functionalities and potential for the Floating Communities strategy. Consequently, a fine-grained visibility of specific waterfront areas was developed. As all kinds of ‘floating projects’ were planned, it became clear that floating objects and spaces were not considered as technically sound, financially feasible or even legal. That is to say, floating houses and objects were considered as ‘blind spots’ by various local institutions, resulting in the

combination of various rules and creative bypasses to adequately understand floating objects. Despite considering some first floating projects as promising and potentially successful (e.g. floating pavilion and *Rijnhaven* project), few official and unofficial evaluations observed them as actually successful. Some 'local observers' argued that concerns of local businessmen and residents were not included, as the new 'floating plans' and 'boulevards' were mostly meant for the happy few. Nevertheless, new plans are still imagined combining various ambitions to reconnect local economic needs to new facilities (e.g. *RMD/Heijplaat*). Furthermore, a range of new observatory tools and reflexive monitoring are used, such as an actual real time camera to 'follow' changes in the *Merwe/Vierhavens* area, or monitoring devices of port activities in *Maasvlakte 2*.



Epistemologies of the neoliberal eco-waterfront

What are underlying grids of knowledge and epistemic schemes associated with these sensibilities? How has the Floating Communities Strategy become knowable? The new waterfront assemblage since the 2000s seemed to be somewhat schizophrenic, advancing a service-based port economy as part of an unprecedented port expansion, while at the same time advancing urban and liveable sites in old port areas. To these ends, a range of epistemic repertoires and schemes has been mobilised. Since the establishment of the OMSR, different problem fields were rendered visible and knowable. Some of these concerns were tied to the port economy and its technical infrastructure expansions, while others were connected to a number of new urban concerns. It is noteworthy that various experts, scholars and advisors were attracted to support a new understanding of the waterfront, among them DRIFT. Transition knowledge circulated in these networks, alongside other models to innovate the city ports in a more sustainable manner. During these years, 'policy tourism' led to inspiration for the newly established Stadshavens Programme, among them were waterfront regeneration projects in Hamburg and London. Despite struggles over land property and the 'urban character' of the waterfront, stakeholder meetings and inspirational images informed a new understanding of the waterfront. A number of new waterfront problematisations were also supported by scientific and technical evidence, for example all kinds of nuisance contours to address environmental quality and climate change figures produced by DCMR. The 1400 hectares were understood as 'too big' to govern in one manner. This significantly differs from 20th century urban planning rationality. Contrastingly, each and every area was understood in terms of its own local histories and possibilities. Some agents that co-designed Stadshavens programme, aimed at combining five different strategies in four waterfront areas.

The Floating Communities Strategy was one of these strategies. Before floating objects and projects could be produced, knowledge to create the conditions for a

floating assemblage was necessary. Future projections of climate change for local safety, knowing how many houses were needed for future Rotterdam residents (e.g. hundreds of floating houses in some port areas), understanding the preferences of a future creative middle-class and knowing the quality of water, air and soil were all conditional for ideas of Floating Communities Strategy. Against this background, knowledge and inspiration for floating houses and living environments came from many places: innovative water architects, dozens of student thesis, even a PhD dissertation (i.e. De Graaf), knowledge institutes such as DRIFIT, TNO, RDM Campus, TU Delft, Hogeschool Rotterdam, official city engineers and DCMR, legal experts employing the Crisis- and Recovery Act, but also abstract holistic and eco-systemic frames to assess value streams and flows. The majority of my waterfront respondents connected to the Floating Communities strategy had a background in (or still worked in the field of) technical engineering, architecture and/or urban planning. These types of knowing how to enact the Floating Communities strategy were quite dominant, sometimes combined with a somewhat abstract understanding of a sustainable and ‘softer’ waterfront future. Interestingly, in the case of the RDM campus, a new educational system was connected to a creative industry, enabling new skills and workers to build and maintain floating objects and sustainable technologies.



Technologies of the neoliberal eco-waterfront

What techniques, procedures and technologies are employed that enabled a ‘sustainable waterfront’ and a set of ‘floating projects’ to emerge? The expanded port further unrolled its technical management systems to operate port activities of transit, selling storage capacities and sites, navigating vessels and managing petrochemical industries. The diverse ambitions of the neo-industrial waterfront assemblage intensified in the early 2000s, but were controlled and managed through some ‘institutional measures’. As *Maasvlakte 2* generated some critique and protests, a compensation plan was negotiated with social actors. These societal tensions were managed in the ‘typical’ Dutch fashion of harmony and consolidation. Similarly, the formal establishment of the OMSR, government programmes, the RCI and the Stadshavens Programme signified a flexible integration of port and city ambitions. After these institutional techniques of consolidation had established a fertile ground for differing ambitions, port and city authorities created more strategic and tactical plans to regenerate the waterfront (5 strategies in 4 areas). Each Stadshavens area was addressed in terms of its future functionalities, and potential environmental effects (e.g. in development plans and environmental impact assessments).

The Floating Communities strategy was devised to materialise a means to combine various waterfront challenges. As plans for the Floating Communities strategy increased,

local and national policy procedures were utilised in tandem with water-based architectural techniques and were used to build a floating test case including solar panels and self-supportive water systems (floating pavilion). Importantly, instead of blueprint planning, this case gave a first sense of what would and could work. Institutions surrounding these projects, however, rarely addressed these 'lessons'. Combining efforts between public and private actors was also expressed in the *Rijnhaven* tender 'adventure'. Next to the activities of architecture bureaus, contractors, and building companies, more formal and legal procedures were employed (for some this was 'too much bureaucracy'). A range of unprecedented architectural plans and urban planning techniques was introduced such as 'slow urban planning' (DKV Architects) and 'floating urbanism' (Deltasynch). As part of Rotterdam's ongoing 'boulevardisation', the new floating assemblage also incorporated parts and fragments of the surrounding environment (e.g. greening the area via the *Dakpark*, attracting the *Heijplaat* community, using old port sites for start-ups and cultural events). One of the tools that was dealt with professionally was promoting the Stadshavens programme as city marketing (comparable with other Rotterdam projects such as *Markthal* and *Rotterdam*). Interestingly, some unexpected connections emerged between port areas and the city, e.g. industrial pipelines used residual energy to heat an urban district.



Subject formation through the neoliberal eco-waterfront

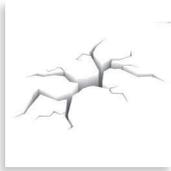
Finally, how did these efforts of waterfront sensing, visualisation, knowing and intervention inform the creation of neo-liberal eco-subjectivities and identities? First of all, it should be clear that the emergence of the Stadshavens programme in general has created and been created by a great pool of 'institutional subjects' that brainstormed, designed new plans, emailed and discussed with experts and other city departments, contacted architects and contractors, visited other port cities as policy tourists, etc. We should also not forget the many (semi-digital) port workers and planners that started working for and at *Maasvlakte*.

Regarding the Floating Communities strategy, a very specific set of identities emerged that sought to organise and plan (and sometimes build) the floating pavilion, the *Rijnhaven* tender, new RDM campus activities and new boulevard sites. Among them, we find architects, urban planners, contractors, technicians, engineers, students, professors, junior policy makers and environmental researchers. Instead of considering these types of subjectivities as conditional and supportive, they were actual identities that emerged in and through the Floating Communities strategy. A different set of subjects was target groups and local residents. As explicitly mentioned in Stadshavens documents, a creative class and innovative entrepreneurs was attracted to live and work in Rotterdam. Some start-ups and innovative businesses

seem to emerge near the *Merwe/Vierhavens* and *Waal/Eemhavens*. Additionally, a new young ‘work force’ has appeared that is educated and prepared to work in the new urban and service-oriented port economy (e.g. designing, building and maintaining new nautical and sustainable technologies).

As mentioned several times, the shaping of Rotterdam’s sustainable waterfront through The Floating Communities strategy is both a bodily and material activity. This is evidenced by the contractors and builders that put their bodies at work to actually construct a floating object, Casco’s (basic structure of a building) and ‘floating concrete’ that might serve as the backbone of serene living rooms, the millions of litres of water that increasingly functions as semi-land or at least water to be developed, the hundreds of RDM campus students that do physical work and labour to build and maintain techniques and technologies for the new waterfront, the newly created pieces of land (*Maasvlakte 2*) that serve as the newest port areas, computer screens, the dozens of bodies that dance to tango music at the *Merwe-Vierhavens*, the fish and eco-systems underneath the floating objects that are accounted for by environmental scientists, etc. These socio-material linkages are no exception, but rather a basic feature of new waterfront assemblages.

If we glue these pieces together, it becomes clear that the current neoliberal eco-waterfront (again!) combines different ambitions and aspirations. In line with assemblage urbanism, we could argue that small and big assemblages are connected, each consisting of heterogeneous actors and activities: a floating assemblage, a more traditional port assemblage, an architecture-housing assemblage, a (sustainable) energy assemblage, a legal-administrative assemblage, and so on. These assemblages are loosely coupled and are glued together by a number of broader frameworks such as the RCI, the Stadshavens programme, Clean Tech Delta, The Floating Communities strategy. Some of these (sub)assemblages operate at a more international scale, while others are organised more locally²¹⁸.



Contingencies of the neo-liberal eco-waterfront

Importantly, despite this apparent ‘nice and neat’ image of inter-related assemblages and cooperative practices and discourses, conflicts and tensions did not vanish since the mid-2010s. In some cases, there were quite fundamental contingencies, while in

²¹⁸ Methodological note: I have interviewed dozens of people tied to waterfront regeneration and studied hundreds of documents, strategic plans, vision reports, consultant reports, studies, residential flyers, evaluations, spatial scans, environmental assessments, media reports, expert journals, etc. Even though the field is quiet complex and highly heterogeneous, I noticed that this logic became apparent the more I studied it.

other instances they were more technical. Without these radical and pragmatic cracks and openings, our understanding of The Floating Communities strategy is simply incomplete²¹⁹.

Technical contingencies

A number of clear technical concerns were addressed explicitly by neoliberal eco-regimes of the waterfront, especially the Floating Communities strategy. New practical concerns and problematisations emerged in a socio-technical network that aims at making these neoliberal eco-spaces across Rotterdam's waterfront area, such as techno-legal anomalies, proper financial means to finance new projects and sceptical citizenry. To some extent, these technical contingencies are related to the more radical contingencies as they inform neo-liberal eco-governing regimes. In some cases, these pragmatic issues are addressed and solved (partly), sometimes not (yet).

1. *Techno-legal complexities.* The discursive and material emergence of floating objects that are neither houses (on land) nor boats, creates technical and institutional tensions. A number of architectural and construction concerns emerged that were addressed relatively quickly. However, the legal, administrative and regulatory concerns were more complex. The category of a 'floating house' required legal precedents and administrative bypasses. Similarly, many 'stakeholders' did not support the traditional tender procedure for the *Rijnhaven* area. Additionally, this procedure was halted, because not all regulatory requirements were met.
2. *Financial schemes and means.* Due to the economic crisis, many parts of the Stadshavens programme were not unrolled or realised as expected. This particularly holds for the Floating Communities strategy, as designing and building 'floating' objects, houses, and offices are associated with higher investment risks and more complex financial schemes. Investors and contractors are often sceptical about the 'financial risks' and banks are hesitant to provide mortgages.
3. *Sceptical citizenry.* As is the case with many spatial and urban plans, local residents and action groups criticise the implications and effects of the Stadshavens programme. Local managers and coordinators addressed concerns regarding the effects of floating houses for the 'nice view', environmental concerns, local business and residential. In some cases, this led to more 'balanced' decisions, while in other instances prior (legal) decisions were 'unapologetic'.

²¹⁹ Interestingly, one of the floating projects would not have even existed if other plans were realised without the economic crisis (*Rijnhaven* tender).

Radical contingencies

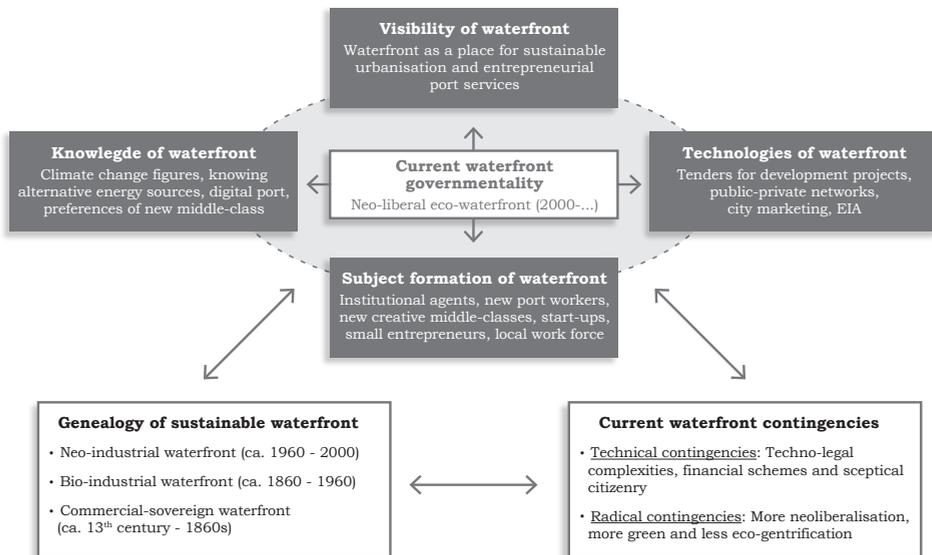
Against the background of the emergence of these neoliberal eco-spaces, more fundamental conflicts and struggles can be found, such as uneven access and contribution to the waterfront (citizen groups and small entrepreneurs) and 'green gentrification' (unequal accumulation of ecological wins, comfort and welfare). A number of critiques, marginalisations and positions are immanent to the neo-liberal eco-waterfront. These forces were able to create radical contingencies as to the direction and organisation of the waterfront regime and the Floating Communities strategy. Importantly, they have quite different 'directionalities' and types of claims that resonate with and extend struggles associated with Rotterdam's waterfront and urban history (i.e. its bio-industrial and neo-industrial era).

1. Marketisation and *neoliberalisation*. This force aims at downplaying attention to environmental, social and ecological concerns. They argue that a purer form of market and business models is better for everyone (local youth, residents and economic activity). Importantly, fierce forms of techno-capitalism and neoliberalisation are advocated from the viewpoint of port expansion and governing (e.g. Deltalinqs, Port authority) but also for urban planning and growth (e.g. Ecorys, strategic planners).
2. Green and *eco-friendly activities*. This force aims at downplaying attention to 'economic interests', increase of port activities and mobility, ecological devastation and institutional concessions. These voices advocate for the intrinsic value of nature, the environment and eco-systems near the port areas. Such ideas and claims come from many different places and organisations, both institutional and non-institutional (e.g. RCI, small architect bureaus, *Zienswijze De Noordzee*, *Stichting Natuurbescherming Vlinderstrik*, *Milieudefensie*).
3. Foregrounding *marginalised groups*. This force aims at downplaying the uneven attention the Stadshavens programme pays to the usual suspects: rich and elitist groups ('eco-gentrification'). Instead, they advocate that waterfront regeneration should benefit local residents (whose view was blocked), minority groups, small businesses and 'truly' innovative ideas. Many of such critiques are articulated by small and non-institutional actors (e.g. small architects, *Heijplaat* residents, resident association *Oud Matthesse*).

The 'current episode' (i.e. the neo-liberal eco-waterfront) is very much work-in-progress. It is a contingent episode full of struggles. Despite the relative 'openness' of the new waterfront logic, various entrepreneurs and social initiatives struggle to gain a

legitimate position in this new waterfront economy. The neo-liberal eco-waterfront can be transformed in such a way that it becomes less 'neoliberal' and more 'liberal', or more 'communitarian', depending on the outcome of struggles and types of problematisations. The 'open source' and 'bottom-up' character of some regeneration projects could also be labelled 'bottom-up neoliberalism'. In any case, the 'here and now' is itself never complete and can radically shift the ways in which Rotterdam's waterfront is still imagined and governed. The term neoliberal eco-waterfront is therefore up for academic and public debate (in a pluralistic and democratic sense). Again, this reflection can also be captured in terms of the transition analytics as visualised in Chapter 4. The following transition analytical image can be presented.

Figure 5.15 Transition analytics of Stadshavens case (cq. Floating Communities Strategy)



As discussed in Chapter 4, these building blocks are related. The waterfront genealogy can be considered as a struggle-based history that shaped the contours of the current neo-liberal eco-waterfront as well as its contingencies. Many elements of the earlier waterfront eras (e.g. bio-industrial and neo-industrial) are sustained and re-inscribed in current waterfront regimes and practices (e.g. commerce and trading, presence of port workers, excavated docks). Issues that have not been addressed properly and social struggles seem to reappear via technical and radical contingencies (e.g. residential interests, public health, urbanising the port). The current waterfront governmentality and contingencies do also relate to its genealogy, but in a more strategic methodological way. That is to say, this genealogy frames

how I understand waterfront regimes and practices, as well as their contingencies, but the present also re-frames the history of Rotterdam's waterfront by highlighting historical problematisations and struggles. The final dialectical relationship refers to the link between current waterfront governmentality and the contingencies. Here, the transition political interplay between technical problematisations that improve the architecture of the neo-liberal eco-waterfront and historical antagonisms is prevalent. The enthusiasm in novel waterfront projects that aim to reconcile and combine port with urban concerns seem to conceal fundamental tensions between port and city, and between capitalist and social motives. Now that we have reconstructed and briefly reflected on the first empirical case, we can move to the second case.



Chapter 6

Gardens, cars and urban revolt

Greening Rotterdam and The Hague from below

Chapter 6. Gardens, cars and urban revolt: Greening Rotterdam and The Hague from below

“The price of anything is the amount of life you exchange for it”.

Henry David Thoreau

“To reverse the effects of civilization would destroy the dreams of a lot of people.

There's no way around it”.

Derrick Jensen

“A nation that destroys its soils destroys itself”.

Franklin D. Roosevelt

“We have it in our power to begin the world over again”.

Thomas Paine

6.1 Introduction

This chapter presents the second empirical case of a sustainability transition in an urban setting. It describes the rise of eco-friendly urban spaces created by a socio-ecological movement called the ‘Transition Network’ or the ‘Transition Towns Movement’. It specifically focusses on transition networks in two Dutch cities, namely Rotterdam and The Hague. These local networks are embedded in a global movement aimed at building resilient communities in the wake of contemporary crises (e.g. peak oil, environmental destruction, economic deprivation). Similar to Chapter 5, the main structure of this empirical chapter is based on ‘genealogical episodes’. The first two episodes in particular highlight the intertwined genealogy of Rotterdam’s and The Hague’s Transition Town (TT). Episode I (1850s-1960s) was an era in which ‘the environment’ and ‘ecology’ emerged in direct relation to industrial activities and socio-economic conditions (*the industrial eco-city*). Episode II refers to a number of more recent decades (1960s-2000s) in which mass consumption, individualisation, state regulations and market forces shaped the

meaning of ecology in Rotterdam and The Hague (*the techno-capitalist eco-city*). Episode III marks the most recent era (2000s-now). In our age, it gives rise to community-based initiatives and actions seeking to relink ecology, economy and communal life in these cities ‘from below’ (*the neo-communitarian eco-city*).

Again, this chapter is structured around these episodes. Section 6.2 briefly introduces TT as a global movement, zooming in on its articulation in Rotterdam and The Hague. This provides a socio-historical background of modern urbanisation concerns that revolve around ecology. Episode I then historicises TT Rotterdam and The Hague, focusing on the 1850s-1960s period (section 6.3 and 6.4). After presenting the emergence of two industrial cities that struggle with the ecological in Episode I, Episode II covers the period 1960s-2000s (section 6.5 and 6.6). Episode II covers an era in which economic life and ecological concerns were addressed in new ways. In both cities, concerns increased as modern urbanisation intensified (e.g. environmental degradation, traffic jams, anti-urban planning protests). This sowed the seeds for counter-cultural grass-root movements, including TT Rotterdam and The Hague. Episode III focusses on the ‘here and now’ of both TT’s (2000s-now) (section 6.7 and 6.8). Section 6.7 elaborates on the ways in which TT Rotterdam emerged and initiates a wide range of community projects and eco-friendly activities. I particularly focus on one of the TT Rotterdam projects, namely a community garden called the Gandhi-garden (*de Gandhituin*). Section 6.8 presents the emergence and activities of TT The Hague, which named itself DHIT (*Den Haag In Transitie*, in English: The Hague In Transition). DHIT engages in a wide variety of activities and projects with other organisations, people and groups, aiming to make The Hague a more sustainable, healthy and green city. Finally, section 6.9, employs the transition analytics to reflect on the transition politics associated with the rise of the Gandhi-garden and DHIT²²⁰.

In order grasp the genealogical complexity and rise of socio-ecological livelihoods in Rotterdam and The Hague ‘from below’, I recommend that the reader reads this entire chapter. However, since this chapter is quite sizeable, and in order to assist the reader in selecting ‘most relevant fragments’, (s)he can follow three ‘reading routes’. These routes relate to difference in *time availability* and *interest* by the reader, resulting in different degrees of case knowledge.

²²⁰ Even though I focus on two specific Dutch TT networks, their thick historical and socio-spatial contexts are not simply background décor. Rather, the TT genealogy and their current activities and events are to be read as temporally and spatially stretched, entangled with many other urban struggles, initiatives and projects.

Figure 6.1 Reading routes Chapter 6

	Degree of case knowledge	Read
Reading route 1:	Extensive	All sections
Reading route 2:	Intermediate	Sections 6.2 and 6.7 till 6.9
Reading route 3:	Very basic	Sections 6.2 and 6.9

6.2 Welcome to Transition Towns...

Even more than with Chapter 5, my engagement with this ‘empirical case’ transcends policy texts and reflections. In order to introduce what is at stake in the TT movement, I present a brief ethnographic experience.

Ethnographic fragment: Experiencing Deep Ecology

Dear reader...imagine hearing a simple and slow rhythm, like a heartbeat. Imagine walking slowly at the pace of the beat, feeling the warmth of the sun and recognising the presence of other creatures around you. You walk with ease, stress-free. Then imagine, or rather remember, that you have to be on time for an important meeting. You start to run. You forget the things around you, and have only one goal: getting to that appointment on time. You run (we run, as our societies are hectic and we rush from one appointment to the other). Then, just as suddenly, stop running and start walking slowly again... feel your heartbeat and your body returning to a slower rhythm. You start to feel around you once more. Your arms are tentacle-like organs that slowly and softly sense your environment. You feel the hands of another creature. You slowly start to feel hands, the other creature also starts to feel your hands...hands...funny things...what are they doing on your body? They have taken an extremely long journey. Your own hands and those of another human are the same. First, we had been swimming around the sea as fish, using these hands as fins. Later, when we evolved into mammals. We used them to dig and climb, and eventually to make tools and fire. We use them to hold each other, to love and to create. Without these hands, we cannot grow food, or harvest and eat them. We use them in everything we do, it defines who we are and how we live. Without these hands, there would be no economy, no society and no human civilisation.

This fragment (re)presents one of the many experiences I had in a Deep Ecology Workshop called ‘Being like a tree’ (in Dutch: *Zijn als een boom*) during a sunny autumn weekend in 2013 in Leidschendam, a small city near The Hague (Fieldnote

B). This ‘exercise’ had a huge impact on me. I felt my subjectivity move back and forth, being like a fish in great oceans, working on this dissertation as a ‘PhD creature’. I thought about the ways in which ‘our hands’ have built the homes we live in and the cars we drive, but also how hands are used to hold guns and knives to murder. This exercise is called ‘Feeling with other hands’ (in Dutch: *Voelen met andere handen*) and was one of the many interactive sessions used in the workshop. The workshop was organised by a small number of people under the label ‘Transition to Resilience’ (in Dutch: *Transitie naar Veerkracht*). This small group started as a specific working group of the Dutch TT network, namely ‘Heart and Soul’ (in Dutch: *Hart and ziel*). This team organises workshops all over the Netherlands²²¹. I participated in this particular workshop, together with the TT group of The Hague (DHIT) in which I had been active as an action researcher since mid-2013. All workshop participants (about 15, among which four members from DHIT) were active in the broader TT movement. The workshop coordinators creatively combined insights from Deep Ecology (mainly Joanna Macy’s work) with ancient knowledge from indigenous Andes cultures. After setting some rules to create a ‘safe space’, one of the coordinators²²² turned the secondary school classroom into a sacred space by referring to a number of symbolic ideas and metaphors: e.g. water is purification, wind is communication, eagle offers an overview, sun is masculine energy, jaguar is prudent and beautiful. A number of sacred objects signified an altar, adding an experiential background to the workshop. The workshop was organised in four steps, each step was made up of a number of exercises (together covering the two days)²²³:

1. *Grounding in gratitude*



This step makes one grateful for life and all the things life gives you. In the workshop, we walked around and greeted and hugged each other. We also got to know each other’s biography and collected some interesting objects outside (e.g. a leaf, a stone) and putting them near the altar. We were invited to tell why we collected particular objects. Many participants gathered simple objects from the environment, but decorated them with an interesting narrative. Most people explicitly

linked a small object to abstract notions of ‘the spirits’ and how we relate to nature. Most people acknowledged that so many beautiful things can be found in front of us or beneath our feet.

²²¹ See: <http://www.catharinadebruin.nl/transitie/over-het-ontstaan-van-transitie-naar-veerkracht>

²²² She did this workshop before, in Argentina.

²²³ See also: <http://www.catharinadebruin.nl>.

2. *Honouring your own pain for the world*

This step encourages contact with the ‘pains and agonies of the world’, allowing one to see and feel that all things are connected. As our society has normalised cutting trees, killing animals, polluting the air we breathe and waging wars for oil, contact is needed to see how this pain is embedded in our own lives and contexts. A circle was created in the classroom, serving as the main setting for the workshop. It was divided into four quadrants with a specific object representing particular emotions (stick = anger, basket = need, leaves = loss, stone = fear). We were invited to express certain personal emotions in one of these quadrants. Here, some participants got very emotional and personal. When it was my turn, I did not express myself very emotionally, but talked about the tacit forms of violence our societies exercise and produce, and that this sometimes made me disappointed and angry. Interestingly, after a couple of rounds, some participants subtly resisted the four categories and the ‘negative emotions’ they represented. Afterwards, we received a piece of clay, and translated the emotions we now had into a re-shaping of the clay. Afterwards, these small emotion-imbued clay creations were buried around a tree outside. To finish this step of ‘burying our pain’ we hummed/sang a song (previously unknown to me) about “healing the world” and “one by one”.

3. *Seeing with other eyes*

This step pushes one to see social reality, society and one’s role in the nature/society nexus differently. One of the workshop exercises was called ‘Feeling with other hands’ (see above). After this exercise, we went outside onto a nice lawn during the sunny day and did some exercises to feel one with nature and the world (these two categories were not used explicitly). It was particularly interesting to harmoniously feel one with the earth and all organisms by lying down, letting my bellybutton touch the grass. This exercise was very relaxing but fascinating, because I felt my subjectivity rushing right to the centre of the earth and imagined thousands of dead and living plants, insects, ants, worms and other forms of life.



4. *On the move again*

The final step focusses on translating the previous steps into tangible and concrete plans and actions. We all received a handful of seeds (corn, black beans, etc.), with which we then laid down on the classroom floor, while hearing an American eco-oriented poem about how plants and stones are actually alive. We had to imagine the seeds as being weapons with which we all could change the world. These ‘seed-

weapons' symbolised how new ideas and plans could turn into something beautiful. To finish of this step, we asked the following questions in duos:

- What would you do if there were no barriers holding you back?
- What direction do you go?
- Which people could support you in this (finance, network, etc.)?
- What would you be able to do in the next 24 hours to reach this ambition?

These questions were framed in such a way that specifically focussed the experiences and ideas of the previous steps. 'My project' was to teach children in primary and secondary schools more about where their products, food and clothes come from, and connecting these lessons with official curricula. After this last step, the workshop was closed in the same way it started, i.e. by expressing our gratitude and referring to the sacred character of the North, East, South, West and the earth, the heart and the sun. After this ritual, the whole group stood in a small circle and hummed some open harmonies for about 10 minutes with our eyes closed.

During the workshop, all these steps were accompanied by different exercises and activities that made all participants become very close and informal. I remember being somewhat emotional and stood on the edge of crying the entire weekend, because of the personal stories of others and the hands-on exercises that pushed me out of my academic comfort zone. I was connected with very specific and more abstract 'pains'. All participants got acquainted very quickly through these exercises, though some more than others. We (almost) cried, danced, sung, were (sometimes very) emotional, made music, held hands, ate, drank, discussed, philosophised and made plans during the workshop weekend.

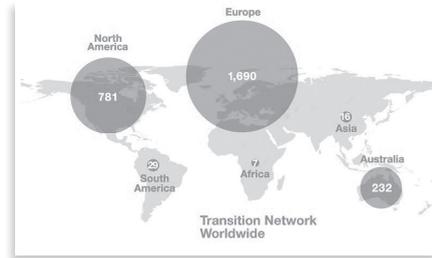
So, what does this ethnographic note tell us? How can this experience become more fruitful here? This microscopic insight illustrates some of the issues and methods associated with the Dutch TT movement. Not only do participants come from (almost) all walks of life, they also seem to intertwine and employ a wide variety of insights, ideas and practices in order to 'fuel' their transition discourse. This Deep Ecology workshop is only one of the dozens of 'tools' the TT movement employs. This workshop showed me that expressing social emotions, bodily engagement, reframing the meaning of everyday matter and organisms can add to the repositioning of one's social place (including my academic position) vis-à-vis the socio-ecological fabric, the human body and our current social relations and economic models.

Transition Towns: A glocal trend

The Deep Ecology workshop is deeply entangled with the global TT movement that is focussed on creating more resilient and sustainable livelihoods and cities. This movement seeks to innovate and reinvent contemporary social and ecological life in various ways. The TT movement emerged in the early 2000s in the United Kingdom

(UK). A number of UK initiatives started the first TT's (e.g. Kinsdale in Ireland, Brixton and Totnes in England). Since 2006, more and more TT's emerged inside and outside UK, with about 400 projects by late 2011.

In 2013, over 2500 Transition initiatives just like this one took place in more than 40 countries²²⁴. Each initiative is unique in terms of its thematic focus, specific concerns and strategy, even though there are suggestions and tips to start 'your own TT' and even obtain an 'official TT status'²²⁵.



In Greyton South Africa, for example, the TT's focus is on poverty reduction, housing and food security. So-called 'eco-brick warriors', for example, build houses from litter-filled plastic bottles²²⁶. In the United States (Los Angeles) TT thinking inspires people to try to transform South Central's deprived areas and reduce obesity rates. In this specific area, food is a crucial theme and as Ron Finley put it, it allows you to "get gangsta with your shovel (...) plant some shit" and become "ecolutionary"²²⁷. And, similar to South Africa's eco-brick warriors, Finley's one-liner "growing your own food is like printing your own money," breathes a mentality that moves away from a culture of consumerism and the dominant meaning of urban streets and soil. In short, such individuals and groups seek to engage in subverting and transforming everyday socio-ecological relations and experiences.

One of the people who introduced the TT concept in the Netherlands is Paul Hendriksen. In 2008, Hendriksen (and others) started TT Deventer as one of the very first Dutch TT's. Hendriksen has also been important in spreading the word, thereby stimulating TT's to pop up in other towns and cities across the Netherlands. In 2013, over 70 TTs were registered, ranging from small groups in rural areas (Bolsward, Hoeksche Waard) to larger networks in big cities (Amsterdam, Utrecht, Den Haag, Rotterdam)²²⁸. On its website, Transition Towns Netherlands (TTN) states that it is "a network of groups of citizens in cities, villages or local neighbourhoods, that actively try to make their way of living and working less oil-dependent, more sustainable and more social". Interestingly, the website continues by arguing that "[p]eak oil, climate change and the interrelated economic crises, are the most important drivers to act"²²⁹. In line with Hopkins' idea on resilience, TTN states that it:

²²⁴ Source: <http://modernfarmer.com/2013/04/map-whos-living-off-the-grid>.

²²⁵ See: <http://www.transitionnetwork.org/support>.

²²⁶ See: <http://www.greytontransition.co.za/greyton-eco-bricks-mount-up>.

²²⁷ See: <http://transitionculture.org/2013/03/13/ron-finley-a-guerilla-gardener-in-south-central-la>.

²²⁸ See: <http://transitiontowns.nl/voorpagina/waar>.

²²⁹ See: <http://transitiontowns.nl>.

“...tries to inspire towards a cultural transition in which people, biodiversity and resilience are key. This makes us able to respond strong, healthy and peacefully during times of crisis in the domains of energy, climate and economy. We strive to make a transition towards a world with less energy, less stuff and less money, feasible, attractive and timely”²³⁰.

The historical context of the problem that TTN aims to tackle, is nicely articulated by TT Nijmegen: “Transition Town Nijmegen formulates answers to the negative consequences of the Industrial Revolution”. Interestingly, they highlight the fruits of modernity and industrialisation, i.e. “the improvement of health care, living environment and security”. Yet, an important downside is that “humans for a long time have underestimated the negative consequences for the earth” (Transition Town Nijmegen, 2012). Precisely these consequences are emphasised by TT Nijmegen and this knowledge makes “change necessary and desirable”. Another document, a Dutch version of Hopkins’ handbook, states that in order to see the problem of our current societies regarding climate change and other catastrophes “we just have to visit a video rental shop”. The same multiplicity of crises is accentuated on the TT websites, stating that:

“the different global crises that we experience today, are closely related to the way in which our economy is organised. The economic crisis offers an opportunity to move towards a necessary change of course into a different economy”²³¹.

This chapter is particularly interested in how the TT network emerged and developed in Rotterdam and The Hague. TT Rotterdam started in the spring of 2009, when three friends got together and talked about the TT idea with 14 interested people²³². Among them were people affiliated with environmental action groups and other ‘green organisations’. It is safe to say that since that meeting TT Rotterdam was ‘born’ as a loose network. TT The Hague also started with a get together of a small number of young people (in their 20s), some of which had international experience with social movements (e.g. Transition Town in Barcelona, Spain, or an Afro-Brazilian movement - *cultura negra* - in Brazil). They met in the beginning of 2013, during the opening of a local vegetarian snack bar in The Hague. One of them, a quite prominent person that was central in the emergence and development of DHIT, attended a national meeting of TT (in Deventer). During this opening they met and were inspired to put some things in motion. Hence, TT was born in The Hague.

²³⁰ Source: <http://transitiontowns.nl>.

²³¹ See: <http://transitiontowns.nl/archief/3962>.

²³² See: <http://www.transitiontownrotterdam.nl/over-ons>.

Transition Towns and eco-cities in the 21st century

Two issues require brief elaboration here: (1) TT as an ecological movement; and (2) TT as a phenomenon embedded in processes of urbanisation. The global TT movement can be understood as an ‘environmental’ or ‘ecological’ movement. Ecological movements have a long history. Their modern origins trace back to the 19th century Romanticism. More recently, these movements gained momentum from ecological conservationism in the 1960s, new environmental organisations in the 1970s, green parties in the 1980s, new green radicals and local coalitions against environmental degradation in the 1990s, to the growth of green lifestyle and community-focused initiatives since the 2000s (Connelly, Smith, Benson & Clare, 2012: 95). Rootes (1999, 2003) defines ecological movements as broad networks of people and organisations engaged in collective action in pursuit of environmental benefits (1999: 2). Sanders (2012) suggests that these movements can be understood as ‘environmental networks’. Doherty (2002) puts it in a broader context, arguing that such networks are more radical and often consist of western environmentalists who state that radical social and political changes are needed to address environmental concerns. It seems that ecological movements can be historically traced when so-called new movements emerged in the 1960s (Scott, 1990). The TT movement is much more than ‘environmental’ in a strict sense. A wide number of intersecting social, environmental and economic concerns are addressed in relation to institutions and other networks. Ecological movements are therefore often addressed in relation to social movements and action²³³ (Meadowcroft, 2002; Ford, 2003; Bulkeley, 2005; Lemos & Agrawal, 2006).

This chapter seeks to historically reconstruct how, in Rotterdam and The Hague, groups have engaged in problematising and governing social and ecological conduct and life, including contemporary Transition Towns. Before we move to a genealogy of the TT Rotterdam and The Hague, it is instructive to highlight the *urban* character of contemporary ecological action. Urban ecological movements have very often been understood as local groups with local concerns and claims, directed at specific policies and public decisions. Such movements have:

“not been traditionally perceived as representative of broader values, ideals or emancipatory possibilities, that have been standardly attributed to identity-based movements concerned with a claim on totality, such as the women’s, environmental, civil rights, peace and human rights movements” (Hamel, Lustiger-Thaler & Mayer, 2000: 1).

²³³ The Transition Towns movement is a social movement as well. Indeed, various issues are addressed through environmental concerns. This holds for many countries, including the Netherlands (cf. Schreuder, 1981).

This 'localism' fits the idea that 'new social movements' resonate with the liberal democratic frame of pluralism and diversity of social identities and political concerns. Nevertheless, urban movements operate in globalised contexts and address global themes and struggles in very specific urban vocabularies and imaginaries. The urban, in this sense, serves as an arena or site to politicise specific themes and concerns that are both local and global (Appadurai, 1990; Hamel, Lustiger-Thaler & Mayer, 2000). As Hamel, Lustiger-Thaler & Mayer rightfully ask: "[is] the very idea of the local, which urban social movements defend, [not] already an anachronism in a global civil society where loyalties to nation-states are no longer a central point of identity?" (Hamel, Lustiger-Thaler & Mayer, 2000: 4). With ongoing urbanisation and cultural and economic globalisation, cities are increasingly 'internationalised' and sites of post-nation-state engagement (Jayaram, 2007). What we are witnessing in cities today is a cocktail of old and new social movements, at the intersection of economic, political and cultural struggles in the eyes of current challenges such as austerities and the dismantling of the welfare state, environmental destruction, gentrification, urban ghettos and gated communities (Roth, 2000; Jessop, 2000). Understanding the history and current dynamics of the TT movement in relation to socio-ecological livelihoods, therefore, requires addressing and unravelling struggles and re-configurations that are both social and ecological, and both local and global (cf. Swyngedouw, 1992; Robertson, 1995).

If a genealogy of TT Rotterdam and The Hague is presented, it should stretch their practices across time and space. Any genealogical account is confronted with the problem of a quite decentred history of the present. The TT case, however, is especially complex. Local TT networks are made up of many loosely coupled aspects and concerns outside governmental and institutional spheres (e.g. health, environmental quality, energy production, biodiversity, food, cultural diversity, alternative currency, communal self-government). To safeguard inclusion while having a sense of focus, I highlight the *socio-ecological* aspects of TT genealogies (*eco-city*). Before focusing on recent (genealogical) developments of TT Rotterdam and The Hague, it is instructive to briefly sketch the most important problematisations and eco-developments prior to the 19th century.

'Back then': Pre-19th century eco-developments in Rotterdam and The Hague

The first ecological concerns for both Rotterdam and The Hague date back to the late middle Ages. Prior to what we now call 'ecological' or 'environmental' concerns, such challenges were often seen as issues of farming, fishing, poverty, health and/or security. Since the 12th and 13th century, local dwellers and farmers aimed at improving habiting, fishing and agricultural life. This allowed for relatively constant flows of food (Waasdorp, 2004: 17). Both regions became more habitable settlements for agriculture

and trading. In Rotterdam, the emergence of the *Rotterdamse Schie* increased import, export and transit tied together the city and the broader region. Local markets and the increasing capacity to store goods made Rotterdam into a significant 'node' in the regional trading network. In The Hague, canals were excavated, which was significant for trade and agriculture, but also for military and strategic reasons. It was a common practice in the Europe's Middle Ages to use canals as a line of defensive protecting an area or land. Water filled canals were used to manage households (cleaning, washing, etc.), manage urban water quality, irrigate soil and plants (Waasdorp, 2004: 38) and advance commercial networks, trading and money exchange (e.g. via the 1345 excavated waterways *Spui* and *Trekuliet*). City rights, city walls and ordinances allowed dukes to regulate land and the conduct of 'their' populations. Ordinances could e.g. regulate one's right to be called a 'citizen of Rotterdam', allowance to use a weapon, and public behaviour (e.g. regarding fighting, nuisance) (see Chapter 5). Since the late middle ages, an increasing number of decrees and ordinances were issued in Dutch cities to also regulate commerce and social activities. Among these issues were inconveniences and annoyances, such as noise, produced by craftsmen and labour work. For example, on 11 March 1560, a resolution of the *Alkmaarse Vroedschap* stated that salt basins are restricted to southern areas and could no longer be situated north of the city²³⁴.

The Hague and Rotterdam grew in size in the 16th century. In Rotterdam, the working environments of craftsmen were physically adjacent to households of residents. This sometimes led to dangerous situations²³⁵. Ecological concerns were mostly about issues of safety, water and commerce. 'The ecological' also referred to aesthetics. Traders, dukes and privileged elites preferred open green spaces and the aesthetic experience of forests and vegetation. New 'natural environments' (e.g. *Haagsche bos* in The Hague) often served as hunting sites for dukes and the nobility. The desire to beautify places in Rotterdam increased, especially in the early 16th century during Europe's renaissance era. Urban places were to be kept green, clean and suitable for leisure. New architectural and spatial designs emerged in Rotterdam, such as the creation of lawns and green spaces and the so-called 'Trees promenade' in 1613 (*Boompjes* in Rotterdam). In both urban regions, rich and poor residents related differently to economic and ecological life. For centuries, Rotterdam's northern part was

²³⁴ In Dutch: "(...) mede gesloten bij de meeste stemmen van de vroedschap als datter in toecomende tijden geen zoutketen gestelt sullen worden an de noortzijde van de stede, maer sullen hoer plaetse begrijpen an de zuytzijde, bij malcanderen streckende totte stedeton toe" (Archief van de stad Alkmaar, inventarisnummer 38 Register van resoluties van de vroedschap, 16 mei 1549-18 januari 1565, p. 81).

²³⁵ After Rotterdam's city rights, an important rule was preventing fire. Fires destroyed many houses in the 15th century. In four 'districts', two buckets were set up, filled with water. Whoever noticed a fire, was expected to run outside and scream "fire". Firemen were assigned and roofing was designed and mandatory (Oudenaarden, 2005: 26).

richer for its proximity to the economic and political centre of Holland; the southern part was mostly populated by farmers and (increasingly) workers for Rotterdam's port economy. Consequently, the green areas and aesthetic 'greenification' of early modern Rotterdam mostly occurred in the northern part. In the 17th century, Rotterdam's population and geography grew, pushing economic activities and traditional kitchen gardens to the outskirts of the city (Van Es, 2013: 15).

The ongoing urbanisation and spatial differentiation of the city created a further differentiation of housing spaces, economic practices and open green spaces up until the late 18th century. In The Hague, dwellers and new 'residents' tried to live as close to the economic centre and roads as possible since the 16th century. Consequently, houses, poor sanitation and work places had to be regulated²³⁶. In order to improve the quality of 'city life', trees were planted, a city park was created, transportation was sometimes banned from housing areas, and clean streets were officially required since 1537. Most buildings, green spaces and animals in city centres were claimed by and maintained for the nobility²³⁷. Actual 'gardens' were mostly meant for elites and nobles, and demarcated by specifically planted vegetation. Some people were appointed or hired to maintain these gardens (the so-called cabbage man, in Dutch: *coelman*) (Smit & Kan, 2004: 109).

'Nature' was also something that required proper supervision. Trees and forests were maintained and governed for many reasons in both cities²³⁸. Green areas were maintained as hunting spaces, but also for economic reasons (e.g. selling wood). Even cattle, fish, turf and other materials outside the centre served as a means to feed, clothe, keep safe and warm the elites and nobility, and to a lesser degree their personal. Ordinary houses situated next to the forests were officially required to grow a nice and neat hedge (in Dutch: *goede stracke hage*) (Stal, 1998: 154). Similar to Rotterdam, the difference between poor (living on 'peat') and rich (living on 'sand') continued to exist in The Hague, extended by uneven environmental qualities and experiences.

During the 17th century, population growth slowly turned the medieval spatial structure of yard and village into an expanding urban network. Intersections between ecological and economic life were expressed in local and regional markets. These

²³⁶ A nice example of this development was the removal of the so-called 'stinking well' around 1450. Such an open well of waste and garbage was seen as improper and unhygienic for a growing city (Stal, 1998: 25). The filling up of this well was a 'private initiative' that was not officially ordained. This, however, did not make the problem disappear. Rather, new wells emerged outside the city.

²³⁷ In and around The Hague's yard, for example, animals were kept for many reasons; horses for hunting and transportation, sheep and pigs for food, and local and exotic animals for enjoyment. The central yard consisted of a number of buildings with a number of purposes, such as baking bread, washing, brewery, kitchen, etc. Each of these buildings required a supportive staff and maintenance.

²³⁸ Interestingly, around the yard some trees were also deemed more worthy than others. A linden tree was seen as more important than oaks, while oaks were seen as nicer than birches.

markets were often regulated by ordinances and guilds²³⁹. It was forbidden to sell improper meat, for example. Such 'unhygienic meat' was then distributed among the local poor (Ibelings, 2004: 161). The growth of Rotterdam and The Hague's urban centres and their extended infrastructure were entangled with the international trading routes for e.g. Italian gold leather or Japanese kimono's. Colonial 'adventures' of the powerful Dutch empire in the 17th century (Dutch East and West Indian Trading Companies, VOC and VIC) resulted in the import of 'colonial products' such as herbs and spices, coffee, tea and chocolate. Such products were quite expensive and only accessible for the rich. Comparable to Rotterdam, The Hague's elite, mainly consisting of bankers and administrative and legal governors (Wijsenbeek, 2004: 286), has historically enjoyed the close proximity of forests and greenery. Even though gardens, trees and natural areas were scattered across the city, they were often maintained for privileged dwellers and elites.

In 'poor districts', life was radically different. Stink and waste was regulated, but little attention was paid to 'green' and natural aesthetics in these neighbourhoods. These areas, in turn, were surrounded by large agricultural lands, meadows, dunes and forests. Green areas and ecology for farmers and poor dwellers was often a matter of economic goods and basic survival. Mundane concerns, such as waste and dirt were expected to be cleaned and residents were fined if they did not clean 'their' residential environment and streets. In some cases, a neighbourhood managed to hire a 'dustman'. Yet, poverty increased in both cities. In the 17th and 18th century, many people engaged in theft, robbery and burglary in the wake of increased poverty and economic disparity. So-called irregularities, violent acts and lootings (in Dutch: *ongeregelheden, geweldendaryen en plundering*) were repressed by legal and military means in the 18th century.

²³⁹ One example is the so-called 'weigh-house' (in Dutch: *waag*), a place where goods could be weighted 'objectively'. Weighing goods (grain, turf, fish, etc.) mostly benefited the poor, as they could not be 'cheated' any more, especially since the 14th century. Activities and conduct in markets were regulated quite extensively. Not only were some products required to look alike for fair competition (e.g. mussels), selling places were allotted, and it was forbidden to drink and curse.

Genealogical episode I: The industrial eco-city (1850s-1960s)

As mentioned earlier, these ‘pre-modern’ narratives of Rotterdam and The Hague present a basic background to understand the modern genealogy of TT Rotterdam and The Hague. The first genealogical episode tells a story of how these cities struggled with (interrelated) issues of industrial urbanisation, health, and working and living conditions for all residents.

6.3 Industry-ecology linkages and improving lives²⁴⁰

The agricultural crisis and industrial revolution created conditions for the growth of urban economies in the late 18th and early 19th century. Most modern socio-ecological concerns emerged in direct relation to port industrialisation and economic development. The industrialisation of ports and urban economic life in general created new forms of mass-employment and mass-production. However, it also had a dark side. New machines were loud, dirty and created dangerous situations.

In line with prior ordinances and decrees to regulate nuisances, pollution and loud noises, the 1875 Public Nuisance Act (in Dutch: *Hinderwet*) signified an important innovation. This act, following an 1810 Royal decree, meant to regulate harm and damage in public spaces. The 1875 Act was entitled: “Act to regulate the oversight of the establishment of locations that could cause danger, damage or nuisance”²⁴¹ (Geraedt, 1988: 53). This Act ordained entrepreneurs and businesses to obtain an official permit, issued by city authorities. Different permits were associated with different types of economic activity ranging from making musical instruments to processing chemicals²⁴². The Public Nuisance Act nicely symbolises how harmful effects of industrial economic activities on safety, health and comfort were addressed and regulated in the late 19th century. Rotterdam’s port-based economy increased in scale due to industrial technologies. Since the early 19th century, industrial factories used vertical funnels to let coal-burning smog escape from workrooms. These funnels were later extended in order to protect local residents against smog. Sometimes,

²⁴⁰ Rotterdam’s genealogy can be construed and written in many ways, depending on one’s focus. At points, this chapter might show some overlap with Rotterdam’s waterfront genealogy (Chapter 5), because Rotterdam’s modern city life was mainly shaped by its port developments. However, I mostly focus on the genealogical aspects of Rotterdam’s socio-ecological livelihoods and concerns. Since genealogical fragments of The Hague are not yet addressed, whenever relevant, this chapter highlights The Hague’s historical contexts a bit more elaborate.

²⁴¹ In Dutch: “Wet, tot regeling van het toezigt bij het oprigten van inrigtingen, welke gevaar, schade of hinder kunnen veroorzaken”.

²⁴² This Act evolved but kept its central premise and focus until 1992 when it became the Wet *Milieubeheer*.

industrial activities created conflicts with local residents, for example, over the height of a funnel for an organ factory or the use of toxic gasses in a chemical factory (Geraedt, 1988). Many poor factory workers lived near their work and were directly confronted with contaminated water, polluted air and loud noises. Only until elites and nobles left the city centre because of increased dirt and noise, did city authorities intervene (De Klerk, 1999). Via the Nuisance Act and other legal codes, Dutch cities grappled with all kinds of urbanisation concerns in the mid-19th century. Issues of health, safety, child labour, employment and housing in Rotterdam were embedded in a broader development of the side-effect of industrialisation, the so-called ‘Social Issue’ (in Dutch: *De Sociale Kwestie*). Even though urbanisation rapidly intensified, only few infrastructural means accommodated new and often poor residents: rampant industrial pollution, no sewage, no drinking water, no electricity, no safe housing, no waste management, etc. Such concerns were articulated by new (national and European) socialist and social-democratic movements, and slowly appearing on the agenda of city authorities and the state.

In Rotterdam, water was a particular ecological concern²⁴³. Water became a typical 19th century issue of hygiene and health after the 1833 cholera epidemic. Rotterdam’s city authority stressed the importance of hygiene and a clean environment. An 1842 ordinance for hygiene stated:

“Nobody is allowed to throw ash, garbage or any other material on markets, ports, streets, near bridges or anywhere else; the same holds for any garbage or anything alike, inside or outside ports, canals, ditches or city walls, or from houses into the water, results in a fine of two guilder. One shall also not throw any garbage into the water from ships or boats, especially no ballast, fined by twenty five guilder”²⁴⁴.

In 1887, a local decree stated that all streets should be maintained and that every home should be connected to the sewer. A whole set of norms and criteria were set in place e.g. about distance between facades, the height of homes, differences between main streets and side streets, etc. (Van Es, 2013: 25; Neiszen, 1885). Rotterdam’s relationship to water was partly based on its port economy, but it was also integrated in new urban plans by the architect W.N. Rose in the period 1840-1852. Rose’s

²⁴³ Rotterdam was historically connected to water in different ways, as sewers were overused, water became more and more polluted, livestock contaminated the drinking water in the city (e.g. pigs, goats) (Hooimeijer & Kamphuis, 2001:12).

²⁴⁴ “Niemand vermag Asch, Vuilnis of eenige andere stoff, op de Markten, Havens, Straten, bij Bruggen of elders, te werpen; evenmin eenige Vuilnis of wat zulks ook zoude moge zijn, in de buiten of binnen Havens, Grachten, Slooten of Vesten, of uit de huizen aan het water, of de zijl uitkomende, te werpen, op eene boete van twee gulden. Ook zal men niet van Schepen of Schuiten enig Vuilnis hoegenaamd in het water mogen werpen, en wel speciaal geen ballast, alles op eene boete van vijf en twintig gulden”. Translation SJ (Hooimeijer & Kamphuis, 2001:13).

experience and plans nicely illustrate the ways in which Rotterdam responded to 19th century urbanisation problems. Rose and his colleague Scholten reconsidered how Rotterdam's relationship to water could improve, not only in terms of hygiene, water safety, drinking water, but also in terms of mobility and trading routes. Rose initially had difficulties convincing powerful city elites that hygiene, health (regarding the "unpleasant vapours") and drinking water were serious concerns. Financial means were not allocated because a dominating liberal doctrine suggested a minimalist state. For example, some areas were not even property of city authorities. Furthermore, in order to realise Rose's water project, city canals had to be excavated, which required dispossession of land. People that were affected (e.g. land owners) voiced their concerns in a 'dispossession procedure'. Land owners often suffered big losses.

'Modernising' the city

Efforts to improve health and hygiene drastically decreased mortality rates from the 1860s to the 1920s in major Dutch cities (Ekamper & Van Poppel, 2008). In light of this urbanisation process, trees, plants and bushes were included in plans to restructure



Rotterdam in the second half of the 19th century. These 'green places' already emerged in the 1840s. Even though well-off citizens actually invested in the creation of green spaces. The landscape architect Jan David Zocher was influential in the design of public spaces. He was inspired by the English landscape style of mimicking the 'erratic logic' of nature²⁴⁵. Dwelling and walking in green and open spaces became means to flee from the crowded and often filthy city for privileged residents. In 1852, city officials also created open green places for its citizenry to relax (Zweerink, 2009). In 1880, Rotterdam appointed its first official horticulture expert or gardener, D.G. Vervooren. Vervooren, and the emerging administrative arrangement for 'urban green', considered vegetation and plants mostly in terms of their aesthetic quality, as he designed beds or mosaics made of flowers. Interestingly, medieval city walls were removed and unused environs were transformed into parks. This 'urban greening' aimed at creating a more aesthetic Rotterdam and attracting elites to the region. Such public interventions also reduced contrasts between urban and rural life.

The Hague experienced a similar Industrial era in the 19th century, during which urban social, economic and ecological life radically transformed. Slowly, modern techniques and ideas of efficiency were introduced by some entrepreneurs with start-up

²⁴⁵ See: <http://www.stadsarchief.rotterdam.nl/zocher-jan-david-1791-1870>.

capital and converted their economic activities into factories. Consider for example an 1824 company that turned copper, from vessels and coins, into materials that could be used for domestic homes such as tubes and nails (De Nijs, 2005: 152). Also, in the southern part of The Hague, an iron casting factory and a furniture factory emerged. These factories were closely located to The Hague's first train station (*Hollands Spoor*). The invention of the steam engine created new modes of transportation, next to walking and horse-drawn boats and carriages. In 1839, rail lines were laid between the big cities in Holland (Amsterdam, Haarlem, Leiden, Den Haag, Delft and Rotterdam). This did not only connect the emerging urban and economic centres in Holland, but also saved energy and time. Put simply, many more people and commodities could be transported in shorter periods of time (Stal, 1998: 76). However, not everyone was able to take advantage of these modern modes of transport. Inside the city, poor people often walked, while rich residents used horse trams²⁴⁶. Since 1837, the local government started managing transportation and mobility more tightly in and around the city. Tolls were introduced, taxing all kinds of transportation, except for walking (Stokvis, 1987: 23).

Demographic growth in the early 19th century not only resulted in scarcity of space and housing, but also of ample green and open spaces (Stal, 2005: 19). For the 'richer parts' of the city, this was less of a concern than for new workers and economic dwellers in the Southern areas. Increasingly, working, living and leisure were decoupled for rich residents. However, the quality of housing and everyday life deteriorated. Non-moving water in The Hague's canals powerfully stank. Furthermore, bad sanitation and hygiene (i.e. no toilet or drinking water) and waste accumulation in and around poor households resulted in epidemics of cholera and typhus (Stal, 2005: 19). Hundreds of residents died. These fatalities were located in high-density poor areas. Hygiene and health was addressed at an everyday level to prevent bacteria and diseases, e.g. doing dishes or cooking water (Wuite, 1990: 291). Engineers and medical experts were asked to assess the situation and propose solutions (as of the early 1850s). Their diagnoses and reports mapped the bad housing and living conditions of workers. Sometimes these conditions were seen as worse than 'animal cages'. Experts proposed to establish (or improve) housing space, drinking water, sewage, and waste services. Interestingly, the circumstances that led to fatalities in poor neighbourhoods were not picked up by local governments²⁴⁷.

²⁴⁶ See an interesting image of a horse tram in front of the Oude Kerk 1864: <http://www.haagsebeeldbank.nl/afbeelding/b80389a9-32a5-4f09-b6b0-6764ee67554f>.

²⁴⁷ It should be noted that the official digital archive of city of The Hague is enormously big and rich (photos, drawings, maps, etc.), but images of these circumstances virtually absent (1850s-1890s). The majority of photos in this period represented areas and residential buildings of elites and portraits (19th century selfies) of male administrators, governors and aristocrats (please see for yourself and scroll around via this link: http://www.haagsebeeldbank.nl/beeldbank/sortering/year_ASC/start/276?f_collectienaam_facet%5B0%5D=Foto%27s).

The Hague's expansion plans in the 1850s and 1860s did not immediately address these concerns. New buildings with spacious green surroundings were mainly meant for elites (Stal, 2005: 21-22). The social and economic composition of The Hague's demography in the 19th century to be based on three 'classes': 1) elites: higher civil servants, merchants, employers; 2) middle-class: craftsmen, teachers, shop owners, transporters; and 3) working-class: cheap labour, maids and the poor (De Nijs, 2005: 178). These differences were based on their income, tax rates and amount of land that was owned. Nevertheless, classes did meet on a daily basis, e.g. as maids and gardeners worked for richer residents, on market places and local fairs.

Interestingly, two types of city plans were drafted, one for privileged districts (northern/western 'sand' parts) and one for poor districts (southern 'peat' parts). Private property-led initiatives shaped many plans, resulting in the ordering of the city in terms of economic 'productivity'. Consequently, 'unproductive spaces' such as green and open areas were often absent from the plans for poor areas. The spatial organisation of the industrial city seemed to continue the traditional difference between sand and peat, between rich and poor, as the working population of The Hague mostly lived near the industrial factories where they worked. This also resulted in the deterioration of air quality (Stal, 1998: 81). Working and trading was done in certain districts, houses and living in other districts, while clean and open green spaces could be found in urban parks (e.g. *Haagsche Bos*, *Scheveningse Bosjes*). The latter areas were predominantly visited by privileged residents²⁴⁸ (Stokvis, 1987: 12). As The Hague's population grew, space became scarce, especially for open and green living environments for the privileged. New expensive areas were created for rich residents near the coast (*Scheveningen* and *Kijkduin*). Villas were built in green spacious areas near the dunes outside the crowded industrial city in the 1870s. Meanwhile, simple houses were increasingly built for lower classes and an emerging middle-class. The rapid building of simple houses for poor residents was called 'revolution building' (in Dutch: *Revolutiebouw*). The revolutionary aspect refers to the new financial schemes that accommodated fast building practices (Stal, 1998: 84).

From saving lives to improving lives

19th century urbanisation concerns were primarily about liveability²⁴⁹. Even though democratic revolts occurred and a national parliament was introduced (1848), many Dutch cities did not address these concerns immediately. Importantly, the liberal

²⁴⁸ Most residential transportation was still by foot in the late 19th century. As one resident remembered the period around 1895: "There was virtually no traffic, and the city itself was full of lovely playgrounds. Many grown up people walked. (...) As a kid, you did not have to walk on the sidewalk" (Stokvis, 1987: 28).

²⁴⁹ Rotterdam's particular modernisation and urban concerns cannot be understood without its port and waterfront developments (see also Chapter 5). The quality of urban life was primarily dependent on the ways in which the port was organised and managed.

doctrine of private entrepreneurship and private property still prevented direct state intervention. This enabled landowners and entrepreneurial builders to buy rural lands around the city and turn them into homes for new working classes. These plans were approved by public authorities (Stal, 1998: 82-3). Some rich residents established an association aimed at improving housing conditions of the working-class in 1854 (*Vereeniging tot Verbeetering der Woningen van de Arbeidende Klasse*).

Up until the late 19th century, quality of life, green places and ‘ecology’ were mostly privileges for wealthy citizens and the urban elite. This does not mean there were not more ecologically oriented initiatives and movements. Arguably, the first environmental movement in the Netherlands was established in 1867 to ‘protect animals’ (under the name of *Sophia Vereeniging ter Bescherming van Dieren*). In 1901, another association emerged in the Netherlands: *Vereeniging tot Behoud van Natuurmonumenten*. This organisation sought to protect ‘natural monuments’. Even though these two associations do not illustrate a ‘the beginning’ of a socio-ecological movement, ‘animals’ and ‘nature’ became issues of concern for social groups for the first time in the Netherlands (Dieleman, 1987: 47). These groups aimed at ‘protection’, without clear political motives of criticising modern society and environmental degradation.

In Rotterdam, institutional inscriptions of ‘public environment’ or ‘public green’ did not actually exist before the late-19th century. This changed due to rapid urbanisation. Workers and new residents simply needed space to work, dwell and live. Since the early-20th century, concerns of hygiene and health were directly related to housing and living conditions of poor workers and new residents in the southern parts of Rotterdam (cf. Wimsemius, 1986). Canals and streets were increasingly expected to be clean and maintained as places for comfort and easing everyday distress. The regulatory apparatus of the city grew. A 1925 ordinance of the city of Barendrecht, near Rotterdam, stated that residents could be ordered (literally “order”, *bevelen*) to clean roads, streets and squares in part or entirely, depending on the presence of neighbours (i.e. scrub using water). This ordinance was informed by a commission of (public) health. Ongoing urbanisation and population growth continued to create concerns about the social and economic prospects of Rotterdam’s inhabitants. Bad working and housing conditions, poverty, child criminality, prostitution and drinking became increasingly linked to Rotterdam’s urbanisation, especially in the southern parts. Architecture, housing and spatial planning were increasingly used as means to direct and improve city life. In 1921, Dr. Berlage noted how his design of a centrally located roundabout (*Hofplein*) had different architectural influences: e.g. Unites States style office buildings, and German informed ideas on ‘cubic balance’ in the city (Oudenaarden, 2005: 162). He planned integrating different aspects of economic and social life:

“Most built environment around the square that is assigned (...) is a shopping square with on top offices or residential homes - which is also a driver to build arcade constructions - as characteristic boundary is definitely most attractive” (Oudenaardsen, 2005: 164)²⁵⁰.

Berlage’s view expresses a typical modernist gaze through which the city is governed in terms of spatial differentiation and interrelated aspects of city life (banking, living, shopping, transporting, etc.). As Rotterdam aimed to attract the rich and elites (competing with The Hague), Verhagen developed plans to build villas (*Rozenburg*). After WW I (1914-1918) new optimism fuelled urban plans. Yet, even though ‘Rotterdam South’ (part of Rotterdam south of the Maas) was being connected to the rest of the city, it received its ‘own centre’ and administrative layers. Local regulations, mostly based on public law (in Dutch: *Gemeentewet*) served as means to further regulate the urban spaces through “public hygiene and health” (in Dutch: *openbare reinheid en gezondheid*).

Slowly but surely, Rotterdam’s living environments became objects for intervention aimed at accommodating mass urbanisation and public space. Many new policy tools and governing methods emerged to support these projects. The means to modernise Rotterdam was occasionally prevented by private land owners. The Housing Act (1901) gave municipalities a legal instrument to obtain ‘private land’, without having to pay exorbitant prices. After overcoming such hurdles, the modern age of rational urban planning was able to thrive. As a Rotterdam councillor Burgdorffer put it: “The last traces of a more or less provincial past had to be removed”²⁵¹. In the next decades, a vast number of legal frameworks and regulations were developed in order to ensure that housing, living conditions and spatial development plans were not arbitrary, but were guided by principles of hygiene, safety, equality, health, environment, energy and utility. Some examples are the 1901 Public Health Act, the 1903 Housing Act, the 1965 the Spatial Ordering Act, the 1967 Environmental Protection Act, and the 1992 Building Act. These acts sought to improve unhealthy, unsafe and unliveable spaces. In 1909, a small number of researchers formed an organisation aimed at tackling epidemics, focusing on diseases such as cholera. This organisation was called the National Agency for Health and Environment (in Dutch: *Rijksinstituut voor Gezondheid en Milieu*, RIVM). The institute utilised scientific methods to assess and evaluate threats for public health and environmental quality. Since its birth, the RIVM developed programmes to vaccinate children and cattle, as well as initiated

²⁵⁰ In Dutch: “De meest aangewezen ombouwing van het plein is (...) een plein met winkels, met daarboven kantoren of woningen - wat bovendien aanleiding geeft tot een arcadebouw - als karakteristieke begrenzing zeker de meeste aantrekkelijke”. Translation SJ (Oudenaarden, 2005: 164).

²⁵¹ “De laatste sporen van een min of meer provinciaal verleden moesten worden opgeruimd”. Translation SJ (Hooimeijer & Kamphuis, 2001:48).

population-wide health checks to improve public health. Similar national agencies focussed on public health and environmental quality, such as the Public Health Council in 1902 (*Gezondheidsraad*). Such environmental administrative bodies employed modern scientific methods, operated in international networks and were installed to control, evaluate, inspect and intervene in name of hygiene, public health and safety.

In The Hague, urban expansion created and intensified uneven geographical distribution of wealth, health, and spacious green living environments in the late 19th century. For example, filth and illnesses were still all-pervading in poor areas²⁵². Canals stank and caused diseases (Stal, 2005: 31). Consequently, debates flared up about the filling in of all canals in The Hague, despite their aesthetic quality. This concern of water hygiene is illustrated by a revealing phrase in the 1889 Annual Book of The Hague's government (on page 3)²⁵³:

“For facial and smelling senses, canal water in its liquid form is rather unpleasant, and also in terms of hygiene, the gasses from these canals are unwanted”²⁵⁴.

Importantly, in 1890, The Hague's official government established a Public Works department to oversee and govern growth and spatial development (in Dutch: *Gemeentewerken*). This administrative entity extended and intensified modernist planning of The Hague's urban landscape. The agency was mostly concerned with adapting and maintaining streets and public spaces. Working, consumption, living and leisure were increasingly spatially differentiated and connected by transportation. This marked a shift from relatively liberal-minded governance with many non-state land owners and private poverty to public programmes (Stal, 2005: 32). From now on, 'public interests' such as safety and health of residents became legal arguments for technical interventions. Lindo was one of the first directors of Public Works that experimented with this modern form of public urban planning. The district of *Duindorp* became a 'test case' (Stal, 1998: 96). New curved streets, squares and tram lines were developed to create a spatial grid for the population flows of The Hague's modern city life. Lindo's plans served as a new format and were increasingly extended to other parts of the city (*ibid*: 97). The 1901 Housing Act enabled The Hague's government to introduce norms

²⁵² The Hague even registered the number of death per district (so-called 'death maps': *sterftekaart*). See: <http://www.haagsebeeldbank.nl/afbeelding/8b0b0f34-3649-48fd-b3a8-eebb769a9120>, <http://www.haagsebeeldbank.nl/afbeelding/c32d190b-ae9b-4669-9aa3-fac99c72f190>.

²⁵³ Jaarboekjes *Die Haghe*, Jaarboekje Die Haghe (1889), beeldnummer 59 van 183.

²⁵⁴ In Dutch: “Zoowel voor de gezichts- als voor de reukzenuwen doet ons het vocht in de grachten, dat met water alleen wat den vloeibaren toestand aangaat, overeenkomt, onaangenaam aan en ook hygiënisch acht men de uitdampingen dier grachten minder gewenscht”.

regarding space, hygiene, safety, etc.²⁵⁵ The Housing Act served as a critical instrument in many Dutch cities to intervene and improve living conditions for poor residents. Interestingly, due to this law, many houses were officially disapproved and considered ‘unsafe’ or ‘unhygienic’. For example, walls had to be at least 22 centimetres thick (Stokvis, 1987: 48). As a result, specific types of materials were used more often to build safer and more spacious houses, such as plaster, steel and glass (Stokvis, 1987: 78-79).

6.4 Chained cities and modernist eco-urbanisation

The 1920s marked the unfolding of modernist planning heydays, including the governing of urban ecologies²⁵⁶. As was the case in most cities in the early 20th century, urban landscapes and living conditions were highly uneven. Nevertheless, as modern planning and technical regulation of urban spaces unfolded, surrounding areas of residents also became an object for governing and improvement.

Building on its history, Rotterdam’s main river split the city into two socio-economic geographical areas (North versus South). The many spatial interventions and urban expansionist plans sometimes countered this development, but often intensified it (see also Chapter 5). The role of ecology was important in this context. Plan South, developed by architects Granpré Molière and Verhagen, expressed a very rationalist and almost mathematically organised image of streets and building blocks (Mens, 2007; Hooijmeijer & Kamphuis, 2001: 49). The *Kralingen Park* served as a space for leisure for Rotterdam’s working-class (e.g. walks, swimming, rowing, people’s kitchen gardens). Newly created green strips were seen as “links” between different urban areas (Hooijmeijer & Kamphuis, 2001: 49). The idea to include green areas in the city was planned, as Molière and Verhagen stated: “To increase the sense of rurality, some small boulevards are designed along roads and behind open terrains”²⁵⁷. Since the early 20th century, more and more gardens were created inside the city, called ‘labour gardens’ (in Dutch: *arbeiderstuinen*). These gardens were created by the Rotterdam

²⁵⁵ I have a noteworthy personal experience regarding this historical context. I lived in a house in The Hague for some years in the 2000s in a typical working-class area in The Hague, in the district of *Laakkwartier* (*Van Zeggelenlaan*). Before I officially moved to this pre-1940s home, it became clear that the home was built in such a way that it had no separate place for actual bathroom and installed water pipes. Instead, in the central hallway, a separate container was installed for people to bathe with provisory pipelines. What this anecdotal experience illustrates is that building plans and homes that were built for relatively poor residents in the early 20th century did not have actual bathrooms.

²⁵⁶ Expressed by for example the 1921 expansion plans for Southern areas and the 1924 emergence of the autonomous department ‘urban development’ headed by engineer W.G. Witteveen.

²⁵⁷ “Om het landelijke karakter te verhogen, zijn hier en daar langs de wegen en ook langs de achterkanten der terreinen kleine singels ontworpen”. Translation SJ (Hooijmeijer & Kamphuis, 2001: 50). One of the most dense urban places was *Hofplein*, which - at times - was immensely populated and crowded (as a traffic node). Consequence, it became a crucial matter of concern for city authorities and planners.

branch of a national organisation with the aim to benefit ‘public goals’ (in Dutch: *Maatschappij tot Nut van ‘t Algemeen*, established in 1784)²⁵⁸. With the support of city authorities a series of gardens were planned and created in the Northern part of Rotterdam (*Kralingen*). In 1911, a local newspaper stated that poor and working-class people could rent these gardens:

“Thanks to his labour, the renter receives rent in the form of vegetables and winter needs, including profit. This improves nutrition for a working family in winter, when everything is so expensive. The family also has food storage. Furthermore, the renter has the joy of being productive, gardening labour provides satisfaction and is healthy”²⁵⁹.

This indicates a link between class, health and food in the early 20th century in Rotterdam, articulated in gardens. It exemplifies how the quality of life for poor residents became an object for urban planning. A number of allotment garden associations emerged since the 1920s in Rotterdam. Often, each district had its own associations. During the economic crisis in the 1930s, such gardens were quite popular, especially because of the minimal access to food. Allotment gardens also served as a means to retreat from hectic city life, as a way to relax and enjoy the tranquillity and aesthetics of a garden²⁶⁰. Allotment gardens were also objects of struggle, because gardens were popular while land was scarce. There seemed to be a subtle hierarchy regarding ‘the right to rent a garden’. If one was poor and unemployed, obtaining a garden was easier than if one was poor and employed. This was supported by the idea that produce from such gardens was less necessary for people with a paid job. Additionally, professional gardeners considered these hobby gardeners as competition since they could produce their own food. Struggles over allotment gardens were also fought in relation to city plans. As land became scarcer and city plans required space, allotment gardens were considered ‘irrelevant’. In mid-20th century, reserving land for allotment gardens had been a constant struggle for allotment garden associations like *De Maatschappij tot nut van ‘t Algemeen* and *Tot Nut en Genoegen*. In many instances, government support was requested to accommodate some practicalities, such as lectures about gardening or sand so that children could also play in the allotment gardens²⁶¹.

²⁵⁸ See: <http://www.nutalgemeen.nl/lnk-historie>.

²⁵⁹ In Dutch: “Dankzij zijn arbeid krijgt de huurder zijn huur in de vorm van groenten en winterbehoefte met winst terug. De voeding van het werkmansgezin kan daardoor beter zijn en in den winter, als alles zoo duur is, heeft het vrij voldoende een voorraad. En bovendien heeft de huurder het genoegen in zijn vrijen tijd inderdaad nuttig bezig te zijn, de tuinarbeid schenkt hem bevrediging en is gezond”. See: <http://www.gemeentearchief.rotterdam.nl/volkstuinen-rotterdam>.

²⁶⁰ See: <http://www.gemeentearchief.rotterdam.nl/volkstuinen-rotterdam>.

²⁶¹ Requests from W.C. Mees on 7 March 1911 and 15 November 1911. *Archief van het Nutsdepartement Rotterdam (Maatschappij tot Nut van ‘t Algemeen) en daarmee verbonden instellingen* (nr. 66-01), Stadsarchief Rotterdam.

Modern urban planning also reframed the ecological in The Hague. In 1903, Lindo cooperated with the architect Berlage to draft a more diversified landscape with less monotone and regularised streets (Stal, 1998: 100). The 1909 plan for The Hague's expansion suggests how the city was increasingly observed and managed in terms of modern engineering and diversified regarding its architecture²⁶². This was considered necessary to facilitate population growth and providing a minimal sense of safety, work, health, and access to green and open places in the early 20th century. In these years, a number of agencies and departments were created with specific tasks, such as the 1907 park keeping agency (in Dutch: *Plantsoenendienst*), the 1909 development agency (in Dutch: *Grondbedrijf*) and the 1914 social housing agency (in Dutch: *Arbeiderswoningbouw*) (Stokvis, 1987: 47). Many industrial urbanisation concerns (mostly about housing) were addressed by city officials, building companies and ideological and charity associations. So, another way to counter the uneven misery of modern urbanisation in the 19th century was to also create open, clean and green areas for the poor populations.

Different flows that shaped The Hague were to be understood in relation to one another. Ecology was traditionally linked to economic practices and life. Whereas economic relations were mostly organised through local and some distant markets until the 19th century, the early 20th century denoted an increase in number of variety of products and services. As Johan Gram notes in 1905:

“Whereas there were storehouses here and there before, these crowded streets now literally offer a chart of various classy store facades, in different styles and phantasies, of extravagant exhibitions behind mirrored glass, in short, of all extraordinary attempts to attract the attention of the public” (cited in De Nijs, 2005: 162)²⁶³.

This ‘professionalisation’ of market strategies was aimed at competing for a ‘fair market share’, similar to late Medieval markets in The Hague. One of the differences here is the increase in amount of basic and luxurious commodities for (rich) consumers. In a way, markets not only grew in size, but also in complexity, as they further differentiated. The diversification in economic goods brought with it better health conditions, as nutritional diets diversified (Stokvis, 1987: 173). As economic diversification increased, class-based lines of division slightly blurred, even though difference in income was still significant.

²⁶² See: <http://www.haagsebeeldbank.nl/afbeelding/b31d3be4-381c-4f49-bcad-415fb1f55ee>.

²⁶³ In Dutch: “Was er toen hier en daar een enkel magazijn, nu bieden deze drukke straten letterlijk een weergalooze staalkaart van allerlei smaakvolle winkelpuien, in allerlei stijlen en fantasieën, van coquette uitstallingen achter spiegelruiten, kortom, van de allermerkwaardigste pogingen om de aandacht van het publiek te trekken”.

New imaginaries and modernist planning

A number of emancipatory forces from electoral politics and civil society, with socialist or religious motives, pushed for better conditions for housing, work and education. This slowly increased the quality of living, food, and education of poor residents in the early 20th century (De Nijs, 2005: 186). Actual poor residents were supported by governmental programmes, anchored in the 1912 Poverty Act (in Dutch: *Armoedewet*). Whereas poor residents were aided by local churches in previous centuries, associations and rich residents, unions and social-democrats now pushed for a more collectivised state-led support of poverty reduction. The economic growth and urban expansion occurred hand in hand. Continuous buying and annexing of rural lands by The Hague's city authorities resulted in some problems as surrounding cities defended their own autonomy (e.g. Voorburg, Rijswijk). The main class-based structure of the 19th century slowly turned into a more pillared structure of various socio-economic groups in Dutch society (cf. Van Zanden, 1998).

In the 1910s and 1920s, spatial interventions created a new urban landscape, in part intensifying uneven distribution of environmental quality. In poor residential areas, only few open and green spaces were available, which meant that they had to walk or use a tram to reach public parks (e.g. a new park called *Zuiderpark* which opened in 1936). Middle-class and richer districts had more trees and small gardens or were situated near open and green spaces. Some of these ideas were inspired by UK's so-called 'garden city' (in Dutch: *Tuinstad*) and socialist visions of a sense of community and direct links with nature (Stal, 2005: 42).

Figure 6.2 'Green' in residential areas in The Hague (1910²⁶⁴/1922²⁶⁵/1928²⁶⁶)



Squares were designed for public life and a spacious experience. Even though The Hague's government had new legal and administrative instruments for public planning and spatial intervention, private land-owners often resisted new plans. This, in turn, led to amendments to the initial plans. As mobility venues diversified and intensified, new traffic jams again required new streets and lanes, especially around squares. This

²⁶⁴ See: <http://www.haagsebeeldbank.nl/afbeelding/1aa8e39b-8d61-0192-2939-c845f6f55ece>.

²⁶⁵ See: <http://www.haagsebeeldbank.nl/afbeelding/67c85812-3248-6b5b-5f7c-e7b77987266d>.

²⁶⁶ See: <http://www.haagsebeeldbank.nl/afbeelding/bc69bd52-47ba-d89a-cda1-86fd66eb50eb>.

spatial expansion of The Hague was increasingly based on mapping, scientific models and calculations of flows, housing and spatial ordering for policy programmes.

In some instances, this modernist urban planning of The Hague encountered fierce criticism, for instance, over the lack of green spaces and homogeneous planning schemes (Stal, 1998: 116-7). This often materialised in the different personal visions of directors of departments of Urban Development and Housing, notably the ‘technocrat’ Lindo versus the more ‘socially inclined’ architect Berlage. Whereas Lindo rigidly planned streets and urban spaces *en detail*, Berlage included parks and open spacious areas (Stal, 2005: 36). In any case, the (expanding) urban landscape of The Hague became subject to a more ‘holistic’ framing of urban planning and spatial differentiation (living, working, leisure, transport, mobility, sport, cultural life, etc.). This differentiation was also literally introduced in residential houses. Before the 20th century, poor residential houses had few rooms, families lived, ate, slept and talked in one or two rooms. Since the development of modern urban planning and its legal and administrative means to improve living standards, eating, cooking, sleeping and entertaining also differentiated spatially. Now, there was room for different activities, as different pipelines and networks were connected to these residential buildings such as gas pipelines, water service, sewer, electricity, etc. (Stokvis, 1987: 261). Functionalist thinking dominated The Hague’s planning schemes. Many spatial interventions created and maintained streets, squares, trees and green spaces²⁶⁷.

In the first half of the 20th century, both Rotterdam and The Hague experienced the heyday of modernist urban planning. For Rotterdam in particular, the ways in which



modern urban spaces are currently (i.e. the 2010s) created and developed are heavily shaped by this era. However, the early 1940s marked a grim period for Rotterdam, as thousands of lives and big parts of the city were destroyed during WWII. Ironically, the destruction of the traditional city triangle (in Dutch: *Stadsdriehoek*) paved the way for renewal of all sorts. Some of the ruins and rubble of the many homes,

schools and cafés were used to fill up canals and ports (e.g. *Noorderhaven*, *Blaak*, *Schiedamsesingel*) creating more space to rebuild the city (Bulthuis, 1987: 14). New districts included public gardens. Rationally planned functions were situated next to each other (homes, shops, leisure, etc.) (Hooimeijer & Kamphuis, 2001: 53). As Hooimeijer & Kamphuis stated: “Van Traa considered squares as well-arranged traffic-machines not as classical spaces surrounded by gables” (ibid). In these years, urban ecology was to be planned rationally and efficiently, as was the case for many cities in

²⁶⁷ See: <http://www.haagsebeeldbank.nl/afbeelding/753a7d3f-81fe-44c5-9706-17bd463eb217>.

the Netherlands after WWII. If one observes the detailed spatial and architectural plans of the 1950s, it is clear that literally every inch was technically regulated. Even though spatial projects were tendered, private contractors were legally ordained to execute whatever was imagined and drafted by official city engineers. This might suggest a perfectly planned vision-implementation procedure, but recovery plans were used quite flexibly and sometimes criticised for being “a chain of coincidences”²⁶⁸ (Bulthuis, 1987: 16). Increasingly, different parts of Rotterdam were separated (districts, housing, shopping, working, leisure, etc.), but also connected by means of metros (1960s), concrete roads and biking lanes.

The Hague’s population grew in size as its spatial organisation stretched in the early 20th century. The Hague attracted people that worked in industrial sectors and for national departments and newly located governmental agencies in The Hague. As the city grew both demographically and geographically, its economic ties with other big cities also grew. Industrial areas (e.g. *Laakkwartier* and *Binckhorst*) remained small, while markets and services around housing remained big. A number of retail industries emerged as well, for example in fruit and cigars. Since the early 20th century, The Hague’s formal government intervened economically, for example to broaden urban canals for better transportation of goods (e.g. *Trekvliet* and *Vliet*). The warehouse stores that emerged, for example *Bijenkorf* (1926) and *HEMA* (1928), were detrimental for small shop owners (De Nijs, 2005: 167). Many privileged residents started buying products such as vacuum cleaners, washing machines and radios. Poorer residents, in this period, gained access to some of the comforts and conveniences of middle-class city life (De Nijs, 2005: 188). Buying goods became a part of urban life for many residents. As a literary critic stated: “Shopping is, so to say, a typical The Hague activity. It is clear that there are many very nice shopping streets and many nice shops” (cited in De Nijs, 2005: 192)²⁶⁹. The emerging middle-class increasingly visited novel forms of entertainment, such as cinemas. Subsidies, pushed by social-democrats, actually allowed lower classes to also enjoy more elitist forms of art such as theatre and concerts.

Re-modernising the city: Negotiating urban livelihoods

As the 20th century ushered in a new era of modern urban planning and experiences, ‘the environment’ also seemed to change its meaning. Up until the late 1960s, the physical and social spaces in which people lived were considered in social and economic terms, e.g. their heritage, their social class often informed by French thought on environmental and surrounding qualities in the mid-19th century. Terms like

²⁶⁸ In Dutch: “aaneenschakelig van toevaligheden”.

²⁶⁹ In Dutch: “Winkelen is om zoo te zegen de Haagsche bezigheid. Het valt dan ook aanstonds op, dat er zeer veel mooie winkelstraten zijn en heel veel mooie winkels”.

poor milieu (in Dutch: *armoedig milieu*), disadvantageous milieu (in Dutch: *ongunstig milieu*), upbringing and milieu (in Dutch: *opvoeding en milieu*), milieu influences (in Dutch: *milieu-invloeden*) denote how residents were considered fixed and immobile. Such terms were frequently used by educational, (mental) health institutions in order to assess the 'milieu' of a patient²⁷⁰. The middle-class grew and the direct spaces in which people dwelled required a stable and comfortable 'environmental quality'. Sense, smell, sound, hygiene and health increasingly became domains of knowledge and intervention.

After WW II, the architect Dudok was still authorised to plan the remaking of The Hague's spatial landscape. Since the 1930s, Dudok aspired to further differentiate urban activities and functions (living, working, shopping, visiting theatres, etc.). Dudok's plans contained variation in the urban landscape, i.e. roads were connected to some open green areas with small ponds and lakes. Some urban areas (including bombarded ones) were subject to new spatial plans for more traffic and office buildings (Stal, 1998: 124-125). New districts were created (e.g. *Moerwijk*, *Mariahoeve*) and planned in such a way that clusters of buildings were combined with green open areas. After the economic recession of the 1930s and WWII, The Hague's economy seemed to revive.

After WWII, public investments and economic growth were crucial strategies to recover from the impact of WWII in both cities. Especially in the 1950s, public programmes were designed covering water infrastructure, roads and highways, gas pipelines and innovating railways. These public investments required physical labour, maintenance, organisational and administrative personnel, and employment (Kooistra, 1983). At the same time, production and consumption were directed at improving living standards, wealth and comfort of Dutch populations, creating a bigger middle-class. Radios, televisions, washing machines, refrigerators, iron steamers, cars, ovens, food, toys, bigger houses, and many other products were considered useful to nurture the Dutch post-war baby-boomers and the larger populace. Factories, office spaces and ports that were destroyed during the war were now restored and could be used again (De Nijs, 2005: 170). This accommodated the further unfolding of urban modernisation projects.

²⁷⁰ These semantics can be found in virtually all Jaarboekjes *Die Haghe* from late 19th century till the late 1960's, for example in Gemeenteverlagen Den Haag 1923, beeldnummer 802 van 1169, which highlights environmental hygiene of school-going children. See also Verslagen en handelingen van de gemeenteraad 1851-2005: Verslagen en handelingen van de gemeenteraad 1851-2005, Handelingen (1962), beeldnummer 1005 van 1073; verzamelingen (1963), beeldnummer 808 van 1682 ad verzamelingen (1967), beeldnummer 1057 van 1968.

Conclusion genealogical episode I: The industrial eco-city

Based on these genealogical sections, Rotterdam and The Hague can be characterised as 'industrial eco-cities' between 1850s and 1960. Industrialisation and urban expansionism led to the intensification of unequal access to proper living conditions ('north' vs. 'south' in Rotterdam, and 'sand' vs. 'peat' in The Hague). Not only were housing and working conditions highly uneven, but also access to open and 'green' spaces. After numerous (national) struggles and political activities, new legal and administrative entities created conditions to improve hygiene, health and living conditions for poor residents. Environment and ecology were often seen in socio-economic terms in the industrial age (e.g. *leef- en woonmilieu*). Modern urban planning, then, increasingly accounted for open and green spaces to include environmental quality and pleasure for leisure. Public parks, allotment gardens and open squares slowly improved the lives of many (poor) residents. This also led to the establishment of various environmental agencies and policies. At the same time, industrial economic life and modern urban planning continued and created the conditions to experience 'true modern' life in Rotterdam and The Hague.

Genealogical episode II: The techno-capitalist eco-city (1960s-2000s)

The 1960s caused a major rupture in how urban ecology was experienced and regulated in Rotterdam, The Hague and other cities in Europe. Political upheavals and cultural revolts created a new understanding of economic life, industrial urbanisation and the place of 'nature'. The environment was increasingly considered as contributing to health, hygiene and spatial quality. This broader revolutionary spirit also ushered in an age of increasing individual autonomy and consumerist lifestyles.

6.5 Urban critique and crafting a new *oikos*?

The downsides of urban expansion were expressed through environmental and social concerns in cities like Rotterdam, The Hague, Utrecht and Amsterdam. In Rotterdam, this period marked the founding of the precursor to a regional environmental protection agency, which was authorised to scientifically address and report on environmental issues regarding the health and safety of the population of Rotterdam and its environment (Environmental Protection Agency, DCMR). In 1963, industrial and chemical factories sometimes contaminated Rotterdam's drinking water to the extent that it was unsafe to drink. Next to the pollution of water, urban smog became an increasing concern due to industrialisation and mass car ownership. Importantly, the 1960s experienced a boom in cultural life resonating with a 'cultural revolution' taking place in many Western cities. Cities like Rotterdam offered numerous dining opportunities, discos and bars. This also increased the density in some urban sites and "a chain of parked cars and scooters" as noted in 1960 (Oudenaarden 2005: 268). It seems that city centres accommodated these new forms of city life. Weekends were introduced in the Netherlands in the 1950s, offering more time for hobbies, leisure and other activities.

A new dawn, a new city?

In the context of democratisation and emancipation in the 1960s, critique emerged against urban plans, middle-class lifestyles, car-based traffic, 'officisation' and the spirit of mathematical urban expansionism. A number of residents and organised groups addressed issues of environmental degradation and quality. In Rotterdam and its broader Rijnmond region, at least nine environmental action groups emerged²⁷¹. Through demonstrations, newspapers and other means, they tried to

²⁷¹ For example: *Vereniging tegen Luchtverontreiniging in en om het Nieuwe Waterweggebied*; *Heren 17 Leefbaarheid Waterweg*; *Stichting Leefbare Delta*; *Front tegen de Nederlands Luchtvervuiling*; *Werkgroep Milieu Zuidwest Nederland*; *Aktiegroep Schone Randstad-Zuid*; *Bond van Leefbaarheidsorganisaties*; *Stichting*

communicate ecological concerns to the broader public. Rotterdam's city officials were confronted with these critiques and alternative ideas on modern urbanisation. In response, city officials tried to 'communicate' benefits of public plans to residents, symbolised in the so-called 'manifestation Communion' (*manifestatie Communicatie '70*) in 1970. This manifestation refers to five months of celebrating how Rotterdam recovered from WWII with new urban plans. All kinds of festivities were organised, such as a swimming pool for kids, restaurants, a scale model of Rotterdam's port, a floating dolphinarium, etc. However, the critique did not decrease. On the contrary, artists, scientists, political organisations and others groups called for more attention to the 'human scale' and ecological concerns in the city.

City officials were confronted with local protests and this broader critique. Since the 1970s, urban development in Rotterdam was increasingly interpreted in terms of balancing urban functionalities. This was realised by participation practices and integration of residential concerns. Many traditional urban plans were cancelled because of this broader shift. Modernist urban development projects were sometimes considered as a form of 'urban destruction' (a symbolic Dutch framing was: *stadsvernieuwing als stadsvernieling*) (Bulthuis, 1987: 28). Dutch professor in social psychology Wentholt reflected upon the dissatisfaction in Rotterdam in a 1968 book (celebrating the 75 anniversary of the V & D company):

"Rotterdamers protest in another way than Amsterdammers, but they are becoming aware that there is something wrong with their city, that some things should have been done differently, that they miss something and that not all progress is an improvement by any means" (cited in Rooijendijk, 2005: 153).

Wentholt's comments were seen as critique against the foundations of the 1950s *Basisplan*, implicitly criticising Rotterdam's post-war urban planning efforts.

The Hague experienced a similar development in the 1960s. The heyday of urban expansion and technocratic planning was not halted in The Hague, but was refocused onto challenges of linking the economy, nature, leisure, environmental quality and the urban experience more generally. Spatial functions were planned quite well, as well as the number of residential and office building floors. Some residential areas were planned near rural spaces (*Loosduinen*). This created a landscape of residential areas close to traditional horticulture areas. Many of these agro- and horticulture products were sold in and around The Hague. In many instances, architectural ideas and plans of residential flats were introduced to house many people. The new urban districts built in the 1930s to 1950s could house over 100.000 new residents. An important

Milieubeheer Zuid-Holland; Milieu Actiecentrum Nederland, afdeling Rijnmond (cf. Klerk:1991: 38-39).

idea behind these urban plans was that each and every district included a variety of functionalities (e.g. living space, a shopping area, sport facilities, a library), creating (or at least suggesting) a local sense of community (Stal, 1998: 128). Virtually all new districts were prepared to become living spaces for the traditional and growing lower and middle-class. Around 60% of these houses were built with the minimum legal requirements for housing (*woningwetwoning*) (Stal, 2005: 44). Many middle-class houses had a small balcony or garden that created an outdoor experience and an improved living quality.

In Rotterdam and The Hague, economic activities have also radically transformed since the 1960s. Material economic production of e.g. metal, clothing, cleaning, food and luxurious goods slowly decreased as a more service-oriented economy emerged (e.g. banking, insurance, commerce, communication) (De Nijs, 2005: 171). This shift is part of a broader international trend in the 1960s towards a growth-based focus with international competition and the search for economies of scale with cheap available labour (e.g. in Asian countries). Warehouses and supermarkets took over small and local oriented markets. The international oriented retail and supply chains had more leverage and a better economy of scale than local grocery shops and manufacturers. Economic nodes across Dutch urban regions moved from local markets to more international networks. This created an enormous concern in economic activities as unemployment increased²⁷². Whereas in 1947 over 52.000 residents of The Hague had some kind of traditional or industrial work, this number dropped to 10.250 by 1992 (De Nijs, 2005: 173). Due to the unemployment concerns, a number of problems intensified in both cities. As districts near the city centre became less attractive and poorer due to unemployment, many richer residents moved outside of the city centre.

Recurring critique and new concerns

In response to anti-rational urban planning criticisms, Rotterdam and The Hague adopted a more comprehensive and long-term approach to planning. An exemplary document that suggests how The Hague should 'prepare' for a more dynamic future



was the 1957 *Plan 2000*. The plan articulated how urban expansions should be linked to a web of streets, railroads and highways. This transportation web not only connected different urban districts of The Hague, but also different urban centres (e.g. Rotterdam, Utrecht, Amsterdam). The Dutch national government pushed for more and better inter-city transportation in order

²⁷² More and more women entered the international oriented market, often employed as workforce in these bigger stores.

to smooth commercial and residential traffic flows. The growing middle-class could afford motorised cars. This led to severe traffic jams in city centres. Fly-overs were planned and built to accommodate the increased traffic flows between big Dutch cities²⁷³. The ongoing urbanisation of Rotterdam and The Hague's city centres led to new expansion plans, which in turn led to even more land scarcity. However, annexation plans for surrounding cities encountered fierce resistance. Instead, peripheral urban centres increasingly served as suburbs around the formal city boundaries of The Hague. At one point, the planning of governmental buildings in 1953 at the expense of green areas was resisted by local residents. Consequently, city officials reduced the number of spaces for these new buildings. Nevertheless, the number of high-rise buildings for governmental agencies, national departments and office spaces, increased immensely since the 1960s and 1970s. This 'verticalisation' seemed to compensate for the lack of land available near the surrounding areas. Such urban interventions were quite costly, leaving little funds to improve houses and living environments of poorer districts such as The Hague's *Schilderswijk* (Stal, 1998: 132).

It seemed that whenever new urban spatial plans were proposed, critique emerged as well. A case in point is the controversy related to plans to create a viaduct for trams near The Hague's Central Station at the expense of green spaces. This led to severe critique from residents and ultimately to withdrawal. Another illustration is the governmental plan to connect The Hague's beltway to a part of its historical city centre. Again, this plan was fiercely resisted by residents and was withdrawn in 1980. The Hague was confronted with conflicts over urban plans and fundamental debates about the meaning of places. In some cases, specific sites were to be taken down for urban expansion (e.g. elderly homes). Such forms of 'resistance' and heated debates about urban plans and material interventions were informed by the democratic and liberal culture that dominated Dutch and West-European cities in the 1960s. These dissenting voices were not without consequence.

A combination of traffic jams, monotonous housing blocks and lack of open living spaces led an exodus to surrounding cities and suburbs. In The Hague alone, this suburbanisation in the 1960s and 1970s included over 50.000 residents, most of which were higher educated residents and families with children (Stal, 2005: 46). Residents that remained in the The Hague's city centre were often of lower income groups. Another reason for more housing space was the decrease in residents per households in The Hague, from 4.17 in 1947 to 2.22 (on average) in 1990 (Stal, 2005: 48). Cultural liberalisation after WWII created an atmosphere that rendered possible living 'alone' or together (unmarried). Consequently, urban governments were increasingly forced to rethink and reframe their blueprint plans and modernist spatial interventions

²⁷³ See: <http://www.haagsebeeldbank.nl/afbeelding/39ab064c-073e-45ce-ba27-f6d906fa5393>.

containing repetitive housing blocks and tall office buildings. The consumption-based urban economy that emerged after WWII created concerns regarding a decreased sense of community, especially by governmental actors and intellectuals (De Nijs, 2005: 202).

Instead of formally and technically drafting, planning and intervening spatially, local governments engaged in more 'dialogical strategies' in the 1980s. Residents were now invited to provide input and articulate their ideas and suggestions. Residents could also have a say in the conservation of green areas. This culture of more interactive spatial planning resulted in the creation of committees, working groups, resident organisations and action groups that articulated their critique and concerns e.g. about traffic lights, squares and safety issues. This often led to mixed goals and interest through 'compromise' and 'compensation'. In The Hague, spatial plans were increasingly diversified and mixed functionalities in more open dwelling spaces. Many houses were renovated in order to increase their housing quality. More urban space was required for better dwelling quality. To this end, surrounding agro- and horticultural lands were available in 1986 (*Loosduinen*), as these activities also moved outwards (towards Monster). In addition, some ports were filled to produce space, and to create office buildings, shops and residential housing. Even more than before, boundaries between The Hague and its surrounding places and cities became blurry. More and more suburban districts emerged outside the traditional contours of The Hague (e.g. *Wateringse Veld*, *Ypenburg*). These suburbs housed dwellers that either worked in The Hague or in nearby cities such as Rotterdam, Leiden, Utrecht or Amsterdam. In turn, this 'stretching' of The Hague's urban tissue 'required' broader highways to connect big and small urban centres. In some cases The Hague's urban environment literally 'touched' Rotterdam's urban environment (Stal, 1998: 149). Suburbanisation further differentiated housing, working, shopping and leisure. The expanding regional tissue became known as region *Haaglanden*, denoting the intertwined web of urban and semi-urban centres around The Hague. Importantly, in this period, a great number of economic and post-colonial 'immigrants' entered The Hague, 'compensating' for the big 1960s and 1970s exodus (Stal, 2005: 46).

6.6 Re-administering the ecological and hypermodern cities

The 'reflexive turn' in modern urban planning brought with it new ways to gaze upon the harmful effects of modern urbanisation on human health and environment. In Rotterdam, a 1965 report identified and reflected on the negative consequences of industrial urbanisation in the period July 1963 - January 1965. The report, drafted by the Committee for Soil, Water and Air, argued that industrial production resulted in environmental pollution, health concerns, nuisance and discomfort. The 1875

Nuisance Act (*Hinderwet*) served as a means to address this concern and articulate new ways to regulate industrial activities and urban areas. A correlation was identified in terms of industrial activities and pollution on the one hand and an increase of health concerns of residents on the other hand (Municipality of Rotterdam 1965: 15). Illustrating the detailed nature of environmental regulations of soil and public areas, in 1960 the council of the city of Barendrecht (near Rotterdam) decided that dog owners were ordered not to let their dog poo on a road of public green. As detailed and witty as this might be, it illustrates that 'environmental quality' and dwelling was legally and administratively regulated (as legally anchored in *Gemeentewet* 168) in the second half of the 20th century in the Rotterdam region.

Even though ecological concerns were traditionally addressed per theme or sector (water, air, soil), they were increasingly integrated institutionally. This was expressed at a national level in 1971 when a new department was installed, combining the fields of Public Health and Environmental Hygiene (in Dutch: *Ministerie van Volksgezondheid en Milieuhygiëne*). Public Health was integrated with Wellbeing and Sport in 1982 (in Dutch: *Ministerie van Volksgezondheid, Welzijn en Sport*). In 1970, the very first Dutch department emerged with the formal task to address issues of 'environmental hygiene' (Dieleman, 1987: 29). At the national level, a number of documents articulated a more integrated approach on environmental concerns. In the wake of international debates on Club of Rome's 1972 report *Limits of Growth* and the 1987 UN Brundtland Commission's report *Our Common Future*, policy and public debates on environmental concerns intensified. In line with these international voices, in 1988 the Dutch agency RIVM published the report *Zorgen voor Morgen. Nationale Milieuverkenning (1985-2010)*. This 488 page document argued that the effects of modern industrialisation have led to complex challenges that require systematic attention. The report prepared the first Dutch national environmental policy plan ever and stirred up a lot of public and policy debate. The first Dutch National Environmental Policy Plan (in Dutch: *Nationale Milieubeleidsplan*) was issued in 1989 by the department of Housing, Spatial Planning and Environmental Management. This document set out a national strategic environmental policy until the year 2010. It addressed and problematised the increased use of fossil fuels, a focus on quantity over quality in economic production, and the disruption of certain environmental cycles. Alternatively, a more 'sustainable' pathway could tackle these problems, highlighting the reduction of energy, emphasis on quality in production and redirecting material cycles and loops. The report was succeeded by three following national environmental policy plans. It is safe to say that these environmental regulatory apparatuses and institutions were constantly fuelled and informed by a series of 'industrial incidents' that were criticised by environmental activists since the 1970s. One of the first big and influential incidents in the Netherlands was the so-called 'Lekkerkerk incident' of 1979. A water leak led

to the discovery of polluted soil in the village Lekkerkerk²⁷⁴. In the next years, such incidents were increasingly addressed and politicised. Greenpeace (an environmental activist group that grew significantly in these decades) and other activists protested against the dumping of hazardous materials (1990) and tried to block the 'dumping of pollution' (1993). These developments shaped local ecological agendas.

In 1978, a city plan called *Rotterdam Binnen de Ruit* introduced how Rotterdam would become a 'compact city', with high quality living environments, better accessibility (mobility networks) and living spaces. This was meant to counter the fleeing urban population, e.g. due to a lack of space and suburbanisation (170.000 people left Rotterdam 1965-1983) (Bulthuis, 1987: 22). Again, a more integrated approach on city life and spatial planning was advanced. For instance, using chemicals against weeds on sidewalks and in public space decreased. Another example was the creation of biking lanes to reduce car-usage in the city. It became clear that environmental issues were not isolated and were directly related to industry, housing, spatial planning, food, labour, agriculture and transportation. In the 1980s, a broader governmental culture emerged advancing a more integrated approach in governing 'the environment' (Wimsemius, 1986). This mentality was already expressed in maps and graphs of urban expansion plans since the 1960s. Both a 1960 and a 1981 plan to expand the northern part of Rotterdam (which included the allotment gardens on which the 'Gandhi-garden' was established later in 21st century), nicely shows a mix of housing areas, green and open spaces, sewers, allotment garden, a high way, train rails, and so on. This 'mixed' approach to Rotterdam's geography was radically different from 19th century urban expansionism. The absorption of green and ecology in the mind-set of urban planners was accompanied by specific tools to monitor and evaluate ecological milieus. An interesting example in this regard is the 1980s is the so-called project group Ecological Monitoring (in Dutch: *Projectgroep Ecologische Monitoring*). The project group, consisting of various governmental agencies, prepared a big 'snapshot' of 'Rotterdam's ecology' by counting and monitoring the quality of green spaces, birds, animals, trees, etc. Over the years, this mapping of urban environmental quality occurred again and again²⁷⁵. In 1990, a new agency was installed (in Dutch: *Milieu Rotterdam*) as part of Public Works Rotterdam that brought together two units: Environmental Policy Rotterdam and Environmental Engineer Bureau. *Milieu Rotterdam* addressed Rotterdam's ecology explicitly and comprehensively in a 1990 policy document called *Milieubeleidsplan Rotterdam*. This document envisioned a city without stink, noise and smoke, the reuse of materials and stimulating natural and environmental education among citizens in the future (i.e. 2015). Doing so, the

²⁷⁴ See: <http://www.bodems.nl/canon/venster-25.php>.

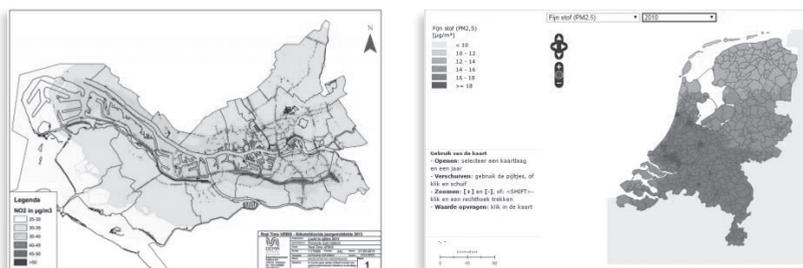
²⁷⁵ See: <http://www.netwerkecologischemonitoring.nl/home>.

agency *Milieu Rotterdam* aimed at realising a clean city and a clean port.

The 1990s continued with ongoing problematisations and regulations of environmental quality. For instance, in 1993, a city programme to ‘save groundwater’ stated that groundwater use can be excessive or insufficient. Both cases are problematic for “certain interests”, such as nature, landscape and water scarcity. Water-related concerns required tighter management of ground water and urban water flows. The increase of regulatory means to manage urban ecological life accomodated certain combinations of prior plans and legal frameworks (European, national and local). This administrative flexibility enabled a tailored approach to policy making and improving Rotterdam’s ecological quality. The local regulatory state apparatus also covered an increasing number of areas, themes and places in Rotterdam, enabling broader policy programmes and mixed management tools. It became normal to advocate for public health, environmental quality and economic activities in an integrated manner. The introduction of ecology as a worthwhile dimension in the city and, combined with urban planning, resulted in a new delicate balance between different ‘urban functionalities’. Significantly, in 1995, a heated local council debate about ‘the environment’ flared up about the meaning of the environment in spatial plans. It was argued that environment was ‘a new dimension added to living, working and leisure’. This clearly exemplified the value of ecology and green for the city.

Finally, in the 2000s, Rotterdam’s city officials introduced a number of labels and approaches to further cultivate and advance this pragmatic approach of connecting different values. Some labels already emerged and circulated in the 1990s, such as ‘sustainability’. This, however, did not directly prevent new concerns of ‘the climate’ and environmental quality in the Rotterdam region. The monitoring of carbon dioxide, acidic materials, smog and other emissions (CO, O₃, NO, NO₂, NO_x, SO₂, NH₃, etc.) was conducted by national and local environmental agencies, the RIVM and DCMR²⁷⁶.

Figure 6.3 Maps that identify and monitor environmental quality (NO₂ and PM 2,5)²⁷⁷



²⁷⁶ See: <http://www.dcmr.nl/cijfers/luchtmetingen>, <http://www.luchtmeetnet.nl/stations>, <http://www.lml.rivm.nl/> and <http://geodata.rivm.nl/gcn>.

²⁷⁷ DCMR report *Lucht in Cijfers* 2013 (2014: 39). RIVM data from <http://geodata.rivm.nl/gcn>.

Such agencies measure, monitor and track changes over time with regard to emissions in local and regional areas. It seemed that Rotterdam was one of the most polluted cities and areas in the Netherlands, even in Europe. These scientific measurements put environmental quality, public health and emissions higher on the agenda of Rotterdam's political groups and policy circles.

In The Hague, 'nature' and 'the environment' also gained new meaning. Since the 1980s, future 'urban development' plans were more and more framed in terms of human livelihoods and public space. Functionalist and large-scale urban planning resulted in so-called 'flat-neurotics' (in Dutch: *flatneurose*). As of the late 1980s, The Hague's spatial and development plans were increasingly negotiated with residents, local communities and other social actors. The Hague's urban centres combined economic restructuring with more open green spaces. A case in point is the 1988 policy document *De Kern Gezond*. This document presents a restructuring of the city centre, integrating different urban aspects, such as working, transportation, shopping, leisure and environmental quality. Many urban interventions were shaped by the logic of accommodating economic activities through housing and transportation. Underground motorways were built to tie The Hague even more tightly to surrounding urban centres (Stal, 1998: 155). The growing middle-class was able to develop and cultivate a 'liberal city' with hobbies, associations, shopping preferences and identities. In a sense, this further deconstructed the so-called pillar structure of Dutch society in the 20th century. The brain-drain and the middle-class suburbanisation of The Hague further increased an uneven distribution of wealth and dwelling space. Socio-economic segregation in The Hague intersected with the spatial distribution of residents since the 1980s. People from distant places have been subject to this segregation as well. This has always been the case in The Hague, but spatial plans aimed to mix income groups in certain districts to overcome further socio-economic segregation. Due to the increased suburbanisation of The Hague's privileged middle-class, traffic jams and crowded trams and trains became part and parcel of commuting life. During workweeks, it was (and still is) common in The Hague for thousands of commuters to either bike, drive or use public transportation to work²⁷⁸. In order to accommodate these developments, the 'environment' and 'ecology' became more user-oriented and were utilised for various reasons. Tourism was one of the means to render useful green spaces. It also became a useful means to engage youth and organise all kinds of local activities.

As of the 1970s, an increasing number of regulations, institutions and public organisations dealt with environmental quality in the context of spatial and urban

²⁷⁸ 2007: <http://www.haagsebeeldbank.nl/afbeelding/c35cd662-0fc1-11e3-9afd-003048976c14>.2005: <http://www.haagsebeeldbank.nl/afbeelding/c429edd2-0fc1-11e3-b502-003048976c14>.

planning in The Hague. A formal committee of 'environment and green' was installed in 1990, as the responsible committee to articulate advice regarding environmental regulations and city plans and ambitions. In 1978, a number of local environmental agencies committed to cooperate and work in a more regional context (in Dutch: *Gemeenschappelijke Regeling Regionale MilieuDienst Centrum Randstad*). In some instances, such arrangements actively sought to involve citizens (e.g. the 1982 decree for 'green policy'). In the 1990s, 'the environment' and 'green' gained an even more prominent role in local policy, evidenced by the so-called *Groen Beleidsplan 1996-2000* (and proposed for the period 2002-2006). This plan argued that 'green' (in Dutch: *Haags Groen*) actually had multiple roles in the city of The Hague: (1) to serve as recreation space that is accessible, safe and comfortable; (2) as education about various parks, and green sites in the city; (3) to increase natural value; (4) to connect green areas through a so-called *Stedelijke Ecologische Hoofdstructuur*; (5) to use green to accommodate public space; and (6) to articulate the cultural history of The Hague. This semantic multiplicity illustrates the fragmented meaning and multiple uses of 'green' for city life. In 2003, the maintenance of 'green spaces' was considered to be an activity that involved government officials, but also something that citizens should be engaging with. In the 2000s, more policy plans were introduced to envision and realise a green The Hague, e.g. the *Groen Kleurt de Stad 2005-2015*. In these decades, policy plans and ideas about the role of 'green' actually mushroomed.

Since the 1990s, the terms 'green', 'environment' and 'sustainability' became increasingly intricate in local policy discourse. For a long time, the notion of sustainability referred to 'durability'²⁷⁹ in a quite general sense. However, the use of the term sustainability since the e.g. well-known 1987 Brundtland report and the Rio summit of 1992+ explicitly connected sustainability to social, environmental and economic life.

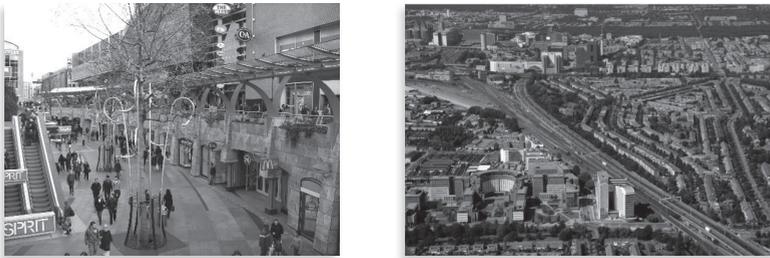
Acceleration and new urban lifestyles

The ongoing urbanisation since the 1960s did not mean that economic life was nicely 'balanced' with ecology and environmental quality in all aspects of urban life. In fact, the 1960s expressed an unprecedented mix of cultural dynamism, individual liberalism and economic consumerism in parallel with administering green public spaces. The

²⁷⁹ In the 19th century the term 'sustainability' (in Dutch: *duurzaam*) was used to refer to a variety of issues: e.g. 'duurzaam voordeel', 'duurzaam vestigen', 'duurzaam nut van gasfabrieken', 'duurzame grondslagen', 'duurzaam behoud', 'duurzame besparing van uitgaven', 'duurzame bevoegdheid tot afwijking', 'duurzame plaatsing', 'van duurzame of tijdelijken aard', 'duurzame vrede', 'duurzaam verblijf', 'duurzame voordelen', 'een duurzaam bestaan'. Until the 1950s, the term sustainability had the same meaning but was also connected to the more reflexive mode of urban issues 'duurzame capaciteiten', 'duurzame bestemmingen', 'duurzame verbeteringen', 'duurzaam nodig hebben', 'winsten die duurzaam zijn safe gesteld', 'duurzame aanstelling', 'duurzaam behouden', 'duurzame vrede', 'duurzame dagvrede'.

neo-industrialisation resulted in a change of economic structure, from a production to a consumption system (see also Chapter 5). This ‘boulevardisation’ was based on the move away from modernist differentiation and specialisation towards mixing ‘urban functions’. Rotterdam’s 1987 plan, for example, envisioned the year 2000 and states that “the plans for the inner city centre-stages the *fusion* of all urban functions - housing, working, learning, living, culture, leisure” [italics, SJ] (Bulthuis, 1987: 42). Rotterdam’s city centre, then, would not be about “demarcated events in demarcated areas”, but the urban functions are “less stringent” in their demarcation, representing “a shift from static to dynamic thought” (ibid: 50). This dynamic and flexible way of organising the city accommodated the increase commerce, capital and consumers. A nice symbol of the culture of mass-consumerism is the so-called “buying gutter” (in Dutch: *koopgoot*) in the city centre.

Figure 6.4 Consumerism and car-based mobility in Rotterdam and The Hague



The neo-industrialisation and consequent neoliberalisation of these geographies have shaped current culture of mass consumption. It is important to understand the combination of these different ‘urbanisation forces’, i.e. urban critique, technical regulation of urban spaces and consumerist lifestyles. In other words, despite the fierce criticisms about urban planning since the 1960s, and the regulation of public spaces and urban green, most urban livelihoods in Rotterdam and The Hague have been embedded in a transnational acceleration of socio-economic life.

Conclusion genealogical episode II: The techno-capitalist eco-city

Based on the genealogical sections above, Rotterdam and The Hague can be characterised as ‘techno-capitalist eco-cities’ between the 1960s and the 2000s. The mainstreaming of policies that accommodated large multi-nationals in Dutch cities was related to the harsh criticism against modern urban planning since the 1960s. Residents protested and ecological movements advocated for a more human-friendly and ecology-minded city (less cars and offices). Urban planners increasingly engaged in dialogues with residents and cooperated to account for new urban plans. Both Rotterdam and The Hague even had an alderman that was responsible for

'sustainability' in the late 2000s. Nevertheless, car-based mobility, fossil-fuel based energy and consumerism dominated this era. As of the 1960s, industrial production decreased and moved to low-wage countries. Consequently, both urban regions became even more enmeshed in global market dynamics. Eco-friendly conduct in this period often relied on political negotiation via liberal democratic procedures and being eco-minded in a consumer society and a growth-based economy.

Genealogical episode III: The neo-communitarian eco-city? (2000s-...)²⁸⁰

Rotterdam and The Hague have experienced long and complex histories with regard to the place and meaning of the environment and ecological life. So far, both urban histories have been reconstructed with the aim to better understand the actual rise of TT Rotterdam and The Hague. In the 2000s, both Rotterdam and The Hague came out of a period that combined the technical administration of ecological life with a growth-based economic model on the one hand, and urban criticism and a small number of counter-movements on the other hand. Against this background, both TT Rotterdam and TT The Hague emerged.

6.7 Transition Town Rotterdam

In the 2000s, a variety of ‘urbanisms’ could be observed in Rotterdam. The combination of technical eco-regulation and a capitalist culture shaped what I call the techno-capitalist eco-city. Within this context, TT Rotterdam began in the spring of 2009, when a number of people got together and talked about the emerging idea of ‘Transition Towns’. As one of them put it: “Transition Town Rotterdam started with some beer on a balcony” (Interview TA). This small group tried to make sense of the world, particularly of Rotterdam. They discussed what Rotterdam was confronted with in terms of economic and environmental concerns and social deprivation. This small group then invited others who might be interested to share and develop some ideas and set up projects addressing these challenges²⁸¹. Among the participants were people affiliated with ecological associations and ‘environmentalist organisations’. Since that moment, TT Rotterdam was born. This group was inspired by the ideas of TT Totnes, tying in with more ‘local concerns’. TT Rotterdam presents itself on the website as follows:

“Transition Town Rotterdam is a network of people and initiatives that cooperate in order to change Rotterdam into a healthy, resilient and lively city, hand in hand and neighbourhood by neighbourhood; a city that lives in balance with local natural resources; a resilient city that can absorb economic shocks; a city where everyone can feel at home in a local community and local nature; a city where children can inhale healthy air; learn how healthy food is produced and know

²⁸⁰ Similar to Chapter 5, this ‘final’ genealogical episode (its meaning, its ending, etc.) should be considered as highly contingent.

²⁸¹ See: <http://www.transitiontownrotterdam.nl/over-ons>.

that later they can provide their local community with life by honourable and meaningful work; in short, a city that sets an example for others and gives hope for the future²⁸².

This somewhat romantic image is linked to a strategy that combines ‘head, heart, hands’. The combination of these aspects ensures cognitive and strategic thinking (head: diagnosing and reflecting on climate change, peak oil, resilience), while having a specific normative and affective orientation (heart: positive visions and celebrate), and a hands-on approach (hands: think global act local, bottom-up)²⁸³. The group was backed by the local district government *Deelgemeente Noord* (Interview TB). The first initiative of TT Rotterdam was to create a small eco-friendly area in Rotterdam (at the *Bergwegplantsoen*) to engage in urban gardening with local residents and children, some of whom were physically challenged. Together, they have been growing herbs, plants, vegetables and fruit trees²⁸⁴ (Interview TA; Interview TC; Municipality of Rotterdam, district North, 2014: 15).

Since 2009, a number of new initiatives have been taken up under the umbrella of TT Rotterdam. In total, eight gardens were created in Rotterdam (e.g. *Gandhituin*, *De LeefVrolijkTuin van het Kinderparadijs*, *Educatieve tuin De Enk*, *Het Moerasje*, *Buurtmoestuïn Kralingen West*), a website was launched, biking tours along various urban gardens were organised for outreach purposes (Interview TD), movie nights and courses were organised, as well as local festivals and markets²⁸⁵.

Figure 6.5 Bergwegplantsoen and permaculture biking tour Rotterdam



²⁸² Transition Town Rotterdam is een netwerk van mensen en initiatieven die samenwerken om, hand in hand en wijk voor wijk, de stad te veranderen in een gezonde, veerkrachtige en levendige stad; een stad die, in evenwicht, leeft van lokale natuurlijke hulpbronnen; een stad die door haar veerkracht economische schokken op kan vangen; een stad waar iedereen zich thuis kan voelen in de lokale gemeenschap en lokale natuur; een stad waar kinderen gezonde lucht inademen, leren hoe gezond voedsel verbouwd wordt en beseffen dat zij later met eerzaam en betekenisvol werk voor hun gemeenschap kunnen voorzien in hun leven; kortom, een stad die een voorbeeld is voor anderen en hoop geeft voor de toekomst. See: <http://www.transitiontownrotterdam.nl/over-ons>.

²⁸³ See: <http://www.transitiontownrotterdam.nl/over-ons>.

²⁸⁴ See images: <https://www.youtube.com/watch?v=JDRWA08IUVk>.

²⁸⁵ See: <http://www.transitiontownrotterdam.nl/initiatieven>.

TT Rotterdam is a heterogeneous network that is difficult to reduce to one or some initiatives. Nevertheless, I mostly tried to focus on the Gandhi-garden to render local TT dynamics tangible. Furthermore, this garden was particularly attractive, because it was quite big, they organised a number of different activities (workshops, eating and sharing) and were inspired by interesting ideas (e.g. Gandhian principle of non-violence) (see also Chapter 2).

Introducing the Gandhi-Garden

The Gandhi-garden is located in the North of Rotterdam near Rotterdam's belt highway (A20). At the moment it is a community garden, which means that it welcomes the public and local residents. The land is rented from an allotment garden association called *Hof van Noord*. However, for a long time, the land of the Gandhi-garden was officially developed and maintained by Rotterdam's municipality. Local school going children could (weekly) work the land and gardens for educational purposes. Because of the economic crisis since 2008, the municipality of Rotterdam could (or perhaps would) no longer pay for and support these school gardens and their maintenance. Consequently, the land was abandoned and unused. In the period 2010-2011, the municipality of Rotterdam, local residential association and *Hof van Noord* met and talked about future uses of this vacant piece of land. One of the members of the allotment garden association participated in the 2009 transition network of Rotterdam. With this background, the participant and others started thinking about turning the unused land into a community garden to experiment with permaculture and ideas associated with Transition Towns. In other words, one of the scenarios was to turn the unused land into a community garden. After some heated talks about the ratio of allotment and community gardens in which municipality authorities supported the TT idea, the land was divided into part allotment and part community garden (2000 m²). Initially, there was no consensus about how prominent the community garden should be. In 2011, the community garden was 'born', and the land was turned into a workable area for permaculture.

Figure 6.6 Gandhi-garden in 2011



Since 2011, the Gandhi-garden was supported by and legally anchored in a foundation, the Peace-Foundation (in Dutch: *Vredestichting*). Ever since, the Gandhi-garden welcomed everyone who wanted to work, harvest, cook, eat, relax and talk together. The Gandhi-garden website clearly articulates an additional vision:

“Furthermore, we provide extra space for people that need the land, and working on the land and its fruits, the most. In the future [after 2011, SJ], parts of the garden should provide space for reintegration projects, educational projects and the food bank”²⁸⁶.

This ambition is directly informed by the work of Gandhi, as the initiators of the garden challenge the dominant economic order of the Netherlands and the Western world: “Only in an economy of exclusion, greed and overconsumption there is scarcity, poverty, extraction of natural resources and climate change”²⁸⁷.

Figure 6.7 Gandhi-garden (Gandhituin)



The Gandhi-garden presents itself as an urban community garden with a *social* ambition. The TT trinity of head, heart and hands illustrates this. In social terms, the ‘head’ refers to the garden as an educational centre that offers courses and lessons to address e.g. poverty, urban gardening, economic approaches and ethical conduct. The ‘heart’ frames the garden as a centre of life that welcomes all people, centre-stages gratitude and celebrates the bounty of nature. The ‘hands’ articulate the garden in terms of working on the land (among other things) and donate vegetables and fruits to the needy (this also covers heart). Furthermore, the foundation also is a quite formal

²⁸⁶ “Daarnaast bieden we extra ruimte voor mensen die het land, het werk op het land en haar vruchten het meest nodig hebben. In de toekomst willen we op delen van de tuin ruimte bieden voor reïntegratie-projecten, educatieprojecten en de voedselbank”. Translation SJ, <http://www.gandhituin.nl/mappen/Over%20Ons/Over%20Ons.html>.

²⁸⁷ “Alleen in een economie van uitsluiting, hebzucht en overconsumptie ontstaat schaarste, armoede, uitputting van natuurlijke hulpbronnen en klimaatverandering”. Translation SJ, <http://www.gandhituin.nl/mappen/Over%20Ons/Over%20Ons.html>.

structure that accommodates the garden (in terms of finances, official agreements, etc.) but everyone is considered as equal and decisions are taken democratically. Many, if not all, participants of the garden activities (a highly diverse and non-fixed group of people) accept the overall vision of the garden, are ecologically conscious and eat organic and local whenever possible.

My first actual experience with the garden was in August 2013 and was quite indicative for the months to come (Fieldnote C). I searched for information about the garden on the Internet, its specific location and opening hours. I entered the garden area on a sunny morning. The garden was quite big and intensely green compared to the surrounding area. I walked towards a small group of people in front of a small wooden house. I introduced myself as a researcher that would like to learn and participate in the garden. Before I was properly finished with my story, I was offered homemade tea and a cookie. I noticed I arrived in the middle a conversation about the state of the world and the major challenges 'we' are confronted with. The group spoke about permaculture, organic food and health. I noticed the intensity and knowledgeability of the group. One of them spoke about morphogenetic fields, referring to a man named 'Sheldrake', while another paraphrased the Bhagavad Gita with a message of peace, connecting it to Gandhi (Fieldnote J). The conversation addressed many issues, including quite mundane concerns such as the difference between organic and regular bananas. One person said that regular bananas are poisonous and that "we are responsible for the harm we do to human beings". The mass media were also subject of critique and were attacked for their selective narratives and the focus on misery, while there are beautiful things going on. As someone put it: "they don't teach that at the schools for journalism" (Fieldnote K). I was not actively involved in the discussions because I had just entered the garden as an outsider, but also because I simply wanted to listen out of interest. Without a clear planned format, the group informed me about some of the activities that were going on in and related to the garden, such as a biking route and a visit from Palestinian school kids. After having tea and the conversation, it was time to work...in the garden. During an introductory tour of the garden by one of the participants I was asked to eat one of the leaves of a plant. I was hesitant. It was...actually nice and fresh...lemon-like and onion-like. This was the first time I ate an unknown plant to me that actually grows in a city. I learned that a small forest was situated next to the garden in such a way that it provides sufficient nutrition for the garden ecosystem. There are hedgehogs that kill snails. This is important, as snails are bad for the vegetables and produce of the garden. I noticed that the entire garden was designed in terms of holistic principles, based on symbiotic relationships. This was no surprise as permaculture was based on such principles and served as a basic design approach for the Gandhi-garden. I started working in the garden for the first time. To be more specific, I pulled weeds after some

basic instructions from other gardeners. On the one hand I did not expect to work on the ‘first day’, on the other hand, this is what participation is all about. After pulling weeds and talking with others in my vicinity for about 90 minutes, we had a little break and again...homemade tea. Now the group spoke about food and big companies, such as Monsanto. It was quite clear that Monsanto was observed as ‘the enemy’ for a number of reasons mostly to do with claiming and manipulating seeds, nature and life. We (I was more actively involved now) also spoke about science and researchers. Interestingly, one person said, “one has to mistrust academics”, but that “I should not take this remark personally”. Interestingly, I also was in conversation with someone who was doing research projects and would like to start a PhD herself. We talked about our research and the role of science and universities in the Netherlands. For me this was a relief, as I was able to let go any residual ‘mask’ of ‘the researcher’. In my experience, we were just discussing these issues as two human beings. After the break, we continued working in the garden. Some left earlier than was planned initially, but this was not considered as a problem or unreasonable in any way.

The decentred (eco-)activities of the Gandhi-garden

The forthcoming months were a very intense experience for me as a researcher and an individual. I noticed that I was really experimenting with what it meant to do research as an embodied being. This was not about abstract concepts and reflexive protocols. As I participated with gardening and conversations about economics, politics, science, health and food, I became part of the group and the network of the Gandhi-garden. I participated in the rituals and recurring moments of meeting, talking, pulling weeds, planning, yielding produce, singing, cooking, drinking and eating together. As I learned more and more about the garden and its activities, I noticed that this physical garden was part of a broader network of social initiatives, practices, ideas and strategies.

In the remainder of this section, I present a number of activities along the lines of specific themes, concerns and types of activity²⁸⁸. Even though these clusters are presented separately, in practice, they are often deeply intertwined.

Suffering, protests and democratic activism

In order to understand what is at stake for many Gandhi-gardeners²⁸⁹, it should be clear that most activities are based on, or related to, critique of and alienation from dominant social, economic and cultural systems. This might sound abstract, but for

²⁸⁸ Please note that this is slightly different from the Stadshavens case. In that empirical setting, many projects and themes were already clustered, organised and regulated spatially. In particular, the Floating Communities strategy has been administratively and programmatically differentiated in four (inter-related) areas. This is an important difference between the two cases, which will be reflected upon in Chapter 7.

²⁸⁹ This is how I call *direct* participants of the Gandhi-garden.

most people I met this could not be more concrete. The most well-known and more typical ‘TT critiques’ are often underscored such as the depletion of fossil fuels and risks associated with climate change. However, there are much more fundamental and specific concerns. Protest and activism, as a means to criticise society, takes many forms in the Gandhi-garden network.

A nice example of activism can be illustrated by my participation in the globally orchestrated March Against Monsanto 2013 (MAM)²⁹⁰. This march was organised near Rotterdam and took place in many cities in the Netherlands. It was co-organised by a number of people related to TT Rotterdam. This was an exciting experience, as people from all kinds of organisations joined the march (Fieldnote D). The protest was directed against Monsanto, a big multinational that sells patented and modified seeds and plants. Many TT participants are critical of the practices and methods of Monsanto to commodify organic materials and sell modified forms of life. Social outrage seems to flare up whenever Monsanto, for example, sues farmers that have ‘their seeds’ on their land as a result of wind or moving cattle. Labelling life through property and capitalist greed were fiercely criticised, next to the selling of harmful chemical products by Monsanto. Interestingly, not all Gandhi-gardeners agreed with articulating social critique and protest as an adequate strategy. Some argued that this is “the old world” and “old energy”. Instead, attention should be focussed on ‘positive’ things (Interview TT). This incongruity symbolises an implicit disagreement about how ‘radical’ one should be and what types of strategies are considered productive (Fieldnote 5)²⁹¹. Symbolic forms of protest seemed to be less problematic, such as throwing seed bombs on an old railroad. These so-called ‘guerrilla’ gardening events were organised together with some action groups (Interview TE). Other politicisations that are agreed upon are more general and unapologetic critiques against capitalism, mass consumerism, the excessive use of material goods, and throwing away of food and material products. I spoke with many participants about their critiques (e.g. Fieldnote C; Fieldnote D; Fieldnote E; Fieldnote F). Some of them are generic and intuitive (Interview TF; Interview TG; Interview TT), while others are more intellectual and analytical (Interview TA; Interview D; Interview TE; Interview TH; Interview TI). Despite these differences, they agree on the socio-economic and environmental problems we face today. An interesting remark of one Gandhi-gardener was that “people are addicted to society”, referring to the socio-psychological problem of materialist consumer culture (Fieldnote H). Gardening in this context is considered a symbolic form of resistance that improves one’s health at the same time, indicated by the

²⁹⁰ See: <http://www.march-against-monsanto.com>.

²⁹¹ Such discussions were sometimes held online, on Facebook comments area. Interestingly, one of these discussions was about the ‘radicalness’ of Jan Rotmans and the extent to which he advocated for a technology-based economy instead of a more ‘radical community based’ transition.

remark that “no gardener is fat, only their bosses are” (Fieldnote L). Many types of experience and knowledge are mobilised, not only the TT ‘narrative of peak oil and climate change’, but also references to everyday life, plasma televisions, car-use, urban smog statistics, Karl Marx, Rousseau, ecological systems thinking, Sufism, Krishna consciousness, druid philosophy and other sources of knowledge.

In all instances, the suffering of people, animals, eco-systems and even the entire world is considered worth fighting for (see also ethnographic fragment). Solidarity with marginalised people and lives was (symbolically) expressed by donating produce to food banks. Elderly, children and disabled people are sometimes actively involved in gardening activities in order to seed, sow, cook and eat together (Interview TA; Interview TJ; Interview TP). This way, social solidarity with different social groups is cultivated. Similarly, many of the Gandhi-gardeners stretch their solidarity to trans-local and geopolitical struggles, such as poor distant farmers or Palestinian youth (Fieldnote G). Interestingly, some participants are confronted with their activities by their families and friends e.g. why would you be vegetarian? or, why do you do yoga? Despite these marginalisations, they still explain their ideas and try to convince others why it seems important to e.g. safe energy or eating less meat (Interview TG; Interview TH). In a way, I was also confronted with my own conduct, as I often used a car to drive to the Gandhi-garden. I live in The Hague and public transportation implied much longer travel times. This was something I struggled with as a (sometimes lazy) ‘scientivist’. One Gandhi-gardener rightfully suggested that using a car was quite “a luxury” (Fieldnote M).

Some participants use sustainability discourse to politicise the development of Rotterdam. However, I noticed that a number of policy actors and Gandhi-gardeners argued that the future of sustainable development in Rotterdam depends on who will hold office. This led me to approach ‘opponents’ and other, more sceptical, voices in Rotterdam. One of the few people that uses sustainability and environmental narratives to politicise the city in a radically different way, argues that sustainability is simply a tool for the privileged and is not addressed with proper large-scale, technological and market mechanisms (Interview SD). This respondent also acknowledged that human beings are polluting creatures and proposed science-based technological solutions (e.g. extracting carbon emissions from the air). Interestingly, from this point of view, local community-oriented projects (e.g. the Gandhi-garden) are considered useful, but too small to do the job.

Urban farming, alternative food and an edible city

Apart from its flexible communal aspects, the Gandhi-garden it simply is a piece of land that requires maintenance and enables people to experience and learn how to garden. Very often current city life and food systems are considered a problem. During my participatory work, I noticed that industrial food, processed food and fast food

were often regarded as great concerns (Fieldnote C; Fieldnote D; Fieldnote F). I was often involved in discussions about how nutritious, healthy and tasteful some food products actually are. An interesting remark I heard in this context was that “one should not give people sugar, but love, especially children”²⁹² (Fieldnote I). One day, I talked with one Gandhi-gardener near an apple tree and we both ate a small but ripe apple (Interview A). I expected it to be a little sour, but it was very sweet and juicy. We reflected on this experience and talked about industrially processed and organic apples. This is symbolic for the many ways in which ‘problematic food’ was contrasted with more pure, organic and/or self-produced food.

One of the core principles that shapes the gardening practices of the Gandhi-garden is permaculture. Some participants had taken a permaculture course, this gave them an implicit ‘gardening authority’ for many other gardeners (Interview TC; Interview TD; Interview TK). As one respondent told me: “Permaculture is just a design system which you can apply on all kinds of things, ranging from a peanut butter sandwich to a society”²⁹³ (Interview TD). Instead of aiming for ‘maximal output’ based on monoculture (‘one area, one vegetable’), which is used by modern agriculture, permaculture argues that diversity and circulation are key. Permaculture is a designing method based on a number of principles and specific techniques. One needs for example trees, bees, hedgehogs and other animals as part of holistic permaculture approach. The Gandhi-garden as a territorial site, therefore, is somewhat difficult to delineate, given overlapping socio-animal networks. Importantly, permaculture advances diversity of using produce in the same spot in order to avoid extracting nutrition from the soil, viruses and ‘sick plants’. Interestingly, some people suggested or explicitly stated that permaculture is also a ‘social principle’, even with political potential. As one of the permaculture gardeners argued:

“A healthy system, a permaculture system, does not fit in the current system. In the current system everything with a short-term life span is privileged. The human is dehumanised. For example, you are a number as an employee, a means of production...in simplistic terms...a robot, that is replaceable for another robot. You are not a human being with a life, or with a soul, or with feelings, or with problems. Those things [permaculture system and current system, SJ] are really separated from each other”²⁹⁴ (Interview TD).

²⁹² In Dutch: “Je moet mensen geen suiker geven, maar liefde, vooral kinderen”.

²⁹³ In Dutch: “Permacultuur is gewoon een ontwerpsysteem, die kun je alles toepassen dat je kunt ontwerpen, van een broodje pindakaas tot een samenleving”.

²⁹⁴ In Dutch: “Gezond systeem, permacultuur systeem, past niet in het huidige systeem. In het huidige systeem wordt alles beoordeeld wat korte termijn is. Het menselijke wordt eigenlijk ontmenselijkt. Je bent bijv. een nummertje als werknemer, een productiemiddel...flauw gezegd een robot, die inwisselbaar is voor een andere robot. Je bent niet een mens met een leven, of met een ziel, of met gevoelens of met problemen. Die dingen zijn heel erg van elkaar gescheiden”.

In a sense, permaculture is presented as a socio-ecological principle that is both more natural and human than the ‘current system’. Even though this principle is executed with great care (planning schemes, rotation schemes, etc.), private gardeners near the Gandhi-garden often do not really care about such ideas. These private gardeners simply want maximum produce or to enjoy their piece of land without these concerns. Interestingly, in 2012 the municipality of Rotterdam published an official ‘strategic document’ for urban farming called *Food & The City* (Municipality of Rotterdam, 2012). The local government formulated three core objectives in this context: (1) improving health by stimulating local and fresh food; (2) strengthening sustainable economic development by reconnecting farmers and food producers to consumers and urban markets; and (3) improving spatial quality by integrating new green areas, fruit trees and urban agro-gardens into existing neighbourhoods (ibid: 13). Additionally, the document states that urban farming can also reduce ‘food miles’ and improve ‘social cohesion’ among its participants²⁹⁵. This suggests that even though local authorities do not explicitly support permaculture as a guiding principle, urban farming and local food systems are accommodated to some extent.



Gandhi-gardeners are deeply embedded and involved in alternative food networks inside and outside of Rotterdam. This was evidenced during a so-called peace festival in 2013, celebrating peace and bringing together local farmers and garden-related stands (Fieldnote N). Rotterdam consumers were able to connect with local farmers (via *Boeren in Zicht*) and sustainable food centres (*De Groene Passage*, Interview TL). Such local producers use non-industrial means and methods. For example, a local community bakery criticised ‘supermarket bread’ and tried to reintroduce artisanal bread making and cooperative bakeries inspired by bakeries from the 1920s (Interview TM). This bakery uses local ingredients and considers this project as an artistic act of resistance against allegedly ‘normal bread’. I have eaten this bread in some instances, similar to my ‘apple-eating-experience’ (see above), I was again surprised how bread could smell, feel and taste. This made me rethink mundane about acts such as buying and eating bread. It made me more critical concerning ‘industrial bread’ and other types of food. More generally, many of my food experiences related to the garden made me more sceptical to ‘normal food’ and systems that produce and distribute industrial food.

²⁹⁵ The underlying approach and advice for his urban farming strategy is delivered by a so-called ‘think thank urban farming’ (Municipality of Rotterdam, 2012: 14). This think thank is comprised of local administrative bodies, programme bureau sustainability, agriculture experts, environmental agency and other organisations.

Philosophy, embodied spirituality and inspirational sources

I was regularly struck by the ways in which abstract concepts, spirits and transcendent forces were mobilised and referred to by many people. For many Gandhi-gardeners, philosophy, spiritualism and energetic forces seems to be fruitful ground to diagnose social problems, to make sense of the world around them and ‘fuel’ their passion for specific projects, initiatives and practices. In a number of instances, inspirational sources were not shared by everyone and were understood more pragmatically by others. Instead of mobilising explicit legal categories or political ideals, I picked up many inspirational sources. Gandhian thought, spirituality, permaculture, financial-economic theory, ecological notions and animism-like ideas are some examples that inspire circular systems and local communal experiences (Fieldnote O)²⁹⁶. Gandhi’s legacy and philosophy was particularly foregrounded. This was evident during a Gandhi exhibition and a Gandhi lecture series that were organised in the garden cabin (Fieldnote P; Fieldnote Q). Interestingly, some of these concepts and perspectives overlap with the types of knowledge I use as a scholar, the institute I worked at (DRIFT) and associated bodies of knowledge²⁹⁷. Conceptual frames like complex systems, evolutionary thought, and transition thinking are used by some more reflexive Gandhi-gardeners²⁹⁸, but this was often linked to very concrete practices, such as breathing techniques (*Pranayama*), using yoga for children and grown-ups, but also of connecting the medical effects of some herbs related to the physical design of the Gandhi-garden. Such ‘pre-modern’ (or rather ‘non-modernist’) modes of knowing and inspiration are considered as useful alternatives in our society again. As one permaculture gardener put it: “Many cultures have been detached from their own past (...) wisdoms from earlier days can be proven scientifically today”²⁹⁹ (Interview TD). This idea also materialises in very concrete practices such as workshops of making clothes with wool from local sheep.

Such direct linkages between forgotten knowledge and spiritual life on the one hand and materiality on the other hand were presented to me in many ways. One telling experience was that one day we drank tea in the garden. There was a bee flying

²⁹⁶ Many Gandhi-gardeners looked for sources through books, but most used the Internet for self-study and making sense of things as they go.

²⁹⁷ Multiple references to Jan Rotmans and DRIFT by some Gandhi-gardener made me realise that my knowledge was introduced before my presence. Interestingly, in one instance one of Rotmans’ books was experienced as inspiring, but also somewhat expensive. After a discussion on the insights of this book, it was sensible to present this book as a gift (Fieldnote R).

²⁹⁸ I was struck by the creative ways in which some participants used knowledge and philosophy, such as linking Sufism with eco-systems theory, or linking Deleuze and Foucault to legal thought. Not only that, but these ideas informed some of their very material and physical practices and initiatives. Even though they were not ‘official and institutionalised scholars’, in practice they were doing engaged scholarship in a way I have rarely seen.

²⁹⁹ In Dutch: “Heel veel culturen zijn van hun verleden losgeraakt, (...) wijsheden van vroeger zijn nu gewoon wetenschappelijk te onderbouwen”.

near us and then landed on the table. One of us tried to direct the bee to somewhere else, when the beekeeper told us to stop and watch the bee (Fieldnote S). The bee seemed to become a symbolic object for an animist and spiritual experience, as bees were crucial and wonderful organisms that enabled plants, fruits and vegetables to breed and provide us with food. Such eco-frames and holistic experiences are not only derived from transcendent notions and spiritual thought, but also enacted through by playing guitar and singing (spiritual and protest songs³⁰⁰), or by cooking and laughing together during harvest days (Fieldnote T)³⁰¹. It seems that technology (at least high-tech) is considered problematic or even bad, given its alienating dynamic (Fieldnote H). One of the most inspirational sources experienced by many (including myself), is simply working on the garden and gardening together. This is connecting the soil to the spirit in very satisfying ways. For some, this is also linked to moral activism, namely producing food for the needy (e.g. via food banks). As someone put it: “One can say 100.000 times ‘allow me to provide service with love’, which one can also actually do it in a garden”³⁰² (Interview TE).

Together, these inspirational sources made me experience the garden as a therapeutic place and a big ‘green battery’. Even though most Gandhi-gardeners have some form of spiritual identity, it is used in different ways. For some it is part and parcel of their lifestyle and holistic understanding of the world. For others, spirituality is directly connected to a broader social or even political engagement of the garden (Interview TA; Interview TD). This, however, did not lead to conflicts or debates, since the garden as a social space was open and flexible enough to welcome all kinds of identities and orientations.

Soil, materiality and being post-human

As mentioned before, life and activities on the garden are idealistic and abstract but also very material. I noticed that many of the activities and initiatives had to do with land, soil, animal life, matter, biological and chemical materials, dirt, plants and human bodies at work. This is not surprising because many challenges and concerns are directly related to material practices and specific aspects of the built environment.

³⁰⁰ Interestingly, some religious Hindustani songs were played (called bajans). This invoked my biographical and social identity, as I have heard such songs often when I was young. This happened a number of times, e.g. when interviewing someone with a ‘Surinamese background’ or I was considered as someone who was knowledgeable regarding Hinduism or the Dutch Hindustani community. Despite the fact that I accept that my presence is part of doing research (see Chapter 2), these experiences were not highly significant during my field work.

³⁰¹ I noticed that laughing and optimism were important ingredients for the gardeners.

³⁰² “Sta mij toe liefdevolle diensten te doen...dat kun je 100.000 keer roepen, maar je kunt het ook doen in een tuin”.

In many instances, there were issues over land and physical space. Gaining the right to actually start the community garden was the result of a long process of conflicts and negotiations with local residents, private gardeners and the municipality. Interestingly, one of the conflicts over land was that land would be ‘taken away’, even though the new garden would produce products for the needy and create a more inclusive space (Interview TA; Interview TB; Interview TN). Similarly, a newly built



urban garden project in the city centre (the ‘Peace Garden’ *Vredestuin Couwenburg*³⁰³) was opened after a series of negotiations, including conflicts over the risks associated with eating plants for public health. The municipality argued that city centres are full of smog and toxic emissions, requiring hard scientific evidence to assess environmental and health risks. Additionally, the design of

the garden was quite small resulting in discussions about the objectives and impact of the garden in relation to its space. Despite these conflicts, and after some tough negotiations, the garden was realised.

Interestingly, the very first TT initiative (at the *Bergwegplantsoen*) was sometimes confronted with dog poo. Dog owners were asked to clean it up, using social media. Finally an extra facility was installed so that dog poo could be removed. Another interesting image that symbolises the ways in which conflicts and pragmatic solutions is combined is the location of the Gandhi-garden. A week or so after I started my ethnographic work, I noticed that the Gandhi-garden was actually a green area in the midst of a residential area, a gas station and a highway. These places are not the most sustainable and eco-friendly places, to put it mildly, which means that the physical site of the Gandhi-garden is located near its ‘symbolic enemies’.

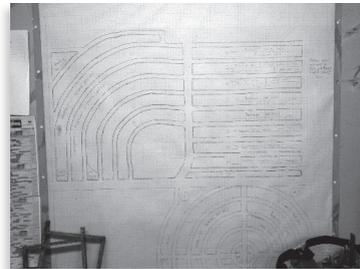
The materiality of garden-related practises is also a bodily experience. I noticed that many aspects of gardening were relatively simple activities: drinking ‘home-grown’ tea, planting seeds, pulling weeds, working and cooking and eating together. Physical labour and sweating bodies are part and parcel of working on the garden. These working bodies were transformed into activist bodies when we marched in the streets in the MAM and throwing seed bombs (see above). Such bodily engagements have specific implications for dealing with food, wood, trees, medicine and relations with humans and animals. As many Gandhi-gardeners reject and criticise the food industry, food and nutrition is reconsidered in relation to the body. The human body, but also animal bodies, have an intrinsic value as they are deeply entangled to something bigger and precious. Similarly, alternative food networks, veganism, permaculture are

³⁰³ See: <http://www.luchtsingel.org/locaties/pompenburg-park/de-vredestuin> and <http://vredestuin.org>.

used to cleanse and revitalise body and mind (Interview TH; Interview TJ; Interview TN; Interview TQ; Interview TTA). In some instances, participants would consider health and medicine in radically un-institutionalised terms, for instance, by avoiding pills and pharmaceutical medicine (as much as possible) and relying on eating and living healthy. Health and well-being, for many Gandhi-gardeners, are not isolated from relations with other humans (a kind of ‘social health’). Therefore, linkages between different forms of life (bees, hedgehog, plants, trees, human beings) are flexibly linked to local and distant places (e.g. Mexico, Gaza, Chinese sweat shop workers). This is enabled through frames of spirituality, holistic ideas, and a sense of inclusive community. However, this does not mean that boundaries and tensions disappear. In fact, numerous boundaries and fences have emerged. Smokers are not allowed to smoke inside of the garden cabin, people with too radical ideas (either esoteric or activist) have discussions, weeds are pulled, fences are built to prevent produce theft, and birds and snails are prevented from eating fruits and produce (Fieldnote U). Even though these examples make sense for many Gandhi-gardeners, they are real and do exclude people, animals and things despite the inclusive objectives of the garden.

Planning and everyday support systems

The social commitment and ideals of many Gandhi-gardens fuel their activities, but a range of material infrastructures, everyday tasks and routines also allows the Gandhi-garden to flourish. Most practices and projects require strict planning and support systems. An important aspect is simple planning and coordination. There are plans to clean the garden cabin, but also agreements about who owns the key to the fence lock and the cabin (Fieldnote V). In a similar vein, a division of labour is arranged to coordinate different parts of the garden during ‘garden days’ (in Dutch: *tuindagen*). This is important in order to avoid depending on one or two ‘permaculture experts’. This creates a decentralised form of responsibility and creates a more professional gardening culture. There is also ‘cultivation planning’, implying that, according to permaculture principles, two types of cultivation are combined: swapping and combination (Interview TC)³⁰⁴. These permaculture planning principles suggest that particular ‘products’ should be planted ‘in tandem’ or ‘mixed’ on the same soil in order to maximise organic and sustainable nutrition. Resonating with these support systems, everyday routines are crucial as well (Interview TTB). I noticed that drinking tea or coffee together and talking about anything, was a means



³⁰⁴ See also: <http://wilgenplantsoen.com/hoe-doe-je-dat/wisselteelt-en-combinatieteelt>.

to support and maintain the social fabric of the Gandhi-gardeners and welcome new gardeners and visitors (Fieldnote W). These small rituals are also present during gardening. Sometimes, a number of gardeners (including myself) talked and made jokes, while at other moments we were silent and worked hard. These jokes and silences, in combination with doing the same physical labour, are important to keep the social network going.

Next to these micro-dynamics of volunteering, financial means are also supporting the Gandhi-garden activities. Besides donations, the garden cabin is rented for activities related to the garden, e.g. yoga classes, political gatherings, workshops, etc. Celebrating one's birthday, however, is not considered as a legitimate reason to rent the Gandhi-garden cabin. Another important supporting system is the set of digital networks, such as Facebook, the Gandhi-garden website, etc. Interestingly, the garden organised a workshop for Gandhi-gardeners to think more strategic about Facebook, and about timing and tactics of communicating news and workshops (e.g. the difference in impact between 'liking' and 'sharing' a Facebook message). This knowledge is used to make the digital identity of the garden more professional and become more visual online. The underlying physical urban infrastructure of the Gandhi-garden should be mentioned as well. An eco-system of physical networks enables the Garden to exist and be maintained, such as fences, roads, bikes and cars. These aspects are perhaps taken for granted, but without proper fences and public roads connected to the garden, the garden would lose its distinctiveness and accessibility.

Such 'immanent support systems' maintain the Gandhi-garden on an everyday basis. The notion of 'support system' is somewhat misleading here, as it suggests that there is a core phenomenon that requires support from 'the outside'. In practice this was not the case. The Gandhi-garden came into existence through a variety of forces and practices, and is maintained through a variety of forces and practices.

Law, the green state and bottom up citizenship

Despite these 'everyday support systems' and the community-based logic of Gandhi-garden related initiatives, public institutions, the state and citizenship are key. The Gandhi-garden and activities linked to the garden are connected to state institutions and institutional structures in a variety of ways. In some instances, such institutions clearly support the Gandhi-garden, however, in many instances there are explicit tensions, conflicts and degrees of marginalisation.

As is the case for decades in Rotterdam, 'the environment' and 'nature' have been governed by state institutions. For governmental agencies, the Gandhi-garden has become one of the community gardens, and part of a broader policy programme focussed on improving spatial quality and activating citizens (Municipality of Rotterdam, 2010, 2012; Municipality of Rotterdam, district north, 2014). I noticed that whenever I read

policy documents or talked to politicians or policy makers, the ‘energy’ and ‘vibe’ of TT was mentioned, but much more rationalised and put in a broader picture of spatial planning, public health or active citizenship (Interview TB; Interview TL; Interview TO). The garden was allotted a physical site. It has had a legal status as member of an association and as part of a foundation called the Peace Garden (in Dutch: *Stitching Vredestuin*), but it was also supported by a local governor and fitted plans to stimulate health, social cohesion, the local economy and spatial quality. So, in many ways there is no actual opposition between government policy and the activities and activism of Gandhi-gardeners. The municipality of Rotterdam does not impose a blue-print onto the city, but focusses on what local activities already exist that are connected to the overall ambitions of the local government, and then tries to support and extend them. One of these types of activities are urban community gardens, next to a wide range of similar activities that are related to urban sustainability (e.g. water squares, solar panels, green roofs, electric cars, public parks). Besides local formal governments, a variety of actors and organisations are involved in supporting the Gandhi-garden, such as housing organisations, environmental agencies, insurance companies, project developers, etc. All these actors, in different ways, have ‘a stake’ in the Gandhi-garden and urban community gardens more broadly (increase in health, liveability, real estate value).

However, there are numerous examples that illustrate a more conflictual relationship between the Gandhi-garden and institutional powers. One example I found striking was that the Gandhi-garden needed a water pump for an irrigation system to water the garden, instead of using potable water from a tap. There was a debate about why one should receive ‘a piece of paper’ from the government in order to gain access to something that should be a right: ground water (Fieldnote X). Similarly, the legal requirements for public health were sometimes conflicting with the ways in which urban gardeners like to work. A case in point was the air quality that might impact the quality of produce in the city centre (*Vredestuin Couwenburg*). The question that emerged here was: who has the right to define when something is unhealthy? Another example that struck me was given by one of the gardeners, namely that it is legally forbidden to pick blackberries, based on a Poachers Act. Allegedly, two kids got fined over picking blackberries somewhere in the Netherlands some years ago. Again, picking fruit in the open is considered a basic right, similar to food and water by many Gandhi-gardeners (Interview TE). These examples illustrate that the state is not retreating in the context of active citizenry, but still present and quite powerful in subtle ways. Institutional conflicts also occur between public organisations themselves, e.g. between the ‘environmental agency’ and ‘urban development’ (Interview TTD). Both organisations are part of the urban administrative apparatus, but sometimes have different goals and priorities (e.g. using space for ‘green’ or ‘a street’). In many cases,

such institutional conflicts are resolved by combining and mixing these objectives in plans and integrating them through negotiations.

The relationship between the Gandhi-garden and the institutions surrounding the garden is complex. There is no clear image of support or conflict. Depending on the context, Gandhi-gardeners as ‘active green citizens’ are supported and find many institutional alliances, but sometimes can be considered as ‘activists’ or ‘dissent’ citizens, that is, from a statist perspective.

Money, sharing and alternative economics

One of the most exiting activities related to the Gandhi-garden is the critical reflection on the economic system and experiments with alternative currencies and economic models. Instead of relying on a given monetary system, i.e. using euros, other ways of understanding and shaping social relations have been introduced. Even though these experiments are rather marginal and not omnipresent, they are significant and worth mentioning here.

For many Gandhi-gardeners, the dominant system of growth-based economic is problematic or even repulsive. They reject the idea that material resources are infinite and that a capitalist market system is just and fair to everyone. I noticed that not only the monetary system and its effect on the human psyche and socialisation was problematised, but also mass consumerism and materialist individualism. Someone referred to the historic economic change in society: “You [i.e. one, SJ] used to inherit closets and other stuff. Now, you think that it is just garbage, now you buy new things. Everything has become replaceable”³⁰⁵ (Interview TR). Such critiques are related to the fact that cheap commodities and products are considered normal. As someone reframed the idea of free stuff: “the idea of something being free is absurd” (Interview TR). I also learned that such critiques are sometimes informed by ‘eco-centric’ thought and thinkers I actually did not know (e.g. Muir, Leopold, Larson, Naess) (Interview TR). For many Gandhi-gardeners, it is a problem that we do not see the physical and symbolic price of cheap products any longer. A number of experiments unfolded in order to move away from capitalist and anonymous economic systems that sustain this invisibility.

One alternative was the introduction of an alternative currency, called *DAM*³⁰⁶. The *DAM* emerged after the financial crisis of 2008 when a small group of people started to reconsider the complex socio-economic interdependencies connected to dominant currencies such as the dollar and the euro. Instead of hierarchical forms of debt and dependency, based on creating something out of nothing (‘rent’), a fairer and less

³⁰⁵ In Dutch: “Vroeger erfde je nog kasten en dingen. Nu denk je dat je oude troep, nu koop je nieuwe dingen. De waarden veranderen ook. Alles is vervangbaar geworden”.

³⁰⁶ See: <http://www.rotter-dam.nl>.

mediated currency was to be designed. One *DAM* - a digital currency - equals one euro. As soon as one buys and uses e.g. 100 *DAM* for a good or service in the Rotterdam region, someone else receives these 100 *DAM*. As one of the people involved put it: “Everyone has a potential to do something, not based on money but on capacities. A *DAM*-system accommodates this. Both of us don’t have a euro, but we can agree upon a transaction”³⁰⁷ (Interview TI). As thousands of users exchange *DAM* the total *Dam* remains stable. As the currency is directly linked to goods and services, there are no virtual added values and rent. One can be indebted, but this is debt towards the entire social system, not an institutionalised bank. In other words, *DAM* creates credit both ways, without ‘a middle man’ (Interview TI). Similar local currencies are popping up all over the world. Regional and local small entrepreneurs and businesses use *DAM*, very often still business-to-business. An increasing number of local entrepreneurs accept *DAM* (including a local community bakery related to the garden). An interesting idea behind the *DAM*-project is that a small number of currencies now dominate the monetary system, which is risky. If one currency falls, the intertwined nature of global finance and economics leads to unprecedented concerns. Alternatively, a high variety of local and regional currencies circumvents these risks and is able to reshape socio-economic relations in a fairer and material way (Interview TA; Interview TI). *DAM* is considered legal by Dutch Central Bank and Netherlands Authority for the Financial Markets and there are no institutional problems or competition with the Euro. However, this might change if *DAM* and other currencies grow. I noticed that such social initiatives are quite demanding, especially if one does not have a part-time job, which holds for many Gandhi-garden related activities. Another concern is that *DAM* is still a marginal phenomenon. This might change when governments accept *DAM* as tax payer money or when cinemas, cafes and restaurants start accepting *DAM*.

Next to this monetary innovation in the Gandhi-garden network, a more material economic innovation emerged. Instead of taking scarcity and financial transactions as givens, the ‘thingness’ of goods and services is appropriated and centre-staged by some. A number of initiatives focus on sharing, swapping (e.g. plant seeds), do-it-yourself (DIY), using (forgotten) skills and crafts, volunteering, repairing stuff and giving stuff away. This type of ‘alternative economics’ is expressed in many ways. As I worked in the garden, I slowly noticed that growing your own fruits, vegetables and herbs was also an economic activity. However, instead of buying these goods in a supermarket, one is a



³⁰⁷ In Dutch: “Iedereen kan wat, niet op basis van geld, maar op basis van mogelijkheden, zo’n Dam-systeem faciliteert dat. We hebben allebei geen euro, maar we kunnen wel een transactie afspreken”.

farmer, transporter and consumer at the same time (Interview TF; Interview TR). The boundaries between economic, ecological and social life become rather blurry. Reframing and reshaping economic activities is expressed in giving away produce ‘for free’ and repairing broken goods (e.g. a bike or a coffee machine). Instead of relying on money as a force of debt relations, other means are used such as social commitment or communal solidarity. I noted that all Gandhi-gardeners were volunteers in the garden, but some were also doing volunteer work at a food bank and repair café³⁰⁸. For the latter, it is important for the volunteers to teach visitors that they can also repair things themselves. This is crucial in order to spread a ‘repair-mentality’ and that throwing away stuff is not a normal thing to do. Seldom did I hear a Gandhi-gardener talk about money or issues in financial terms. However, many people have a paid job (sometimes part time), yet the types of jobs they have are often considerate and related to sustainability, public and care-related work (e.g. organic shop, education or health professionals). This is not always the case however.

It is safe to say that economic life and activities are often considered as a social concern based on solidarity. As one gardener put it: “We will not change our lives if we don’t see that inner growth is...taking one step back in a material sense”³⁰⁹ (Interview TA).

New communities, glocalism and flexible networking

Even though the Gandhi-garden and its many initiatives stretch throughout Rotterdam, the network is in fact much more plastic and global in nature. The network is a typical ‘assemblage’, meaning that all related initiatives, activities and networks are entangled with the Gandhi-garden, but might do radically different things, with different local aims and histories.

This flexible structure accommodates a flexible set of communities that co-exist and work in very different ways on similar concerns and issues. Such loosely coupled communities can be found in the field of social movements and environmental activism in other TT initiatives in other Dutch cities (Hoeksche Waard, Deventer, Den Haag, etc.), but also national TT actors and groups and environmental activists in Environmental Defence (in Dutch: *Milieudefensie*). In the domain of institutional politics and administrative bodies, there are linkages with Dutch political parties (Party for the Animals), politicians and government officials (Interview TB; Interview TS), European environmental regulations and national policy makers (Department of Environment and Infrastructure). Similarly, the domain of science and research

³⁰⁸ See: <https://repaircaferotterdamnoord.wordpress.com>. Repair café ‘employees’ do get a small financial compensation.

³⁰⁹ In Dutch: “We gaan ons leven niet veranderen als we niet zien dat het innerlijke groei is...als wij materieel een stap terug zetten”.

is linked via students (e.g. doing ethnographic work for a Master thesis), Dutch and non/Dutch scientists (including myself). Interestingly, quite remote areas in the world are also linked to activities of the Gandhi-garden, such as children from Gaza (for an exchange project), people in Mexico with traumatic experiences (Interview TA), Cuban youth (Interview TH) or poor residents in South Africa (Transition Town South Africa). Obviously, some ties are stronger than others, but they are connected nevertheless. Such coupled activities also allow new alliances and initiatives to emerge.

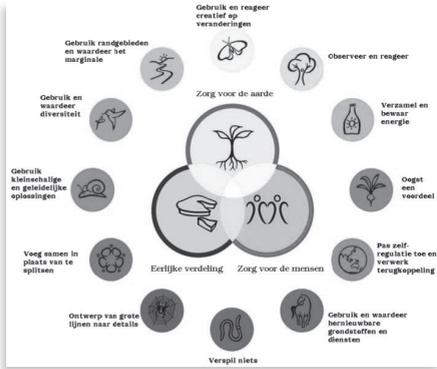
This flexibility also creates challenges. A risk is that flexibility may also lead to early cancellation and organisational fragility due to e.g. loss of personal commitment, the logic of electoral cycles, finishing contracts. Related to this concern is the way in which Gandhi-gardeners envision the future. For some, growth and expansion is important to have impact on a larger scale using for example urban farming methods (Interview TA), while others might like the small-scale and innocent character of a community garden (Interview TT) and urban designing and planning methods (Interview TTC). This is where Gandhi-gardeners are not speaking with one voice (again!), namely the extent to which the garden should be a politically motivated activist group (Interview TA; Interview TD) or a more hobby-like community that enjoys gardening (Interview TE; Interview TT; Interview TH).

6.8 Transition Town Den Haag, a.k.a. DHIT

One of the moments that created TT The Hague was a movie night in November 2012. This night was organised by someone with experience with Transition Towns and social movements elsewhere³¹⁰. A number of potentially interested people from The Hague and beyond were invited (also someone from TT Rotterdam). In total about 40 people met and watched a movie about the Transition Towns movement. This movie triggered a discussion about local and global social, environmental and economic issues. This demographically diverse group discussed many ideas. After this meeting, it became clear that there were different ways to frame how TT could be translated in The Hague. One group mainly reflected on issues while the younger generation wanted to be more hands-on and start doing stuff. During a follow-up meeting, more specific organisational issues were raised about future cinema evenings, urban gardening and other themes. Some sessions were organised in which schisms seemed to occur between old vs. young and thinking vs. acting (Interview TU; Interview TV; Interview TAG). This made it challenging to agree on the meaning of TT The Hague and its

³¹⁰ This person together with others had international experience with social movements (e.g. participating in a Transition Town in Barcelona, supporting workshops in Kenyan slums, and studying the Brazilian Afro-Brazilian movement *cultura negra*).

objectives. This period was somewhat stressful, as there were divergent ideas and ambitions as to how TT The Hague should develop. Despite these differences, a more



central group continued to exist and work. At the same time, a number of people left the initial group. And even though the organisational structure was not legally established (as an association or foundation, etc.), a small more or less stable network emerged. That is to say, a number of people (around 10) met regularly and organised events and explored ways to further the network. A logo was designed, a website was made, local entrepreneurs

were visited, NGO's and more public organisations were mapped. These organisations were selected on the basis of their focus on organic food, energy or other sustainability-related themes. Nevertheless, it was still an unstable period in which this young group tried to make TT more 'sexy' and less rural (making 'town' in Transition Town more 'urban'). Among other things, this resulted in a new label: DHIT, The Hague In Transition (in Dutch: *Den Haag In Transitie*).

During and after the summer of 2013, DHIT developed a strategic vision, a flexible structure and events that all resonated with the spirit of permaculture and the TT discourse. On its website, DHIT states that it:

“facilitates the coming together of local communities in The Hague in order to make positive changes in life and work. From greening a neighbourhood, exchanging services and producing your own food, to being more conscious about energy use, waste and consumption”³¹¹.

DHIT tries to be(come) a breeding place to develop all kinds of initiatives and alternatives in the city to become “less oil-dependent” and become more sustainable and social. DHIT is very much inspired by permaculture as a more or less holistic worldview that addresses different themes and issues based on three principles: 1) taking care of the earth; 2) taking care of people; and 3) safeguarding a fair distribution. In their more formal vision statement, permaculture principles are explicitly noted in combination with creativity and a democratic spirit: “We, residents of The Hague and its environs, together, create a green, creative and self-sustaining city. We do this by taking care of

³¹¹ In Dutch: “faciliteert het samenkomen van de lokale gemeenschap in Den Haag om positieve veranderingen te maken in onze manier van wonen, leven en werken. Van het vergroenen van de wijk, het uitwisselen van diensten en het verbouwen van eigen voedsel, tot het bewust omgaan met energiegebruik, afval en consumptie”. Translation SJ, <http://www.denhaagintransitie.org/den-haag-in-transitie>.

the earth, of each other, sharing justly and having lots of fun³¹². For DHIT, creating networks and bridges between different initiatives, individuals and organisations is a crucial strategic method. Such social actors can be local residents, policy makers, environmental organisations, an alternative currency initiative, sustainable food networks, alderman, local entrepreneurs and/or laymen.

My first contact with DHIT actually started with reading a small flyer for a so-called guerrilla gardening flash mob event in The Hague. Somehow, this flyer circulated in the Gandhi-garden when I was doing participatory work in Rotterdam (summer 2013, see above). Interestingly, the flyer was made of decomposable material with seeds that would grow once you throw it away. I was also triggered by the professional and playful lay-out of the flyer. DHIT co-organised this event with a number of other organisations. I was curious about this TT group, so I contacted them via their website. Interestingly, one of the DHIT members I contacted had also talked to one of my colleagues from DRIFT (Fieldnote Y). During my meeting with the DHIT member, together with my DRIFT colleague, I was welcomed and invited to participate and conduct my research. One of the first actual DHIT experiences was a meeting with some 'DHIT members' in the building of a 'sustainability agency' related to city authorities (*Duurzaam Den Haag*, DDH) (Fieldnote Z). This meeting, in the summer of 2013, was organised to see how DHIT relates to the local government, and what potential cooperation might be possible. I noticed that there seemed to be a difference in how people understood the meaning of making the city sustainable. This was especially evident with regard to the role of big companies. It seemed that many DHIT members were rather sceptical with regard to cooperating with big multinationals such as Siemens or Shell. For most of the DDH people, this was about also getting big organisations 'on board' and working together. However, for most DHIT members that were present, this was an ethical concern. It seemed that big multinationals are not 'natural allies' for DHIT. After the meeting, this small selection of the DHIT group went out for a drink. All of them used their bikes, and since I had no bike (I used public transportation that day), I was welcomed to join them and jump on a carrier. During this ride on a hot summer day through The Hague, I talked to one or two people with the DHIT group about the meeting. It was a nice experience to get to know some of the DHIT members. When we arrived at one of the hot spots for the DHIT group (a lunchroom/café at the *Prins Hendrikstraat*). I noticed that even though I had lived in The Hague for many years, I was not familiar with this part of the city. The DHIT group was really diverse and we talked about the meeting. Despite the difference between DHIT and DDH regarding big companies, it became clear that the meeting seemed to be a success in the sense

³¹² In Dutch: "Wij, bewoners van Den Haag en omstreken, creëren samen een groene, creatieve en zelfvoorzienende stad. Dit doen wij door voor de aarde te zorgen, voor elkaar te zorgen, eerlijk te delen en heel veel lol te hebben". Translation SJ, <http://www.denhaaginttransitie.org/den-haag-in-transitie>.

that DHIT was able to voice their concerns and to explore potential ties with DDH. I noticed that the group was energetic and joyful; they talked about many things and had many plans. These plans were idealistic in the sense that they tried to ‘change the world’, but were also specific in terms of cooperating with different groups in all kinds of projects.

The decentred (eco-)events of DHIT

This first experience is quite symbolic for the many meetings and activities in which I immersed myself for some months. Slightly different from my experience with the Gandhi-garden, the DHIT group does not have a fixed place for their activities, such as a community garden. The DHIT group itself is loosely coupled, as well as the types of activities they are engaging with. I participated in many of the DHIT meetings and activities that DHIT co-organised. I learned that DHIT was clearly a ‘nodal point’ related to a wide variety of individuals, similar local groups, governmental agencies, local business and other actors. This broader context and co-evolution of initiatives and efforts is important to keep in mind.

In the remainder of this section, I cluster many of the events, activities and concerns DHIT is engaged in on the basis of specific themes. Similar to the Gandhi-garden context, these clusters are by no means isolated from one another in practice.

Politicising The Hague and criticising systems

DHIT is a social movement. Therefore, many of the DHIT members articulate critique against how society is structured and how governments and businesses operate, especially with regard to climate change, carbon emissions, environmental degradation, food production, health and mass-consumerism. These general concerns are taken up by various DHIT members in different ways. I noticed that DHIT can be characterised as a heterogeneous network that also politicises in a heterogeneous manner. That is to say, the way in which the city of The Hague (and beyond) is organised is called into question and countered with all kinds of projects and alternative visions and practices.

The practice of politicisation became clear during many encounters and meetings. I interviewed, or rather had a conversation, with some DHIT members on a rainy afternoon in January 2014. We drank coffee, as they talked about their motivations to join DHIT (Fieldnote AA). Interestingly, as is often the case in my TT experiences, we spoke about food. One of them said that he was not satisfied with tomatoes from the supermarket, because they taste different than the ones you grow yourself. And cucumbers have a particular taste, “they are almost sweet, very different, a lot of people don’t know this (...) we lose the original taste and nutritional value of food” (Interview TU). Similarly, our understanding of what kind of materials and fertilisers are used in food are unknown to the wider public. This experience symbolises how

DHIT members diagnose very specific social problems and reflect on them. Similarly, other DHIT members criticise the food system for its mystification of extracting materials and nutrition in distant places, for example, by eating meat on a daily basis (Interview TV). Some explicitly politicise the wider economic system and the ways in which sustainability concerns are linked to issues of global inequality and poverty, informed by insights from e.g. development studies (Interview TU; Interview TV; Interview TW). As one active DHIT member put it:

“It is presented as normal, also in schools, in our upbringing. We are taught that the entire history, everything, indicates that this is the only choice we have...but things are distributed unequally, everything is uneven...almost everything we have here in the Netherlands has a negative effect, for example for our food consumption, the country of the Netherlands is too small”³¹³ (Interview TV).

Related to this economic critique, I noticed that formal political representative systems and city administrations are questioned as well. As various DHIT members and actors related to official governing institutions noticed, there is a clear tension between how institutions address concerns and how society experiences problems. Someone even said during an interview: “The council [city council, SJ] wants it, so the city wants it (...), but that is simply not how it works”³¹⁴ (Interview TX). In some instances, the somewhat typically technocratic approach of The Hague’s city planning is critiqued, indicated by a respondent’s mind-blowing phrase: “experts need problems” (Interview TW). In harsher terms, this DHIT member argued that all “systems and models deprive us of our souls” (Fieldnote AD). Similarly, another DHIT member told me that:

“...those civil servants work behind all kinds of walls and all they know is numbers and accountability and control, that is the world they know...and political games. That is their main concern. But actually thinking for yourself...”³¹⁵ (Interview TY).

These general critiques are often connected to very specific concerns or personal experiences. For example, the issue of ‘green’ in official politics is measured by numbers, “...but well yeah green, how do you actually measure that”³¹⁶ (Interview TZ). DHIT members address socio-economic and environmental concerns in many ways,

³¹³ In Dutch: “Het wordt zo gepresenteerd allemaal, ook op school, hoe je opgroeit. Ons is geleerd dat het hele geschiedenis, alles, wijst erop dat dit de enige keuze is...maar in studie geleerd ongelijke verdeling... alles is scheef...bijna alles wat we hier hebben in Nederland heeft negatieve effect...zo scheef...alleen al voor onze vleesbehoefte is Nederland te klein”.

³¹⁴ In Dutch: “De raad wil het, dus wilt de stad het...zo werkt het gewoon niet”.

³¹⁵ In Dutch: “Die ambtenaren zitten achter allerlei muren en die kennen de wereld van cijfertjes en van verantwoording en van controle, dat is de wereld die ze kennen...en van politiek spel...en daar zijn ze druk mee. Maar gewoon zelf nadenken...”.

³¹⁶ In Dutch: “Politiek gezien gaat het om de cijfertjes...maar ja groen...hoe meet je dat”.

i.e. through Transition Town knowledge, movie nights, discussions, but also through ‘knowledge’ about the suffering of animals, carbon emissions in the city, and litter. A nice example was a movie night organised by a befriended organisation called Healthy Soils (in Dutch: *Gezonde Gronden*) about food waste, followed by a discussion about how to tackle food waste in the region of The Hague (Fieldnote AB). These diagnostics are considered ‘factual’ and backed up by figures and scientific studies, but are sometimes also considered to be self-evident and part of being a moral creature. In a different setting, this was clearly evidenced by a DHIT member that challenged placing food and money on one table (Fieldnote AC). One ‘simply’ does not put these incompatible phenomena on one and the same plateau. Interestingly, DHIT members sometimes explicitly aim at translating what counts as a ‘sustainable city’ for less privileged neighbourhoods. Some actually stated that DHIT should not be, or become, an elitist project or a movement for the ‘usual suspects’ (Interview TV; Interview TAA). DHIT members also use a wide range of theories and perspectives to diagnose current society, including the work of critical thinkers like Jacques Rancière, Erich Fromm and Noam Chomsky (e.g. Interview TV; Interview TW; Fieldnote AD).

During my field work, I noticed that The Hague was a rather politicised city. Some policy makers told me that there are also ‘opponents of sustainability’ (Interview TAB; Interview TAC). Luckily, I was able to hear these ‘voices’. I was eager to hear this critique, as I encountered almost no critique against the discourse of ‘sustainability’ in The Hague. The conversation I had with this influential actor in city politics was illuminating and refreshing. The open conversation shed light on how sustainability-led initiatives could be considered as “green socialism, Marxism in a green coat, or the new Bolsheviks”³¹⁷ (Interview TAD). These creative terms suggest a clear anti-totalitarian and anti-statist attitude in the ways in which sustainability should be addressed. What also struck me was that such voices try to uncover contradictions and hypocrisies in sustainability-led policy narratives. For example, a local food strategy was installed by the municipality to stimulate local food systems and reduce ‘food miles’ (The Hague Municipality, 2014). But, the question was: “why not also install a local car strategy and bike strategy, and even locally producing telephones” (Interview TAD). Such a critical attitude towards sustainability, this respondent argued, is marginalised time and time again, even when scientific sources and references are provided (e.g. Kuznets curve, work of Marcel Krocht, Kees Leper, Bjorn Lomborg or Peter Siebelt)³¹⁸. It was telling that I did not know these latter names, since I have

³¹⁷ In Dutch: “Groen socialisme, Marxisme in een groen jasje, of de nieuwe bolsjewieken”.

³¹⁸ I was handed some of these books in order to know more about them. I was also invited to attend a press conference with a researcher that criticises that ICCP reports for downplaying scientific evidence. This suggested that this critical voice ‘needed to be heard’, according to the respondent. This respondent even told me that critical articles are not even published in a Dutch populist-conservative newspaper. In Dutch: “Kritische stukken over duurzaamheid worden zelfs in de Telegraaf niet geaccepteerd” (Interview TAD).

been enmeshed in sustainability discourses in my work for many years at a research institute. Interestingly, a more communal, bottom-up and business-driven version of sustainability is indeed supported (partly resonating with a DHIT approach). As this person put it: “Sustainability will become more significant, when the government and the left are not touching it...only then it can be owned again by neighbourhoods, companies...[to strengthen, SJ] social cohesion”³¹⁹.

Organisational concerns, working groups and a flexible structure

As mentioned earlier, DHIT started its first phase as an organisation trying to shape its identity and structure in 2013. This, however, did not go smoothly since there were some coordination and management issues. It was not always very clear what the main vision was and how responsibilities were distributed among DHIT members. This period was turbulent and there were many long and sometimes frustrating meetings, which led some to leave the DHIT organisation (Interview TU; Interview TV). After the summer of 2013, perhaps after a relatively calm period, things changed. A workshop led by TT Netherlands initiator, Paul Hendriksen, was prepared in order to assist DHIT in its quest of establishing a new structure. After Hendriksen informed DHIT about the structure of a central group for general policy (in Dutch: *kerngroep*), theme based groups that were responsible for execution (in Dutch: *werkgroepen*) and a group that tried to find synergies and linkages between working groups (in Dutch: *focusgroep*), organisational stability came to the fore. I was also present at this workshop, which was quite interesting as I witnessed a TT network ‘in the making’ with all its chaos and internal debates (Fieldnote AE). Interestingly, prior to this workshop, some DHIT members actually proposed a similar structure, following ‘TT guidelines’, but they were not adopted. It seemed that a ‘real TT authority’ had to propose this structure to be adopted (Interview TU). In some instances, I was asked what I thought regarding such organisational issues. I responded by highlighting tensions and trade-offs associated with a specific structure (Fieldnote AF). Importantly, this new structure provided a flexible yet focused design to organise events, projects and establish new social relations (including with former DHIT members). An important organisational innovation was ‘division of labour’. Instead of all DHIT members preparing and working on one single event together, this new structure enabled some - those who were interested and experienced - to focus on one event, while others focussed on something else (Fieldnote AG)³²⁰. I felt that this process made DHIT a more ‘professional’ organisation.

³¹⁹ In Dutch: “Duurzaamheid zal aan belang winnen, als de overheid en links er met hun poten van af blijven.. dan blijft het weer iets van de wijk, bedrijven, [voor] sociale cohesie”.

³²⁰ Importantly, the organisation was formed ‘on the job’. That is to say, thematic groups were introduced and reframed during so-called ‘Join DHIT meetings’, when newcomers were invited to participate. After one of these meetings the thematic groups were called: Hart & Soul, Youth, Awareness & Education, Theatre for Transition, Art for Transition, Mobile Gardening, Economy, The Green Circus, Multilingual,

Despite this new organisational structure, some DHIT members were considered as too ambitious and wanting ‘the transition’ too soon (Interview TU; Interview TV). This caused some tensions regarding the practicality of upholding promises. For example, a nice and interesting collaboration was initiated by one DHIT member, while other members were not involved. DHIT, as an organisation, was not yet fully in place while its ‘external communication’ often seemed already quite professional (I also heard this from non-DHIT members). Furthermore, despite the new structure, some loyalties can create different subgroups within the organisation. Even though this was not always very clear, and did not result in many problems, it sometimes causes miscommunication and irritations. Via these negotiations and intense debates, a vision was actually formulated that represented the main objective of DHIT, based on earlier definitions (Fieldnote AH):

“The residents of The Hague and its region, together create a green and creative self-sustaining city by acknowledging and connecting with humans, plants and animals, based on the principles of looking out for each other, balanced with the earth and based on fair distribution”.

For some, this formulation was a milestone, as some DHIT members argued: “We debated for half a year, only to formulate one little sentence”³²¹ (Interview TU). Such formulations were often debated because of the inclusive ambitions of DHIT. Another DHIT member warned against using words that “divide and rule”, such as “and”, “the” and “or” (Fieldnote AI)³²².

An interesting interrelated organisational concern I was also involved in was: how to account for a social movement in legal terms? DHIT is considered by many as part of a broader social movement to make societies greener, healthier and more liveable ‘from below’. The diversity of local initiatives is a strength of this movement, but it also needs to ‘communicate’ with a government or other organisations that actually have a legal status. This might be important to apply for a subsidy, or make an agreement with an organisation, or receive compensation for a workshop or a consultancy. Therefore, many discussions revolve around the question what legal status DHIT should have: a foundation, an association or something else. Many meetings concluded that the legal structure should only support the movement, not the other way around. I participated in a small preparatory working group, together with other DHIT members, to explore

Media and Vacant Places. All DHIT members were connected to one (or more) thematic groups, depending on one’s preference and experience. I attended some meetings of the group called Consciousness & Education (Fieldnote AA).

³²¹ In Dutch: “Sommigen zeiden...ja we hebben een half jaar gedaan om één zinnetje te formuleren”.

³²² This is perhaps the most Foucaultian remark I picked up during my field work.

the options for DHIT (Fieldnote AD)³²³. One of the core concerns was how to account for the many voices in a fair and democratic way, while still having a structure to communicate with the ‘outside world’. Whenever a clear legal status or management structure is introduced, some DHIT members are sceptical about its democratic and open character. This organisational concern was partly solved by the ‘interactive group structure’ (see above). A different way to deal with disagreements was the so-called ‘sociocratic method’. This method refers to having qualitative discussions instead of quantitative voting on disagreements (Fieldnote AE). The sociocratic method, however, was rarely used, mostly because it seemed to require quite some knowledge provided by an expensive expert workshop³²⁴. Another way to account for tensions, small irritations and general concerns, is the so-called ‘check-in & check-out method’. This was an interesting and rather important ritual to open and close a DHIT meeting. Every participant was able to voice his or her ‘emotional well-being’ before and after the meeting. In some instances, a frustrated person was comforted by others. I experienced this method as very valuable. Often, check-in expressed more emotional concerns than the check-out, especially when a meeting was considered fruitful and effective (Fieldnote AK).

DHIT is not only a socially decentred network that focusses on many themes and issues, but it is also physically scattered. Instead of having one central building or meeting place, a number of spots were frequently used. In most instances, DHIT members met at in a building somewhere in the city, a favourite bakery, the official building sustainability programme of the municipality (DDH) and - more recently - a community centre. This physical network illustrates the multi-centric nature of DHIT as an organisational form.

Joy, optimism and activist events

Despite some organisational concerns, I must say that since my first meeting with the DHIT group, I was surprised by the important role of joy, laughter and fun. I noticed that many, if not all, DHIT meetings and activities are directed towards making The Hague (and its environs) more sustainable, liveable and healthy, but with a smile and having fun. This might be understood as a ‘counterforce’ against some of the more serious concerns about e.g. global problems, the social role of DHIT, internal debates and practical agreements. Nevertheless, I felt that humour and joy went hand in hand with organising activities and activist events. This ‘joyful activism’ is expressed in various ways.

³²³ Interestingly, my role of researcher was often respected, but also played with ironically. One DHIT member addressed in a counter-ethnographic ironic manner asked me in the context of a my perspective on the DHIT vision: “...but you are an independent researcher right, you don’t have any influence on the research object?” (Fieldnote AJ). In Dutch: “maar je bent toch een onafhankelijke onderzoeker die geen invloed heeft op het onderzoeksobject”. I like this ironic play, because it resonates with my definition of science and academic practice (see Chapter 2).

³²⁴ See: <http://www.sociocratie.nl>.

An interesting example is the so-called ‘Cup Game’ from the United States. This game was new to me. To play this game one needs drinking cups, a table and a group of people. Everyone starts with one cup and slowly starts with a fixed rhythmic beat by clapping and tapping cups and hands on the table. This game is used in different ways, to support a song or even translated into a Spanish flamenco rhythm. I was taught how to join the game by the DHIT group (Fieldnote AM). This example might seem marginal and irrelevant in the broader context, but I noticed that this game created a sense of community among the DHIT members. Even though nothing was created to ‘make’ the city sustainable, it exemplifies what methods such local groups use to get inspired and stick together. This, however, did not mean that fun and joy was not integrated in particular social events and initiatives. The preparation of events and potential initiatives such as a flash mob (e.g. urban gardening event) was often



accompanied with jokes and humour (Fieldnote AL). This was quite different from my experience in other professional environments and the way I expect serious concerns to be handled (e.g. university, conferences, governmental agencies). Some thematic groups used humour and

playfulness quite strategically and frequently, such as the Theatre for Transition, Mobile Gardening, Art for Transition and the Green Circus group (Fieldnote AA; Fieldnote AN). These groups used more dramaturgical and artistic means to gain public attention, create awareness and promote eco-friendly social change (Interview TV). Similarly, DHIT-related members used all kinds of methods to ‘green the city’, such as throwing seed bombs, pulling out tiles and using soil for new creations and similar ideas, often related to guerrilla gardening (Interview TAA). A nice example in this context is the idea of a ‘pothole garden’ which refers to decorating an existing pothole (or new one after pulling out a tile) with an idyllic



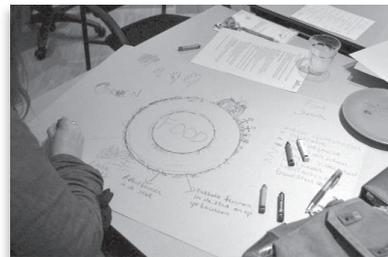
mini-scenery. During the greening of a deserted place in a part of The Hague (which was often filled with dog poo and litter), a group of enthusiastic people (remotely related to DHIT) inserted some plants. Suddenly, a pedestrian walked by and asked: “Do you know that this is illegal?”, after which they responded “Yes!”. The pedestrian replied by yelling: “All right, go on then!” (Interview TAA). It should be noted that these playful forms of activism are perhaps not all very effective, depending on the context and follow-up actions. Most importantly, the role of these joyful activities is not to change entire social structures, but to create a sense of light-hearted awareness that streets, neighbourhoods and cities are organised contingently, and can be altered.

What is most remarkable in this context is that the municipality of The Hague actually officially introduced a so-called “fun-factor” as one of its key priorities to attract The Hague youth to sustainability (The Hague Municipality, 2013a). As a powerful actor in the municipality stated: “Sustainability is fun!” (Interview TAE). This fun-factor is introduced to address non-usual suspects, such as youth, lower class groups and so-called laggards in the field of sustainable lifestyles. It also implies that city officials “will communicate the message in a different way and will often use social media” (The Hague Municipality, 2013a: 1). Again, this emotional and micro-cultural aspect might seem marginal, but it plays an important role as ‘psycho-social glue’ among different citizens and groups.

Alternative food, health and new collectives

One of the themes that was manifest whenever specific events and activities were organised was food. Food is one of the issues that is very easy to connect to a wide range of social concerns. For some, food became a concern after experiencing allergy, or knowing industrial and processed food products were based on distant and invisible forms of suffering (Interview TU; Interview TV; Interview TAF).

DHIT has been thinking and talking about upscaling local food production and urban farming for a long time. A number of DHIT members have been working with food, health or the politics of food systems (Interview TU; Interview TAF; Interview TAG; Interview TAH). Urban farming and growing your own food is advocated and practiced by some, e.g. growing tomatoes, cucumber and all kinds of herbs. This type of activity is related to a kind of ‘food activism’ against large-scale and profit-based food systems that offer cheap, unfair, unnatural and unhealthy products. One of the thematic groups actually focussed on food and tried to reflect on how a more sustainable food system could be organised locally. DHIT tries to do outreach regarding food in different ways. DHIT offers workshops about urban farming, including how to grow your own food even if you only have a balcony using so-called ‘vertical farms’ (Interview TU). DHIT members are not isolated in their quest for a more sustainable and fair food system in The Hague. They cooperate with a wide range of organisations and actors (e.g. *Gezonde Gronden*, *Haagsche Voedselcoöperatie*, *Eetbaar Den Haag*, *Lusthof Den Haag*, *Sustainable Studios*). These actors inspire one another, work together based on a specific food-related event or project. Interestingly, DHIT has published a document, illustrating how a more regional food system might look, based on an interrelated network of producers, distributors and sites for supply (Den Haag In Transitie, 2013).



Similarly, a local centre for environmental education (called *Haagsch Milieucentrum*) published a report that explored the problems of the current food system and the (social, economic and ecological) potential of urban farming for the region of The Hague (Haags Milieucentrum, 2013). Some DHIT members also reflect on the broader transformation between urban and rural life (Fieldnote AO). One of the challenges related to urban farming is that as soon as original enthusiasm is gone, residents and small entrepreneurs do not properly take care of their small urban gardens (after about three months). Some DHIT members saw this happening and provided advice about maintaining and taking care of produce and a long-term garden.

This discourse of urban farming has also entered the local political and administrative system. In 2011, four local political parties proposed a so-called ‘urban food strategy’ for the city of The Hague (PvdD, PvdA, HSP, GL, 2011). In this document, several political parties argue that food and urban farming should have more priority because it has many advantages for city life. They frame urban farming in terms of multiple ‘connections’. For example, food is able to reconnect consumers to local



farmers, it benefits the economy, nature, fishery, public health and regional developments. The document was taken seriously by the local government and translated into an official ‘Food Strategy’ in 2013 (Municipality of The Hague, 2013b). This official document centre-staged the potential of urban farming and local food systems for The Hague as an urban region.

Three specific objectives of the urban food strategy are formulated: (1) improving public health by making local food accessible near schools and sport facilities; (2) creating green living environments through roof and neighbourhood gardens; and (3) improving spatial and local economic development by turning vacant places into sites for urban food systems (ibid: 8, 10-17). The municipality of The Hague facilitates this development by e.g. publishing a digital map of all urban farming-related activities in the city. Food and urban farming seem to offer a wide range of advantages for many actors. A nice example of how food can connect unexpectedly was provided by a DHIT member whose neighbour dropped something in her garden by accident. Afterwards, they unexpectedly talked about her work as a small vegan baker. The neighbour, a Hindustani man, was enthusiastic since he knew many religious Hindustani that would like to buy her egg-less cakes (Interview TU)³²⁵.

³²⁵ Without explicit references during the interview, my Hindustani identity was invoked. I knew that some Hindustani families do not eat meat or eggs for religious reasons and find it hard to find a good bakery that makes vegan cakes.

Food and health are also connected to spiritual thought. A relatively small part of the DHIT group engaged in more spiritual and holistic philosophies in relation to (physical and mental) health, food and non-human lives. To me, it was clear that these forms of knowledge were not simply abstract ideas, but very specific and material indeed. A wide range of ideas combine spiritualism and active (or activist) work, such as deep ecology exercises³²⁶, radical interdependencies (e.g. regarding global food systems and meat consumption), ethical permaculture principles (translated in the main DHIT vision) and yoga exercises (creating physical and mental fitness and resilience). For some DHIT members, a human being is a spiritual being, linked to a holistic understanding of nature. The body and mind should therefore be respected by eating proper and pure food, but also mentally by doing yoga or thinking holistically (Interview TAF; Interview TAI). However, even though a number of DHIT members are into such spiritual methods, not everyone I talked to likes yoga and spirituality. Some, mostly related to the local administrative bodies and people with a technical background, even marginalise such ideas (Interview TX; Interview TAC). Even though they might work with DHIT and share similar ambitions and do projects together, one of them even said that some DHIT members resonate with “a light kind of veganist, green leftist, flower power group...”³²⁷. This critique suggests there are radically different ideas about how to understand activities and activism associated with urban food and health.

Exchanging services and alternative economics

As mentioned earlier, many DHIT members express critique against industrial capitalism, ecological deprivation and alienating social systems. These critiques were countered and translated in various ways. An interesting way to tackle socio-economic issues was introducing alternative ideas about exchange, material property, social relations and money. As one DHIT member put it, in relation to consumerism and social relations: “It is nonsensical to have everything for yourself”³²⁸ (Interview TAJ), thereby challenging the idea of the right to property. The same person, quite eloquent and ‘well educated’, criticised the lack of engaging with material goods. She formulated it as follows: “We are inside of our minds way too much, we have to learn how to use our hands again”³²⁹ (Interview TAJ).

One way to ‘reconnect’ to nature, material goods and social communities is the so-called ‘giveaway shop’ (in Dutch: *weggeefwinkel*). This notion emerged in the 1960s through a culture of anarchism and communal values, opposing commodification of

³²⁶ See ethnographic fragment at the beginning of this chapter.

³²⁷ In Dutch: “Een licht-veganistische, groenlinks flowerpowerhoek...”.

³²⁸ In Dutch: “Het is onzinnig alles voor jezelf te hebben”.

³²⁹ In Dutch: “We zitten veel te veel in onze hoofden, we moeten weer leren meer met onze handen te doen”.

products and life. A number of DHIT members talked about this shop as a normal phenomenon, which was new to me³³⁰. Interestingly, a Gandhian quote is considered as a source of inspiration: “There is enough for everyone’s needs, but not for everyone’s greed”. For the DHIT context, such a ‘shop’ serves different purposes. Poor families are able to obtain clothes or household appliances. Furthermore, it ‘recycles’ material goods and products, which reduces pollution and energy use (less transportation, manufacturing and carbon emissions). Such ‘shops’ challenge the idea that scarcity and individual property are somehow natural. Alternatively, giveaway shops transfer the notion of property towards use. Similarly, DHIT members also talked about and were connected to a ‘repair café’. An increasing number of repair cafés have been established in different districts in The Hague³³¹. During one of the thematic group meetings I attended (‘Awareness & Education’), we talked about the possibility of spreading knowledge, buying new stuff and repairing broken things among The Hague’s youth. The idea of ‘repair kids’ was introduced. Kids could bring a toy or something broken to a class and try to repair them with tools and under supervision of an expert (perhaps related to school). While we were brainstorming about this, we thought about the role of schools in creating vegetable gardens, a pizza oven and silence gardens. Such innovative ideas are aimed to let kids experience a different kind of reality regarding social contact, food, agricultural products and making things ‘yourself’.

In a different way, the idea of social relations and money was experimented with, e.g. via the so-called Time Bank³³². A time bank is similar to a regular bank, but instead of providing money, you can sell your own time and receive someone else’s time in return. This idea dates back to the early 19th century, when American anarchism and social reforms challenged the ways in which time was commodified. Instead of giving someone money for a product or service, the time (i.e. clock time) it takes to produce this product or service is considered as valuable (e.g. translating a text, organising a workshop, cleaning a house, repairing a bike). This challenges the idea that time somehow equals a certain quantitative value (e.g. salary, price of a product). If one becomes a member of Time Bank, one can have an account of time (not of money, which is the case with regular banks). Time replaces money as a medium to return a service or product. One of the consequences is that there is a more direct link between material production or service delivery and time than is the case with money. I talked about Time Bank with one of its founders in The Hague during a big Energy Exhibition in 2013. Time Bank The Hague was founded in response to the financial crisis and as a means

³³⁰ An example of a giveaway shop in The Hague: <http://www.haagsevaders.nl/site/index.php/projecten/de-weggeefwinkel>.

³³¹ See: <http://www.repaircafedenhaag.nl>.

³³² See: <http://timebank.cc/the-hague>.

to explore new forms of economic relations “based on trust and solidarity” (Timebank. cc). Some of these economic innovations are returning to ‘previous times’, also indicated by one of my respondents who started a small journal to teach people how to live more parsimonious and sober in the 1990s (Interview TAA). The latter person also mentioned more recent forms of socio-economic innovations based on community relations related to food (*thuisafgehaald.nl*), sharing and borrowing domestic devices (‘Peerby’) or community-based forms of financing (crowd sourcing and revolving funds³³³).

Another example I would like to mention here is the idea of ‘hacking’ everyday goods and machines. One of people in the DHIT network told me that some creative and technically-minded people in The Hague get together and simply make things (Interview TU). This can be anything really, but the meeting places of these ‘makers’ are considered as an inspirational place for makers and makers ‘to come’³³⁴. Some of them simply deconstruct a coffee machine and make something else out of it (called ‘hacking’ a device). This creativity is seen as a fun thing to do, but also useful for practical concerns and applications. These innovations suggest that the DHIT network is deeply invested in alternative economic models. However, in many cases, I noticed that DHIT members cooperated with small entrepreneurs based on more traditional economic practices. The same holds for organisations related to DHIT, such as the municipality of The Hague, which uses traditional monetary systems. Nevertheless, whenever such organisations or traditional economic models were used, other explicit sustainability-goals were expected, such as renewable energy (solar panels) or organic food. As mentioned earlier, DHIT members are sceptical about big companies that try to be ‘green’ such as Siemens. The combination of old and new economic models makes this issue quite interesting because it is tightly coupled to other themes such as energy, food and health.

Despite these innovations, there are some challenges. One of the struggles for some DHIT members was creating new ‘business models’ and ‘income’. A major challenge was to sustain DHIT financially and perhaps make new jobs via DHIT. As some DHIT members were small entrepreneurs themselves, discussions emerged about the boundaries between DHIT and non-DHIT activities. During one meeting, a discussion flared up about ‘working for the transition’ outside DHIT. It seemed that some DHIT members had a job on the side, some were self-employed, while others tried to make a living via DHIT (and related) activities³³⁵. Interestingly, policy actors consider DHIT members as “professional hippies”, because they sometimes give up their jobs (Interview TV). Despite these differences, all

³³³ Interestingly, the municipality is also exploring how to use revolving funds in the cultural sector (Municipality of The Hague, 2001; Interview TAK).

³³⁴ See: <http://haagsemakers.nl>.

³³⁵ As someone put it, “trying to make a living by transition”, by giving workshops, speeches or other activities (Interview TV). This raises questions about the difference between such self-supportive ‘transition activists’ made me think about the difference between DHIT and my own position within DRIFT.

‘jobs’ and forms of income seemed to be related to the broader ambition to make The Hague a greener, cleaner, healthier and more sustainable city.

Eco-policing, climate change and energy

As I participated in DHIT activities, and especially when speaking to policy makers and institutional actors, I noticed how a complex field of norms, regulations and social rules shaped sustainable ideas and practices. Conversations during and after informal meetings, initiatives in the city council, policy documents, but also DHIT-related events and activities seemed to express new forms of sovereignty, legal codes and cultural norms. These regulations and administrative practices fostered eco-friendly practices, especially regarding climate change and energy.

When wandering around at The Hague’s Energy Fair in October 2013, I was fascinated by the vast initiatives and ideas to realise ‘sustainable energy’ (Fieldnote AP). Some organisations showed electric cars and Segways, some represented energy



companies while others tried to brand their solar panel. Next to these business-minded actors, there were also NGO’s that tried to tell ‘their story’ (e.g. protecting oceans) and present methods to show children how to save energy. DHIT was also present. We had a stand and gave a workshop on urban gardening. This event took place inside and in front of the city hall, hosted by the municipality. While the

alderman responsible for Sustainability had a symbolic green jacket and tie, some DHIT members experienced the event as ‘showing off’ its sustainability ambitions using the efforts of others. The diversity of initiatives was immense. It was a vivid and lively afternoon, symbolising the vast diversity with which sustainable energy was promoted and initiated by different groups. More specifically, the municipality of The Hague has put sustainable energy on the agenda and aspires to improve air quality and what they call “climate neutrality” by the year of 2040 (Interview TAE; Municipality of The Hague, 2014). To this end, a number of measures and ideas emerged, such as physically and legally diverting cars in the city centre and licence plate recognition for polluting cars (e.g. old diesel-fuelled vehicles). This policy practice has been introduced in other major Dutch cities. In order to have impact, the ‘built environment’ was also targeted and considered as problematic. As one policy maker put it: “80% of all carbon emissions are related to the built environment (offices, real estate and houses), 20% is traffic-related” (Interview TAL). This implies that “physical changes [in buildings and traffic system, SJ] are entry points to make sustainability policy successful”³³⁶

³³⁶ In Dutch: “80% van CO2 uitstoot is afkomstig van de gebouwde omgeving (kantoren, vastgoed en

(Interview TAL). One of the technical examples various policy makers gave me was the energy system of The Hague's new International Court of Justice. This system is (or will be) based on so-called 'low-temperature sources', which means that less energy is used for the similar amount of warmth and comfort (Interview TAE; Interview TAL). Another example that was presented proudly was 'geo-thermal energy'. This technology taps warmth from deep in the earth (about 2 km. deep). Geo-thermal energy is presented as clean and renewable and able to fuel The Hague's heating system³³⁷. This project, however, has been confronted with financial concerns (for energy companies) due to the economic crisis and the lack of ample households to provide with 'earth warmth'³³⁸.

It is interesting to observe the role of the term 'sustainability' in this context. The city government has used the term 'sustainability' for some years. This label mostly served the purpose of integrating a number of environmental and energy-related policy themes and practices. This need for integration has been explicated in various strategic documents, e.g. for the period 2006-2010 called *Tien voor Milieu*, and 2010-2014 called *Den Haag maakt het Duurzaam* (Municipality of The Hague, 2006, 2010). An important emphasis that was added in the recent plans was the active involvement of citizens. One of the ways to realise this was by providing public funds for citizen initiatives. One of these subsidies (called *Initiatievenbudget duurzaamheid*, authorised in 2015) was quite open and was meant to 'map' the kinds of initiatives citizens and non-state actors proposed (e.g. greening a street, or a sport association that saves energy, solar panel project, edible garden for kids). The first version of this subsidy was quite flexible and non-specified. This was a concern regarding accountability and administrative rules³³⁹ (Interview TAK). Additionally, the criteria that were set were quite formal. Consequently, additional support and explanation was needed to accommodate enthusiastic residents. I noticed that connections between the municipality and citizens were also made through new models of measuring and calculating energy use called Energy Performance Assistance (In Dutch: *Energie Presetatie Advies*, EPA). An EPA visually 'shows' citizens how much energy is 'leaking' from their house (a company is hired that uses advanced photographic technology) (Interview TAM). However, some people also argued that this 'quantification' and comparison between different households

woningen) en 20% uit verkeer (...) Fysieke ontwikkeling [in gebouwen en verkeer, SJ] zijn de aangrijpingspunten om duurzaamheidsbeleid tot succes te brengen".

³³⁷ See also: <http://geothermie.nl/geothermie-aardwarmte/projecten/aardwarmte-den-haag> and <http://geothermie.nl/actueel/fotos-en-film/video-boring-den-haag>.

³³⁸ Additionally, some technical concerns are addressed about back-up systems. As of 2015, new options are explored to further unfold this system.

³³⁹ Urban farming was sometimes used as an example that was popular, but one could argue whether urban farming reduces carbon dioxide and creates a 'climate-neutral' city. Most policy-related respondents argued that the reduction of 'food miles' (i.e. decrease in transportation) and a less intensive food system might lead to The Hague's policy ambitions.

and districts also downplays singularity and diversity (Interview TAK). For many policy actors, there was a clear limit as to ‘pushing’ citizens to be sustainable. That is to say, citizens have to make their own choices (e.g. collectively buying solar panels). Policy makers still have to be accountable legally and act as ‘non-biased agents’ that use tax payer money (Interview TAK; Interview TAL; Interview TAN). City officials also ‘simply’ have to stick to legal frames. So, for instance, whenever a small windmill is installed on a rooftop, certification and checking whether the windmill is safely installed is still legally expected from the municipality³⁴⁰ (Interview TAC).

These initiatives might be considered as isolated from DHIT. However, DHIT shares most of the ambitions of these policy initiatives regarding use of energy and mobility. Furthermore, many - if not all - policy makers I spoke actually knew DHIT (sometimes even personally), as they worked on similar ambitions. In some instances there were differences and tensions between governmental agencies and DHIT-related activities and initiatives. In such instances, the status of government was represented as part of ‘the state’ and ‘institutions’ that should be partners for pragmatic reasons. The legal status of DHIT was linked to fierce debates about the ‘co-optation’ and ‘institutionalisation’ of DHIT’s radicalness by powerful governmental and economic actors (Fieldnote AD).

Connecting and upscaling initiatives

The municipality and DHIT share the ambition to stimulate and connect various initiatives. As one DHIT member formulated it: “the municipality tries to connect initiatives top down, and we [DHIT, SJ] do the same but bottom-up” (Interview TAG). Connecting various initiatives in the city sometimes seems to be DHIT’s ‘core business’. This was considered a problem for some as it suggested “connections for the sake of connections” (Interview TU). I noticed how DHIT was (sometimes partly) embedded in many networks and entangled initiatives. The municipality works together with DHIT (via DDH) while there are numerous other organisations that are linked to DDH and DHIT, such as *Gezonde Gronden*, *Uitwinderswijk*, *Eetbaar Park*, *Buurtlab* and *De Regentes*³⁴¹ (Interview TAJ). It is quite hard to actually reconstruct one overall network or a set of networks, because cooperation is often project-based and therefore temporal and local. What is more, such ‘green actors’ need one another since they are often too small and specific to operate on their own.

DHIT, the municipality and other organisations avoid having a big plan and convincing others about ‘their plan’. Alternatively, initiatives and new projects often

³⁴⁰ Also regarding tax payer money, whenever receipts do not make sense, citizens cannot reimburse their costs (Interview TAN). For citizens this can be confusing, as *some* policy actors are considered as ‘cooperative people’.

³⁴¹ I could list dozens of other initiatives and organisations here.

start with a brainstorm session, during a thematic group meeting or a movie night, or over food and some drinks. Interestingly, whenever it is quite hard to actually reach another group or target group (e.g. lower-income groups, elderly, youth, certain ethnic groups or conservative policy actors), an ‘ambassador’, enthusiastic individual or frontrunner is identified in the first phase (Interview TAE; Interview TAN). Somewhat unexpectedly, during an interview, a DHIT member said that “Jan Rotmans [one of my PhD supervisors, SJ] called these people transition managers, I think...but I don’t want to call them managers. They are inspiring though”³⁴² (Interview TU). In this case, some DHIT members also referred to me and colleagues from DRIFT as being knowledgeable about transitions (Interview TU; Interview TV; Interview TAG)³⁴³. In the case of the municipality, however, this was much more planned, regulated and embedded in legal and policy frameworks. This ‘ambassador’, then, was able to attract more attention and set an example with his/her authority and trustworthiness. As one policy maker put it: “a good example leads to followers”³⁴⁴ (Interview TZ). In order to further connect and upscale this personal cooperation, informal settings are created, e.g. drinking some beer or wine together, or organise a market with activities for kids (Interview TAN). There are actually various informal meeting points for such exchanges, called e.g. ‘network drinks’, ‘neighbourhood drink’, ‘sustainable breakfast’ or ‘energy café’.

Very often, these expanding activities work quite well, however, the next step seems to be more problematic, namely to get serious about it and become “entrepreneurial” and establish a legal contract by starting an association, a foundation or small company (Interview TAC; Interview TAN). From the perspective of the municipality, this is the bottleneck. Citizens or local initiatives often don’t have ample ‘professional knowledge’, time, priority and a network to rely on (Interview TAN). Additionally, whenever one or two really enthusiastic frontrunners move to a different city, lose inspiration or stop for another reason, an initiative is often cancelled (Interview TZ; Interview TAB). One of the more ‘successful’ examples that enjoyed continuity, according to many policy makers, was the initiative called *Vogelwijk Energiek*³⁴⁵. This initiative has grown from a small idea about a self-supporting energy system to an association that is indeed self-supporting in terms of energy and organises various initiatives. It is noteworthy that this network is indeed supported by local residents with high-income, professional networks and communicative capacities³⁴⁶. For many people I spoke, differences in

³⁴² In Dutch: “Jan Rotmans noemde dat transitie managers volgens mij, ...maar ik wil het geen managers noemen. Ze zijn wel inspirerend”.

³⁴³ Some DHIT members invited me to even give a presentation about the topic of ‘transitions’ in relation to DHIT, which I gave. In this presentation, during a join-DHIT event (attended by e.g. 40 people), I talked about the idea of a transition and the fact that a transition is not a natural process but it requires hard work.

³⁴⁴ In Dutch: “Goed voorbeeld doet volgen”.

³⁴⁵ See: <http://www.vogelwijkenergiek.nl>.

³⁴⁶ Among which a director of an energy company and the director of a national environmental agency (Maarten Hajer).

'being successful' in sustainability was related to 'sand' and 'peat'. Many initiatives, whether successful or not, started in districts with more high-income groups, e.g. *Statenkwartier* and *Vogelwijk* ('sand') (Interview TV; Interview TAC).

The role of the governmental agencies in this context is significant, as they consider themselves as brokers between different initiatives, but also between consumers and producers (e.g. mediating in group discount for solar panels). Some policy actors explicitly try to connect sustainability with participatory citizenship. This involves trying to 'activate' citizens through sustainable conduct or to support existing citizen initiatives. For many of these policy actors, this involves being on the road and attending many meetings. These micro-managerial interventions are nicely illustrated by a policy actor who said: "Everyone can make a difference, every phone call you take might mean that you can be somewhat better or clever"³⁴⁷ (Interview TAN). Additionally, an unexpectedly surprising method for the municipality was also to intervene in so-called "natural moments of a household or family" (Interview TAL). If, for example, a boiler is defective or people move, one should be prepared to present a more sustainable boiler or consider insulating the home or installing solar panels. Additionally, citizens can also make "calendars" and try to match their neighbour's calendar in order to collectively invest with discounts in home insulation, solar panels or a small windmill³⁴⁸. As entrepreneurs and companies are more interested in sustainability, it has become a feasible and realistic opportunity for some. In a similar vein, 'spreading the word' is also enacted by approaching sport associations and schools (e.g. creating awareness among The Hague's youth that take these ideas to their parents at home³⁴⁹). This mentality of thinking and being present outside of the city hall was nicely captured by one policy actor who stated "work is not from 9 to 17 in here anymore, but from 17 to 9 out there, outside, in a restaurant, with young folks in the street"³⁵⁰ (Interview TAN).

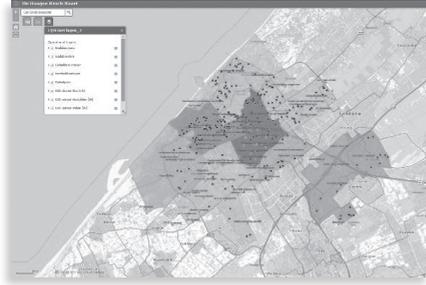
³⁴⁷ In Dutch: "Iedereen kan het verschil maken, ieder telefoontje dat je opneemt kan betekenen dat je net iets beter of iets handiger bent".

³⁴⁸ In some instances, particular consortia are created in order to improve (i.e. make 'more sustainable') homes quite easily. Policy action here involves playing the role of a 'broker' and tying together supply and demand for sustainable homes. See for example: <http://www.bamwoningbouw.nl/nl-nl/news/1/1/475/energie-voor-energie-brengt-woningverbetering-tot-aan-voordeur.aspxb>.

³⁴⁹ There are dozens of examples to be provided here. One striking example of this 'invisible presence approach' is expressed in the following quote: "Whenever you see a painter work you think...oh...I also have to maintain my own home. That is what we aim for, neighbors should be good examples for a neighborhood, as a kind of acupuncture. As a municipality, you should not be present everywhere" (Interview TAO). In Dutch: "Als je een schilder ziet werken denk je oja...zelf onderhouden moet ook gebeuren. Daar mikken we wel op, dat burens een goed voorbeeld zijn voor de buurt, als een soort acupunctuur. Je moet niet als gemeente overal aanwezig zijn". Or, as another policy actor underscored the making impact: "one should not approach individual home owners, but groups of owners" (Interview TAM). In Dutch: "In plaats van individuele eigenaren, moet je groepen benaderen via VVE's".

³⁵⁰ In Dutch: "Het werk is niet meer van 9 tot 17 hier, maar van 17 tot 9 daar. Buiten, in een restaurant, met jongeren op de straat".

This also implies that the traditional role of environmental inspector moves to a so-called “all-round advisor” (Interview TAM). The Internet and digital tools are supportive in this context as the municipality (embodied by DDH) crafted a number of digital maps (consolidated in the so-called *Haagse Krach-kaart*) to show how The Hague is doing in terms of ‘urban farming initiatives’. Combining GIS data and all kinds of official databases, the ‘sustainable state’ of The Hague can be visualised and represented spatially (Interview TAP). The aim of this map is to let all residents and interested parties search for an initiative nearby or ‘do whatever’ suits them or is in their interest. One of the future goals is make this map more open source and let The Hague’s residents more interactively ‘fill in’ the map.



Interestingly, DHIT, the municipality and other organisations consider growth and expansion of sustainability somewhat holistically. An example is the possible introduction of a guidebook for residents to learn how to connect to existing or new sustainability initiatives (Fieldnote AQ). This is also evidenced by inspirational references, such as using insights from ‘spiral dynamics’³⁵¹ to use differences and oppositions in a productive way and complement one another (Interview TV; Interview TAJ). In a very material way, sustainability knowledge and ideas simply circulate through moments of contact, for example in the case of The Hague’s Energy Fair 2013. Again, I noticed that the notion of sustainability plays the role of ‘glue’. It seems to tie together different local initiatives while keeping their specific character intact. Very often the label ‘sustainability’ is used pragmatically. As one policy actor noticed “At this moment we are called Sustainability and Living Environment....oh well... sustainability (...) every time a new magic word emerges”³⁵² (Interview TAK).

³⁵¹ Spiral dynamics is a socio-psychological approach to understand how different kinds of individuals are related to broader social developments. This creative management toolkit allows one to grasp these differences, categorise people and try to manage integration and innovation. See also: <http://spiral-dynamics.org>.

³⁵² In Dutch: “Nu heten we duurzaamheid en leefomgeving...ach duurzaamheid (...) er is altijd wel een nieuw woord toverwoord”.

6.9 Analytical reflection: New urbanities and new eco-struggles

This chapter presented a ‘twin genealogy’ of Transition Town Rotterdam and The Hague. I reconstructed the rich histories of the emergence, the unfolding and new concerns of the Gandhi-garden and DHIT. We have seen that in the 2000s, a global network emerged, under the label of Transition Towns, with the aim to work towards carbon-neutrality and more sustainable cities and societies ‘themselves’. TT Rotterdam and The Hague emerged respectively in 2009 and 2012, and tried to struggle against dominant capitalist and individualistic culture, by experimenting with all kinds of projects in various domains: renewable energy sources, sharing and gift-based economy, growing their own food, a new sense community, alternative models on health and medicine, etc. Whereas TT Rotterdam (cq. the Gandhi-garden) uses community gardens to explore a number of these alternatives materially, TT The Hague aims at initiating and connecting existing initiatives at an organisational level. These networks aim to reconfigure urban economic and ecological life by social and institutional experimentation. This eco mind-set is shaped by a mix of old and new tensions and as a new governing network refers to a mix of traditional (‘indigenous’) knowledge and practices (farming, sharing, etc.) in high-modern cities. Importantly, very often all kinds of local, distant and fluid ‘communities’ shaped such practices and projects. I call this new rationality neo-communitarian eco-urbanism (shaping a *neo-communitarian eco-city*). In terms of the urban governmentalities I described in Chapter 4, this case also represents some indigenous (‘spirit and soil’) and disciplinary (‘morals and guilt’) forms of urban governing. However, I consider these elements as part of the broader logic based on fluid identitarian networks and new broader urban communal ties. If we capture ‘our current’ genealogical episode in the analytical building blocks as elaborated in Chapter 4, we can note the following governmental and contingent features of neo-communitarian eco-spaces.



Visibilities of neo-communitarian eco-spaces

How are urban spaces in Rotterdam and The Hague observed and sensed via these TT networks? What kinds of sensibilities and urban cartographies emerged to observe ecological spaces? The Gandhi-garden and DHIT, as discursive spaces, actually emerged by critically observing challenges such as oil-depletion, over-consumption and unhealthy and alienating urban lifestyles. A wide range of institutional and unofficial graphs and schemes were employed to illustrate how dirty, unhealthy and unequal today’s cities are. Gandhi-gardeners, DHIT members, local residents and policy actors all craft new (digital and non-digital) sensibilities to map, visualise and observe all kinds of sustainable initiatives (e.g. urban farming, solar panels). Additionally,

'green routes', 'edible routes' or harvest of urban gardening projects are visualised on maps to illuminate how both Rotterdam and The Hague could be sensed beyond a techno-capitalist visibility of eco-systems. Such maps are often directly connected to geographical and physical sites. This imaginative ambition was nicely captured by one slogan I encountered in the DHIT networks: "If you can dream it, you can do it". In a way, socio-environments and ecological places for TT networks were considered as means to reconnect with forgotten and new communities and visualise a more social economy. Rather materially, newly built communities or edible gardens were literally drawn, designed and visualised to grasp their spatial organisation. This pro-active engagement 'from below' was often supported by city authorities. Many TT participants, but especially city authorities in Rotterdam and The Hague, considered the city in terms of 'thermodynamic systems'. That is to say, in addition to (or instead of) having formal legal citizenship, some 'active residents' or 'neighbours' were considered to be potential ambassadors in their streets or neighbourhood. In some instances, certain districts were considered as potential 'markets' e.g. for a solar panel 'street discount'. Furthermore, even though the Gandhi-garden and DHIT are local initiatives and networks, they are tied to numerous projects across the region and worldwide. This also holds for considering urban regions such as Rotterdam and The Hague ripe for 'sustainability policies' and 'green markets'.



Epistemologies of neo-communitarian eco-spaces

What kinds of epistemic regimes emerged through the TT networks? Which underlying knowledge repertoires informed and circulated in and via Gandhi-garden and DHIT? The (Dutch) TT movement more broadly seems to deploy a wired range of sources, authorities and inspirations. Some more abstract epistemic regimes, such as holism, permaculture, druidism, Sufism, Krishna consciousness and/or Spiral Dynamics were linked to practical know-how. This is also evidenced by a simple TT motto to use 'head, heart and hands' and constantly know that ideas, people, animals and things are interdependent. Additionally, a wide range of more critical ideas and perspectives were used to target industrial and processed food, the pharmaceutical system, consumerist lifestyles and alienating individualism. In some cases, 'pre-modern' (or rather 'non-modern') knowledge inspired more practical engagements such as using wool from local sheep to knit, or to create an 'off-the grid' refrigerator without electricity. Quite fundamental categories of private, public or community property, access to water and healthy food or socio-economic theories were approached in antagonist ways. In Foucaultian terms, 'counter-knowledge' is presented by Gandhi-gardeners and DHIT members. Altogether, these epistemic repertoires call into question many epistemic grounds of the techno-capitalist eco-regimes that dominated Rotterdam and The Hague for decades (and often

still do). Interestingly, this does not mean that eco-thinking and using holistic principles was not used by policy actors. In fact, many policy actors observed and thought about urban areas and districts in terms of vital and dynamic sites with ‘different energies’. Such spaces, from the viewpoint of the ‘city hall’, required very little legal regulation but ‘acupuncture’ and ‘snow-ball effects’. In some cases, this was explicitly linked to austerity measures and budget cuts, making it more salient to activate citizens and sustainable businesses. Even though traditional technocrats did not disappear, micro-relations emerged between policy makers, residents and businesses in the context of ‘green subsidies’. Additionally, different ‘databases’ (sometimes ‘Open Data’ or ‘Open Source’) emerged to share information and knowledge about new initiatives or events. This knowledge was also produced and exchanged by workshops, events and ‘DIY’ maps and brochures to let residents take up initiatives themselves (e.g. urban farming, solar panels, making one’s home energy efficient). For many of these epistemic regimes, an underlying premise holds that urban sites should not be overregulated by legal rules, but by local initiatives and self-supportive networks. Ultimately, this should lead to less alienation, individualism and unsustainable conduct.



Technologies of neo-communitarian eco-spaces

How did these sensibilities and epistemic regimes inform specific techniques for spatial interventions? What new technologies emerged in the context of the Gandhi-garden and DHIT? In relation to these sensibilities, discursive grounds and epistemic schemes, a wide range of procedures, techniques and interventions can be identified. Various communal techniques and practices can be identified such as gardening eating, singing, sharing, giving away produce, repairing stuff for others or using a local currency. These technologies aimed at moving beyond an individualist culture with consumer-based practices of buying processed food, owning stuff for yourself, using money, living in a concrete jungle ‘on your own’. Alternatively, such communal technologies seek to move towards new forms of solidarity and social linkages that stretch well beyond the confines of Rotterdam or The Hague. These communal technologies are accompanied by means to connect the outer world to the inner world. Such self-disciplining techniques range from doing yoga, being vegan, engaging in non-Western breathing techniques and doing ascetic exercises. Even though only some TT participants employ these methods, they serve a very precise role, namely to purify and exercise oneself and to engage in new types of relations with other human beings, animals and material goods. More ‘orthodox’ methods and procedures are also significant here, namely policy tools (e.g. subsidies and legal codes), organisational and supportive techniques to enable Gandhi-gardeners and DHIT members to do the things they do. These methods range from becoming a legal organisation to communicate formally,

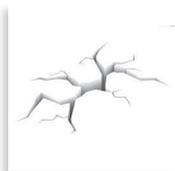
digital communication and interaction, designing and providing small eco-subsidies, having an internal structure and planning scheme and minimalist state interventions. Cooperation is a crucial method for virtually all actors involved. The Gandhi-garden and DHIT are 'nodal points' to connect and inspire all kinds of initiatives (often project based). Additionally, they were also surrounded by some of these nodal points (e.g. DDH, policy network, festivals or repair cafes), thereby participating in a much broader network. Despite these rather pragmatic techniques, both TT networks also engaged in more radical techniques. Some of them protested with their bodies on the street, while others lobbied with an alderman or senior city officials. More playful techniques such as guerrilla gardening, flash mobs and peace festivals were also organised in order to raise awareness for more eco-oriented conduct.



Subject formation through neo-communitarian eco-spaces

What are the subjectivities and socio-material identities that emerged in these TT networks? Gandhi-gardeners and DHIT members have emerged through these various regimes. Through these means actual Gandhi-gardeners and DHIT members came into being as social identities. While some could be considered as gardeners or actively involved in one specific type of interest (health or food), other participants were more into organising events, planning meetings and 'external cooperation'. Despite these TT 'divisions of labour', most members can be considered as part of a broader active citizenry aimed at sustainable conduct. For years, it has been (and still is) a strategic goal of city officials to cultivate active citizens that start initiatives with the same goals as specific policy plans (e.g. urban farming or reducing food miles). This results in different institutional subjectivities. It is clear that policy actors have become much more invested in city life outside the city hall. They attend workshops and barbeques, have evening calls and meet with innovative entrepreneurs. Such institutional identities are neo-sovereign, as they navigate between formal procedures and citizen projects with 'good energy'. At the same time, institutional actors (e.g. housing organisations, architects, policy makers) are part and parcel of the new, fluid and project-based urban communities that seek to green the city. Finally, these subjectivities aim to multiply, grow and circulate. That is to say, the Gandhi-garden and DHIT, and their associated local and institutional networks, have particular target groups. Through a variety of techniques to raise awareness and connect unrelated initiatives, new entrepreneurs might emerge (creating green consumers, producers and prosumers), new eco-institutional actors (policies and institutions that absorb 'sustainability' and ecological concerns) and new active eco-conscious neighbours and residents emerge (creating 'ecological citizens'). As such, a highly diverse set of 'tentacles' aims to create new eco-subjects by addressing their minds, their hearts, their emotions and their material environments.

Similar to the Stadshavens case, we can notice how these spatial governing dimensions create a mixed political rationality. Together they slowly move away from a techno-capitalist logic to govern eco-spaces in Rotterdam and The Hague. Alternatively, the emergence of a neo-communitarian logic allows us to understand how this rationality shapes a sense of ‘internal stability’ and ‘external connectionism’ to unrelated initiatives. However, it should be noted that the final genealogical episode (in particular) is still ‘in the making’.



Contingencies of neo-communitarian eco-spaces

The combination of a wide variety of TT (related) activities creates the logic of neo-communitarian eco-urbanism. However, we have witnessed a number of conflicts, concerns and struggles. This makes the current moment of TT as ‘genealogy in the making’ fascinating, it depends on complex micro-dynamics as part of broader struggles. Again, the term neo-communitarian eco-urbanism is up for academic and public debate (in a pluralistic and democratic sense).

Technical contingencies

A number of practical contingencies are associated with a neo-communitarian eco-governmentality. These contingencies are new fields of concern for various actors involved.

1. *Stabilising a footloose organisation.* Both the Gandhi-garden and DHIT struggle(d) with being a stable organisation with a clear structure, division of labour and distributed responsibilities. TT, as a grassroots movement, is often considered to be rather footloose. However, in order to exist, communicate and cooperate institutionally, TT networks sometimes rely on a specific structure (e.g. working groups). However, for many participants this institutional flexibility is a constant act of balancing between ‘international’ and ‘external’ realities and practices.
2. *Being radical or pragmatic.* Related to this institutional concern, there is an underlying tension between being radical and antagonistic versus more pragmatic and cooperative. Since Gandhi-gardeners and DHIT members consist of both ‘forces’, they are in a constant dialogue whenever too local and pragmatic decisions are made. Similarly, whenever too abstract ideas are used, a more hands-on approach is advocated. This problematisation is particularly significant when more radical actions are discussed (e.g. participating in a protest).

3. *Convincing 'non-believers'*. Both TT networks, including their institutional partners (e.g. policy actors, aldermen) are confronted with 'spreading the word', convincing unsustainable groups and unprivileged districts. These concerns are not shared by all participants, but sometimes TT members (or affiliates) reflect on the 'TT bubble' and are reminded by the fact that many urban dwellers simply live in a different world. These 'laggers' cannot be obliged to become sustainable, but they must be informed, tempted and convinced that eco-friendly and sustainable conduct are 'beneficial' to them and others.

Radical contingencies

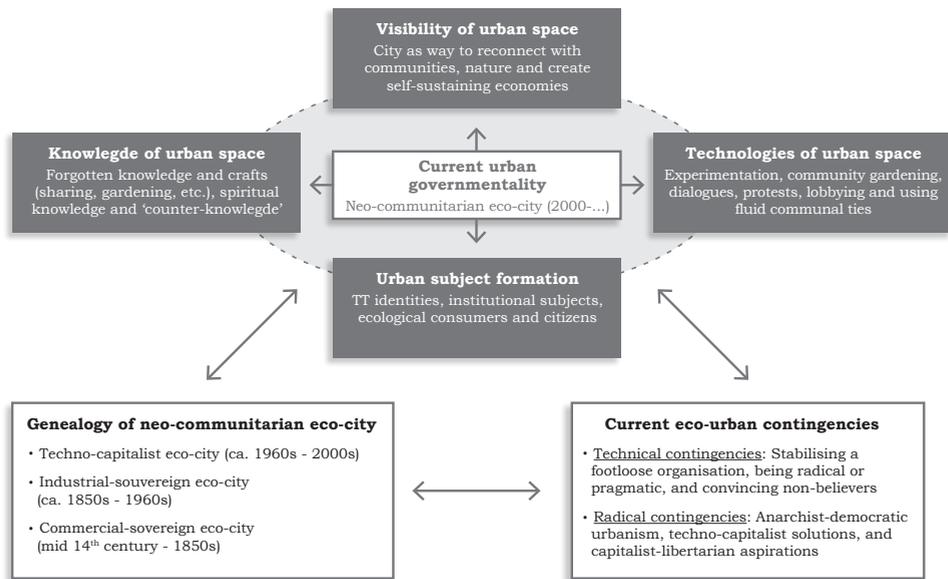
Importantly, a wide range of fundamental struggles laid the basis for the TT movement. These struggles did not disappear because of the emergence of a neo-communitarian eco-mentality. In fact, there are still many radical contingencies that represent more fundamental struggles regarding fossil fuel based economies, ecological degradation, individualistic consumerism and global capitalism. In some instances, a more neo-capitalist or neoliberal form of eco-urbanism might pop up and unfold. Perhaps a more communitarian or even anarchist bend might be added. Different voices and positions are connected to the neo-communitarian eco-mentality, pulling it in one direction and/or another.

1. *Anarchist-democratic* urbanism. Even though many Gandhi-gardeners and DHIT members have rather 'moderate' ideas and claims, sometimes they have quite radical ideas and expectations. These voices are informed by more radical ideals, critical theories, social diagnoses and spiritual modes of thought combined with a protest and creative mind-set to 'do things (y)ourselves'. Even though few TT participants would call themselves anarchists, they are present implicitly and, in some instances, explicitly. Additionally, these voices aim to reach the unprivileged that live in poor districts, thereby dismantling eco-gentrification. In most instances, these tendencies are articulated in a more or less inclusive and democratic manner, avoiding authoritarian or totalitarian ideas.
2. *Techno-capitalist* based eco-solutions. Such forces are expressed by entrepreneurs and some market-oriented policy actors. For them, local community-based solutions are only feasible to some extent. These voices advocate more radical interventions to let big companies step in and create large-scale supply to meet demand of new sustainable goods and services. Importantly, the role of government is to accommodate these markets through regulations and proper incentives.

3. *Capitalist-libertarian* aspirations. A small minority seems to argue that cities thrive if the state is absent, letting communities and market mechanisms seek adequate solutions. Such voices criticise governmental interventions and argue that a combination of bottom-up initiatives and supply-and-demand can do the job.

It is up for debate whether to observe and understand TT activities as stretching their own network, thereby simply remaining in their own eco-oriented network, or to consider these radical contingencies and struggles as part of an effort to challenge existing social norms, forms of lives and institutions. Taking my transition analytics as a point of reference, I believe that both aspects are present. Technical and creative governing techniques are relevant to ‘spread the word’ and connect to city plans, entrepreneurial projects and social activism. Simultaneously, more radical antagonisms and contingencies shape these practical concerns and inform more radical politicisations of urban life.

Figure 6.8 Transition analytics of Transition Towns case, Gandhi-garden and DHIT



The transition analytics allows us to sensitise how the present neo-communitarian eco-mentality is embedded in genealogical struggles, but also attempts to break with techno-capitalist ways to govern eco-spaces. There is no new stability. New contingencies are immanent to the neo-communitarian eco-city, reminding us that this transition analytics foregrounds the mixing of and new struggles. Now that I have presented two ‘empirical’ transitions towards sustainable urban spaces, we are able to reflect on their points of contact.

Interlude 3: The catastrophic

My experience in academia so far has been characterised by underlying assumptions about what it means to live a ‘normal life’. To be an academic often means being part of the happy few. Few human beings have so little trouble surviving, having financial security, enjoying nice meals and drinks. Rarely is this reality challenged in academia. This holds for academic life in general, but for in scholarship in the fields of sustainability and environmental sciences in particular. Therefore, I argue, it is refreshing and ethically worthwhile to re-experience the contingency of this privileged positions from time to time.

Kafka and academic taboos

Kafka’s 1915 book *The Metamorphosis* begins with a scene of a man who wakes up as a giant insect. The salesman, called Gregor Samsa, experiences an existential transformation in which he slowly stops being a man and starts being an insect. As Kafka writes:

“He [Samsa] lay on his armour-hard back and saw, as he lifted his head up a little, his brown, arched abdomen divided up into rigid bowl-like sections. From this height the blanket, just about ready to slide off completely, could hardly stay in place. His numerous legs, pitifully thin in comparison to the rest of his circumference, flickered helplessly before his eyes” (Kafka, 1915: 3).

To me, this experience of ‘becoming an insect’ illustrates two things. First, the human hegemony of experiencing our ‘selves’ as human beings is highly contingent and sometimes outright arrogant. We should be able to re-experience ourselves in a post-human world in which human, animal, social, technological and physical realities interact more than ever. Second, the experience of the insect, i.e. seeing and perceiving oneself as an insect is catastrophic, because we often understand insects as ‘bugs’ that can legally be killed (Agamben, 1998). Who hasn’t smashed a fly, spider or mosquito? Who has not thrown away ‘infected food’? Who hasn’t killed disposable forms of life? To be disposable and unworthy in the world is a catastrophic experience. This is not just an existential insight for late evenings with wine and philosophical debates (which are undeniably valuable). I argue that the catastrophic is deeply entangled with issues of (un)sustainability, environmental politics and socio-economic change.

To me, it does not make sense to talk about sustainable futures *without* understanding the complex relationship between suffering and normal life. This is a complex but important relationship that keeps academic work ethical and relevant. Scholars or professionals might ask: what do sustainability ideas and projects have to do with death and collective suffering? Why bother us with unwarranted suffering in our

academic work? Such questions symbolise how and why catastrophic experiences are taboo in scientific and academic narratives. Whenever one speaks about sustainability, climate change and ecology, we talk about potential or actual collective suffering and death (of humans, animals, plants, etc.). Symbols of suffering are omnipresent: floods, droughts, smog, biodiversity loss, food scarcity and poverty.

Relinking normal life and the catastrophic

Modern science, public policies and technological innovations have been successful in overcoming suffering, pain and early death. The state has rendered governable bearable life and capitalism has democratised comfort. However, this modernist optimism also brought us two challenges. First, the collective avoidance of suffering has been *selective*. That is to say, there is an uneven distribution of suffering and comfort at work at different levels. Not everyone has enjoyed the fruits of modern projects to ensure security, welfare, health and comfort. There is a structural link between the collective comfort and joyful lives of white middle-class heterosexual male human beings in the global North, and the suffering of the rest. This traditionally privileged category has become increasingly diffuse and fuzzy. Second, and most tragic, modernisation projects have actually *increased* and created catastrophic events and suffering. Consider, for example, the transnational social and ecological impact of colonisation and industrialisation. Interventions with good intentions create dark sides (Scott, 1998). The experience of social and physical death, extinction and disappearance lays at the foundation of a 'civilisation' and its everyday reproductions. As soon as we have overcome natural circumstances, the normal order of things again depends on the catastrophic.

In our day and age, the catastrophic is often represented, isolated and managed in such a way that it simply disappears. This is extremely problematic. In order to understand and to deal with suffering more ethically, we should not represent it via statistics or abstractions, but with how the materiality of death and suffering is embedded in our homes, streets, work and social lives. Human beings that experience a minimum standard of living in the middle-class (again, often white males in the Global North) seem to have a major blind spot regarding catastrophes. Suffering seems to disappear as soon as individuals and groups enter a minimum standard of living. As soon as subjects emancipate themselves into a middle-class life, they disengage from everyday suffering and the presence of the catastrophic. Tragically, the mass suffering of animals, materials and disposable distant working subjects is a precondition for a more or less stable, but unequal, society. Consider the horrors that have to be experienced for chickens, cows and pigs for us to have meat on our dinner plates. Or consider the catastrophic experiences of prehistoric lives embedded in the production of oil to fuel our cars and industrial economies. Without catastrophic experiences, there would be no society.

Here, it is instructive to be informed by scholarship in radical political theory and post-structuralist philosophy. Scholars in these fields suggest that the unspeakable and catastrophic plays an important role. Put simply, their central argument is that *unbearable suffering cannot be experienced directly in 'normal life' because it is too traumatic, but it is re-presented to make normal social life possible at all*. Images, graphs, words and concepts might try represent the catastrophic, but it can never be experienced without mediation. This tension cannot be resolved. So, do I argue for a collective bio-guilt or eco-guilt? Do we have to engage with some kind of green Calvinism?

Precariousness: A way out?

Instead of tightening our policing apparatuses and fine-tuning modernist strategies to promise everyone equal comfort, we need to engage with suffering and catastrophes more boldly (Han-yu Huang, 2011). Instead of simply retreating to some kind of neo-modernist guilt culture for our hubris towards Mother Nature and distant marginalised peoples and animals, we can radically integrate the *vulnerability* of marginalised human and non-human lives. Judith Butler has developed a basic understanding of what such 'precariousness' entails (Butler, 2004; McRobbie 2006). Even though her book is concerned with how we think about security, state violence and terrorism, the principle of precariousness is very useful here. Precariousness refers to the idea that in order to have life (both material and non-material), a minimal degree of violence is constitutive and conditional. Consequently, 'our' cultures, institutions and everyday practices should be guided by the idea that our lives, suffering and death are always already correlated. Mourning and misery is an experience that runs across all forms of living. This may lead to an affirmative and understanding of individual and collective forms of life, as dialectically related to suffering and death. Representations and images of suffering and death often circulate in the living rooms and professional environments of the middle-class (and higher). The actual suffering, however, remains at a distance. Something is lost when lived experiences become statistics and data for reflection and intervention.

Can we do a better job by introducing a minimum sense of systemic suffering in our thinking, language and priorities? And more importantly, who should be doing the caring here? Not all lives are equally vulnerable. Guy Standing (2011) coined the term 'precariate', combining the notions of 'precarity' and 'proletariat' in the wake of economic crises and social deprivation. For example, human beings that live in luxurious gated communities in Northern America do not experience a similar kind of vulnerability as the millions of homeless kids wandering around in African and Asian cities. Distant and undeserved suffering is grounded in systemic violence and is not a natural phenomenon. To account for 'radical otherness' is an institutionalised taboo and at the same time an ethical endeavour, both inside and outside the walls of academia.

PART IV - REFLEXIVE MATTER

*“The real man smiles in trouble, gathers strength from distress,
and grows brave by reflection”.*

Thomas Paine



Chapter 7

The good, the bad and the city

Reflecting on the empirical cases

Chapter 7. The good, the bad and the city: Reflecting on the empirical cases

“Here we go mother on the shipless ocean. Pity us, pity the ocean, here we go”.

Anne Carson

“Modern technology owes ecology an apology”.

Alan Eddison

“There is a sufficiency in the world for man's need but not for man's greed”.

Gandhi

7.1 Introduction

This chapter reflects on the empirical reconstructions as presented in Chapters 5 and 6. As such, it seeks to describe and explain more reflexively the rise of sustainable spaces in both empirical settings. Importantly, this chapter aims to understand the emergence of sustainable urbanisms through a post-Westphalian, post-(neo-)liberal and post-anthropocentric vocabulary. This is especially relevant given the spatio-political focus of the transition analytics. It is instructive to briefly recall some of the methodological issues that inform these empirical reflections.

My understanding of transition politics is informed by a very specific framing of socio-material systems and their contingencies. Conceptual heuristics from transition research, urban political ecology, governmentality studies and critical urban research informed this transition analytics. The three elements of a transition analytics (genealogy, governmentality and contingency) are based on an underlying ontology of assemblage urbanism. It has been instructive to consider urban spaces as loosely coupled urban assemblages, as it enables me to grasp the long struggle-based histories, layered governing regimes and new contingencies of urban spaces (i.e. a particular waterfront area and socio-ecological areas). Following MacFarlane (2011) and Magnusson (2010), such urban spaces should be considered as: (1) trans-local

and stretching across time and place; (2) continuous doings, makings and agential actions; and (3) organised hierarchically and unevenly. As I aim to show how particular urban transitions unfold in our day and age, this conceptual sensibility plays a crucial role throughout this chapter³⁵³. Furthermore, even though I have presented a typology of specific urban governmentalities, this typology only served as a tool to sensitise very specific spatio-political variations and modalities. The main focus has been on the ‘paradigmatic logic’ of a new type of urban governmentality associated with two different urban sustainability transitions. The empirical reflections presented in this chapter do not reflect Rotterdam and The Hague as urban regions, but rather as specific (and sometimes related) sustainability projects and transition cartographies³⁵⁴.

The chapter is structured as follows. Section 7.2 reflects on the points of contact between the two case genealogies. Instead of a classical (‘objective’) comparison of empirical cases, I formulate a number of themes that allows me to reflect on the cases in a more historical and spatial manner. Case-specific issues are contextualised in order to critically focus on broader uneven urban and socio-material developments. It becomes clear that both empirical cases ‘touch’ throughout their histories in a number of ways. Contact points are reflected upon in terms of the three main transition analytical building blocks. Section 7.3 moves to points of contact of current eco-governmentalities. I reflect on how the empirical cases intersect, focussing on their spatio-political rationalities. Section 7.4 then highlights the technical and radical contingencies associated with these spatio-political rationalities that govern urban eco-spaces in Rotterdam and The Hague. Based on the empirical reflections in this chapter, section 7.5 extends the transition analytics. Finally, section 7.6 puts these reflexive insights into a broader context for our understanding of creating sustainable cities and radically different futures.

³⁵³ As explained in Chapter 4, I do not adhere to most of transition research vocabularies (‘niches’, ‘front-runners’, ‘arena’, etc.) since I find many of these abstract categories in transition research ill-equipped to grasp transformative politics and spatial complexities (see Chapter 4).

³⁵⁴ Since both the first empirical case (Stadshavens) and half of the second case (the Gandhi-garden) are situated in the Rotterdam area, The Hague’s context is reflected upon less extensively in this chapter.

7.2 Genealogical points of contact: Eco-industrialisation and the will to urbanise

The histories of both empirical cases are not isolated. As extensively discussed in Chapter 2, it is instructive to understand their points of contact in order to understand their interrelated nature *across time and space*³⁵⁵. Both empirical cases were selected for a number of reasons, most notably their relative embeddedness in dominant institutions and social regimes. Whereas the Stadhavens case was expected to be connected to official spatial planning strategies, project developers and investors, the TT case would be developed on the margins of socio-economic systems and governmental projects. To some extent, this was the case (see also Chapter 8). But what actual points of contact can be addressed between both cases here? How can these points of contact present a critical explanation of the rise of sustainable urban spaces?

In line with the notion of paradigmatic logics, it is instructive to understand genealogical contact points via the ‘non-genealogical building blocks’ of the transition analytics, i.e. in terms of spatio-political rationalities and the contingencies thereof. Recalling Chapter 4, the transition analytical deployments do not provide any ‘general pattern’ of ‘meta-logic’. They do also not highlight mere ‘micro-dynamics’ and ‘self-interpreting subjects’. What they do, rather, is critically describe and explain the complex ways in which eco-friendly and sustainable urban spaces come into being historically (genealogical points of contact), how these spaces are rendered normal and governable (governmental points of contact), and how new contingencies and struggles emerge (contingent points of contact). These building blocks critically combine correlative patterns and logics with contextualised interpretations through (temporally and spatially) interrelated struggles, regimes and practices. Following Foucault’s genealogical method, each episode and historical mode of governmentality renders urban spaces visible, knowable and governable in particular ways, moulding, adopting and downplaying earlier and other forms of urban governing. Importantly, in both cases I used a different terminology to denote the specific type of urban space-making (‘neoliberal eco-waterfront’, ‘neo-communitarian eco-spaces’). To account for points of contact, I use a more flexible approach and use ‘urbanism’, ‘urban space-making’, ‘(urban) eco-spaces’ and ‘(urban) eco-space making’. These notions denote how points of contact signify broader urbanisation processes or types of space-making.

³⁵⁵ Note that modern Dutch history is often considered as a history of consolidation, corporatism and consensus building, devoid of radical dissensus, struggles and revolt (Van Schendelen, 1984). However, my genealogical accounts show that ‘even’ Dutch histories are dipped in all kinds of blood, sweat and tears (cf. also Blokker & Blokker, 2008). It is therefore much more interesting to radically reframe the history of these urban assemblages.

Episode 0 (14th-mid-19th century): An age of commercial-sovereign eco-urbanism

In order to grasp the historical traces of the paradigmatic points of contact of current urban transitional forces, it is instructive to briefly trace some linkages in the pre-19th century period. The combination of commercial and economic practices with the regulatory forces of sovereign power shaped *commercial-sovereign eco-urbanism* or *commercial-sovereign urban eco-spaces*.

Life in late-Medieval Dutch cities was characterised by commercial and trading activities. As such, the ecological did not have any 'intrinsic' value and was mostly considered as a material economic issue. In most instances, the 'environment' of urban spaces - if we even can speak of urban spaces yet - did not actually exist. Socio-ecological relations were considered as means to trade and survive (fishing, shipping, selling goods, burning wood). Nevertheless, elites and nobilities in Rotterdam and The Hague indeed have the privilege and power to enjoy open green spaces for hunting and dwelling. This unequal access to 'open environments' and livelihoods developed along geographical lines in both urban regions: northern areas in Rotterdam and 'sand' in The Hague versus southern areas in Rotterdam and 'peat' in The Hague. Additionally, sovereign power regulated most of city life and social conduct in both cases. It seems that in both genealogies the logic of uneven ordering of commercial-merchant spaces was supported by legal and regulatory practices. These practices seemed to accommodate trading and reproduce radically uneven eco-landscapes. Slowly but surely, local markets were increasingly linked (e.g. through regional ties and colonial adventures), which created conditions for new economies of scale and the growth of local businesses.

Episode I (1850s-1960s): An age of eco-industrial urban spaces

The mid-19th century marked a new era in both case genealogies. It signified industrial breakthroughs and mechanical and technical innovations to boost economic production. This radically new way of governing economic life had severe repercussions for the industrial working force and their biological and socio-environmental living conditions. At this point, I systematically map the genealogical points of contact on the basis of a modern urban eco-governmentality and emerging contingencies. The intersections between the first genealogical episodes of both cases (respectively bio-industrial and the eco-industrial urbanism) can best be described and understood as *eco-industrial urbanism* or *eco-industrial urban spaces*.



Visibilities of the eco-industrial urban spaces

How are waterfront spaces and urban sites sensed and visualised since the mid-19th century regarding ‘environmental concerns’? What kinds of objects and experiences were foregrounded and backgrounded? Port areas and cities industrialised and developed for the sake of progress and national welfare. As urban growth and port expansion dominated the mind-set of local nobilities, merchants and elites, concerns grew over residential and worker safety, hygiene and health. However, these were downplayed up until the late-19th century. Some examples of an ‘modern industrial gaze’ in Rotterdam’s waterfront area were: rational planning of port activities, planning new port routes and transit schedules, and considering port workers as machines (i.e. considered replaceable). Up until the beginning of the 20th century, many safety, health and living concerns of poor residents were neither visualised nor problematised. ‘Ecology’, in this context, was often considered in economic terms. Environments emerged as socio-economic living areas as the result of new concerns, such as the effects of industrial activities, crowded and dirty places of living (e.g. considering homes as ‘animal cages’). After years of dispossession, and dreadful working and living conditions, the biological lives of these many dwellers from ‘the South’ (Rotterdam) and ‘peat’ (The Hague) were correlated to their socio-economic lives. Importantly, while some industrial and everyday urban activities were considered as harmful, the bodily and material effects of these activities were not actually observed as problematic for many years. Only after miseries, illnesses and deaths of many residents and workers in poor districts (In Dutch: *sterftekaart*), did a new ‘environmental gaze’ and sensibility emerge (early 20th century). These new sensibilities were also created after series of strikes, protests, national parliamentary debates and local mappings of the circumstances of poor Rotterdam and The Hague citizens. As such, spaces that could be observed as ‘ecological’ were mostly considered to be directly related to, and the result of, Rotterdam and The Hague as industrial and crowded cities (e.g. litter, polluted canals). Since the early 20th century, the waterfront was not only imagined and observed as a modern merchant project, but also as a working and living area that required at least some care and qualitative improvement (e.g. RDM and *Heijplaat*). New maps and graphs were created to visualise and image Rotterdam in a rational and mathematical manner.



Epistemologies of the eco-industrial urban spaces

What, then, are the underlying epistemic schemata and repertoires connected to these sensibilities and visibilities associated with eco-industrial urbanism in both cities? How did specific modes of thought inform a tangible understanding of eco-industrial spaces?

Economic activities were increasingly considered to be subject to rational and efficient planning that would thrive via industrial innovations. Rotterdam's modern industrial waterfront, for example, was mostly made possible by specific ideas and thoughts about international trading, technological innovations in other port cities and the survivalist notion of fierce port competition. All kinds of port workers had to learn and 'know' how to carry heavy loads, handle a crane, design a vessel and plan transit. For decades, it was not 'known' by formal authorities what these innovations actually meant for neighbouring residents. Knowing living conditions of (poor) residents and planning for better 'environments'. Hygiene and health became public concerns that required management and improvement. As urban dwellers became sick and even died as a result of all kinds of diseases (e.g. cholera and typhus), urban 'living environments' became objects that needed to be studied and known. Urban dwellers themselves were also addressed to keep their livelihoods clean and hygienic. Slowly but surely, industrial economic activities were correlated to bodily well-being and physical places of urban dwellers. These linkages were mapped and informed urban planning practices. Since the first decades of the 20th century, the liveability of urban places was integrated in rationalist planning schemes (e.g. The Hague's *Duindorp*). The idea and knowledge that nuisance and pollution could lead to harmful health effects did not actually result in reducing industrial activities. Rather, in line with a broader scheme of urban planning in Western cities, different urban areas were separated and assigned particular functions, often categorised as working, living or leisure spaces. This allowed residents to rest and relax their bodies and minds after physical labour with cranes, cargo, sheet production and vessels. Slowly but surely, new ideas about planning, architecture and urban landscapes informed a mode of urban planning that would improve the livelihoods of many residents in Rotterdam and The Hague. A new type of city life emerged for workers and residents in the early-20th century. Nice examples of new knowledge about the living conditions of poor residents are the public officials that inspected the state of buildings and living conditions. Specific norms and measurements were formulated about architecture or the allowed number of occupants. In order to 'care' for the population on a larger scale, new 'waterfront knowledge' enabled city officials to create new plans (e.g. plan Rose and Public Works in Rotterdam). Despite these concerns, modernist and rational planning dominated with the aim to accommodate urban growth, traffic flows and 'development' (e.g. Rotterdam's *Hofplein* project).



Technologies of the eco-industrial urban spaces

How are these epistemic regimes expressed and articulated in technical everyday settings? How types of technologies, procedures and interventions were aimed to shape eco-industrial urban sites?

Port merchants and local firms used new industrial and mechanical techniques and innovations. This was especially relevant in Rotterdam. As steam ships and vessels became bigger, vessels and port basins were enlarged as well. New basins were excavated, new hydraulic, mechanical and electric 'port machines' were bought and used (e.g. grabber cranes, floating cranes, coal tip, Jacob's ladder). In order to safeguard the flow of materials, goods and commodities, the 'hinterland' was connected with port areas through railways, trains and inland navigation. A new port authority (1932) served as a 'control centre' to map and identify port challenges and concerns that required intervention. Such techniques expanded and governed new urban areas, but were accompanied by a number of legal, financial and cultural technologies that shaped the waterfront as an urban site since the late 19th century. However, these innovations led to intense sounds, smells and other effects near homes and living areas. In the mid-19th century, environmental quality was regulated quite technically. Ordinances and local decrees were issued to regulate everyday conduct and commercial use of public streets, rivers, canals and open water. An important legal instrument was the 1875 Nuisance Act, enabling city authorities to consider what industrial activities required what type of 'environmental regulation'. After numerous local and national struggles, parliamentary debates, additional legal means were introduced to living conditions, especially for poor residents by the end of the 19th century. Living conditions and 'private' livelihoods could now be regulated publically through national laws and acts, mostly regarding public health, working conditions and housing quality. This also led to the establishment of environmental agencies and policies in Rotterdam and The Hague. These regulatory tools (including new local powers, via the so-called *Gemeentewet*) enabled identification of problematic and 'illegal' working, housing and living situations, and follow-up with possible fines and punishment. Importantly, a number of material and physical interventions sought to improve the quality of city life in the early 20th century such as public parks, canals, green areas and labour gardens. As of the mid-20th century, modern urban planning aimed at 'rationally' regulating environmental quality, while economic activities were stimulated which resulted in the flourishing of a new middle-class (e.g. *Basisplan*). As both cities expanded in the mid-20th century (accommodating urban demographic growth), new urban plans and policies addressed living environments 'from the start'. Residents, workers and dwellers (e.g. living near the waterfront) were expected to use their salaries to buy commodities and their spare time for cultural lifestyles and leisure activities (outside the port areas). These economic principles were expected to improve the welfare, health and social lives of all residents. Additionally, modern urban

planning increasingly accounted for open and green spaces to include environmental quality and opportunities for leisure.



Subject formation through eco-industrial urban spaces

What kind of subjectivities emerged through these sensibilities; what forms of knowledge and specific interventions? Which 'eco-identities' and 'eco-relations' emerged in Rotterdam and The Hague since the mid-19th century? As industrialisation and rationalisation increased, new jobs and industrial activities emerged. After a series of problematisations of industrial and everyday urban activities, a number of new 'institutional identities' appeared, such as medical experts, industry inspectors, environmental scientists, water engineers, environmental agencies and departments. Many urban areas in the 19th century did not become 'less merchant' due to new regulations, but intensified their traditional merchant character by industrial or modern-utopian means. For example, before the mid-19th century, Rotterdam's merchant waterfront was mostly 'populated' by merchants, port nobilities, city authorities and (relatively poor) workers and residents. The eco-industrial waterfront added specific types of port workers (e.g. crane workers, traditional movers and lifters), port technicians and engineers (e.g. planners, local managers, maintenance jobs) and city officials (e.g. public works, inspectors, enforcers). All these symbolic roles are deeply entangled with bodily and material practices and objects. Handling a mechanical crane, excavating port basins, moving cargo from a ship onto a train, living in a safe and clean (or unsafe and filthy) house, inspecting unsafe and dirty living environments, dying from cholera or a 'port accident', striking for a better wage are some examples in which symbolic identities are connected to very material settings. Since late 19th century, industries and urban residents were increasingly addressed via 'their environment' and qualities. Consequently, environmentally sensitive industries and identities were created, or at least attempts were made via regulations and hygiene and health concerns. Importantly, since the first decades of the 20th centuries, welfare and middle-classes in both cities led to more consumption of 'luxurious commodities'. These eco-industrial subjectivities were tied to all kinds of material settings, such as machines, small houses, polluted water, bio-chemical illnesses, lawns, allotments gardens, bikes, cars and ovens. As such, the institutional and discursive aspects of these eco-subjectivities from the 1850s to the 1950s were equally material³⁵⁶.

³⁵⁶ It can be said that eco-industrial urbanism coincides with an eco-industrial assemblage, consisting of eco-industrial visibilities, knowledge schemes and technologies, and together crafting a wired range of eco-industrial urban objects and peoples. Importantly, again, these subjectivities were by no means only local, but stretched to similar port cities such as Amsterdam, London, Frankfurt and Antwerp. These cities share a similar history.



Contingencies of eco-industrial urban spaces

Even though this eco-industrial rationality seeks to capture a heterogeneous, contradictory and decentred logic, it does not cover all tensions. As explained in Chapter 4, every genealogy is imbued with struggles, contingencies, contradictions and interventions of the political. What types of contingencies (technical and radical) have been downplayed or engaging with broader eco-industrial assemblages?

Technical contingencies. Instead of contrasting Rotterdam's port regime with an urban regime, it makes more sense to me to consider how both port and city officials shared a number of technical and pragmatic concerns to improve urban livelihoods. Both formal city authorities mainly problematised economic activities in view of international port competition, technological innovations, financial and organisational efficiency (e.g. low-wages, rational planning of transit and storage) and safeguarding growth. As noticed earlier, since the mid-19th century many concerns related to hygiene, health and deteriorated living environments were added as technical concerns. This was enacted through a series of problematisations in both cities, improving working and living conditions through local and national regulations. Litter, waste and pollution became concerns in public spaces and were considered hygiene and health risks. New knowledge apparatuses and national and local regulations, agencies and measures that emerged since the mid-19th century, became professional and institutional problematisation machines to regulate and steer modern industrialisation and urbanisation into the 20th century. In the mid-20th century, it became increasingly significant to problematise cities like Rotterdam and The Hague by rational means. Combined efforts continuously aimed at improving and fine-tuning conditions for the growing middle-class.

Radical contingencies. One of the major struggles that shaped debates, initiatives and projects about the ecological quality of urban residents was the Social Question. Social movements, political ideologues at a national level, and local critiques articulated the bad circumstances of children, workers and poor dwellers. Let us not forget that thousands of port workers died and were injured by industrial port activities. Even though strikes were illegal until 1872, these conditions were countered by port strikes (since the legalisation of strikes) and fierce debates about the poor conditions of port workers and residents alike. Similarly, (often) men fought against technological innovations as they were fired and replaced. As urban areas were being expanded, it also meant dispossessing farmers and rural residents from their land. These struggles were frequently won by port authorities and city officials, indicating that the eco-industrial assemblages could also be different if these struggles turned out differently. The underlying urban struggle can be considered as a struggle against uneven conditions of hygiene, housing and work. For decades, not only housing and working

conditions were highly uneven, but also access to open and 'green' spaces. What is more, elites and rich residents moved to less polluted and crowded areas (Rotterdam Northern districts and The Hague's 'sand districts' and surrounding areas).

Episode II (1960s-2000s): An age of techno-capitalist urban eco-spaces

The ways in which the eco-industrial urban spaces were rendered visible, knowable and 'ripe' for development and intervention changed significantly in the 1960s. However, while some features changed radically, other 'assemblage ingredients' recurred and adapted slightly in view of new concerns. Let us move to the ways in which new governmental elements emerged and what types of contingencies unfolded. The intersections between the second genealogical episodes of both cases (respectively neo-industrial and the techno-capitalist eco-urbanism) can best be described and understood as *techno-capitalist eco-urbanism* or *techno-capitalist urban eco-spaces*.



Visibilities of techno-capitalist urban eco-spaces

This industrial-sovereign gaze was slowly confronted by upcoming sensibilities to observe urban environments in terms of intensified global economic relations and a fine-grained sense of identifying environmental qualities. The visibility of what entailed healthy and green spaces became more sophisticated, professional and science-based. Through an array of local, national and international 'eco-radars', Rotterdam and The Hague's environments became observable, assessable and predicable (e.g. via DCMR, GGD, RIVM, PBL). These science-based visibilities, then, informed local political debates, urban policy plans and the wider public. These ways of sensing and observing nature and ecology as deeply connected to urban life and economic systems was intensified by international debates on 'climate' and 'sustainability' debates and new phenomena (e.g. pollution, acid rain, deforestation and ozone depletion). This was clearly evident in Rotterdam. Rotterdam's port expanded and almost 'touched' the North Sea. The traditional port areas became safety, health and environmental concerns. Water from the Maas River was polluted, port workers were still unsafe, and nuisance created all kinds of concerns for residents (regarding air quality, smell and sounds). The waterfront, as part of Rotterdam, was increasingly considered as a living environment under control of capitalist motives, rationalist planning and bureaucratic rule. These typical critiques sought to visualise the harmful effects of rational urban planning mixed with uncompromising urban developments for public health and liveability. In response to these critiques, and in view of port expansion, the future of the old port areas was reconsidered and reimagined. The eco-industrial waterfront became a site for new urban concerns and functionalities such as offices, houses and leisure (even boulevard-like hot spots). New maps of the waterfront area were designed to re-

imagine this area into a service-oriented economy, instead of a port industry (e.g. the *Kop van Zuid* project). However, the actual industrial port activities did not disappear, they merely moved towards the coast in the context of fierce global port competition.



Epistemologies of techno-capitalist urban eco-spaces

What forms of knowledge co-emerged with these visibilities? What epistemic regimes infused the ways in which techno-capitalist urban spaces were shaped? The move towards service-oriented and consumer-based models in Rotterdam and The Hague were assumed to increase wealth and comfort for most residents. This also resulted in the introduction of new skillsets and economic knowledge. Port authorities, for example, aspired to be one of the greatest and biggest ports worldwide, implying that new port areas, financial schemes, new computers and software programmes and growth rates had to be tied together. City and port authorities tried to address critical voices about liveability and environmental degradation of local residents and action groups. Interestingly, ongoing port expansion was also (symbolically) halted by the city council in 1971 for environmental and public health concerns. Such 'drawbacks' suggested a new type of knowing was required to plan and manage a port 'rationally'. In fact, integrating opposing ideas seemed to be a core response to port and urban expansionism and associated planning schemes. While 'environmental knowing' emerged through local and national agencies, social critiques and counter-knowledge emerged about the alienation and dehumanisation of modern architecture, car hegemony and concrete jungles. These local concerns were embedded in broader debates. New discourses emerged on harmful effects of modern industrialisation in the 1970s (e.g. Club of Rome) and the 1980s (e.g. Brundtland report). In response to these diagnoses, Dutch national and local policy reports assessed environmental challenges. Despite official city ambitions to address environmental and health concerns more interactively, rationalist planning schemes remained dominant in the 1980s and 1990s. Crucially, such rational plans were often attempts, not actual and implemented realities. Rotterdam's old port areas were increasingly addressed and known through scientific schemes of nuisance, pollution figures and implications for public health, backed by local administrative bodies and a regional environmental agency (DCMR). From now on, the Maas River would become more urban and was considered as an aesthetic, attractive and open area ('Venice at the Maas').



Technologies of techno-capitalist urban eco-spaces

What types of technical interventions and practices resonated with these visibilities and epistemic grids? Since the 1960s, the increase of wealth and welfare for middle-classes in both urban regions was intensified by specific policies to ensure further economies of scale. As salaries increased, industrial production of commodities moved to low-wage countries. Market mechanisms allowed 'cheaper' large multi-nationals to gain ground in Rotterdam and The Hague, at the cost of smaller businesses. This resulted in new routines for urban and sub-urban middle-class residents. As a response to modern urban expansion and development plans, city authorities tried to combine their technical procedures with more dialogical strategies. This enabled compromise and compensation of 'local losses'. Despite these dialogical measures, many modernist urban plans were still developed in the 1990s. Since the 1970s, these local and national plans progressively included environmental qualities and measures to cultivate public health, public parks, bio-diversity and green places (from DCMR, national departments, health agencies). These new interventions were not only discursive, but also material. Port expansion required engineering protocols, physical preparation and excavations. The neo-industrial waterfront was increasingly automated, which required fewer muscles and physical labour and more handling of electric and mechanical machines and computer software. Despite the port strikes in the 1970s and 1980s, the era of handling boxes, sales and sacks was over. Since the 1980s, many policy plans and material interventions sought to turn the old port areas into a 'waterfront boulevard'. This fitted a wider policy technology to render palpable a more creative and service-based economy in major Dutch cities. As of the 1990s, this market-based urban development became salient through e.g. *Kop van Zuid* project and a shopping and consumer-based city centre. In these years, many fragmented and sector-based programmes and policy initiatives were connected to a broader more integrated vision, sometimes supported by a new 'sustainability discourse'. In line with this tendency to integrate and reconnect different policy realms, different urban functions were mixed. However, despite these attempts, car-based mobility, fossil fuel based energy and consumerism dominated the late-20th century era and was often governed by technocratic rule and administrative planning. Eco-friendly conduct in this period was indeed significant 'outside' sovereign power, but often implied being eco-minded in a consumer society.



Subject formation through techno-capitalist urban eco-spaces

What types of identities emerged in this era? What subjectivities were created through the making of techno-capitalist eco-spaces?

The 1960s produced some critical and political subjectivities that fiercely criticised the ways in which bureaucratic rule and economic life dominated urbanism. Protests and procedural input from residents led to the cancellation or adaptation of official plans in both cities. After these critiques, both institutions and residents became increasingly 'interactive' since the 1970s. Such interacting citizens and urban planners, however, did not prevent the emergence of technocratic identities, departments and agencies in both cities and the Netherlands more broadly. The number of physical workers decreased in the context of the service-economy. Regarding the waterfront case, port technicians, engineers, software programmers and managers of new port activities increased. City officials with a clear public task did not disappear however, rather their profession to address public health and safety expanded to social and environmental concerns. What is more, the ways in which policy subjects addressed Rotterdam's waterfront and urban sites was not only through legal and regulatory procedures. Their identities became less legalist and more 'socially involved'. That is to say, policy agents started engaging with various public and private actors, investors and residents (e.g. in the *Kop van Zuid* project). As the middle-class grew in the early 20th century, the 1960s and 1970s created a boom in the middle-class by fostering liberal freedoms and cultural lifestyles. Importantly, the emergence of a diversified consumer class did not mean that religious, familial or post-colonial issues dissolved. Rather, these kinds of subjectivities were considered as secondary to law-abiding citizens and market-oriented identities. Critically, many discursive identities were deeply material, albeit in different settings. Human bodies, for instance, were increasingly tied to electric and computerised machines (e.g. cranes). What is more, *Maasvlakte 2* (a material project if there ever was one) expanded the discursive boundaries of Rotterdam and the port: filling up excavated basins creating new urban potentialities, skyscrapers extended the city vertically, port strikes reminded port authorities of embodied port work, a Maas River was chemically polluted, natural environments and bio-diversity were at stake and absorbed in new urban plans, and many litres of wine and beer brought joy to thousands of middle-class bodies in city centres and old port areas (at least, I hope so). Many traditional industries did not disappear, but were displaced. In fact, industrial activities were intensified to (mostly) Asian low-income countries. So, techno-capitalist assemblages morphed their eco-industrial past into displaced (port) industries in combination with socio-environmental ambitions and middle-class consumerism.



Contingencies of the techno-capitalist urban eco-spaces

Again, this techno-capitalist rationality is still quite contingent. What pragmatic and more fundamental contingencies have been downplayed or constantly intervened 'in response'?

Technical contingencies. As of the mid-20th century, technical problematisations regarding environmental quality further intensified and 'fine-tuned', as new agencies emerged, science-based models advanced, regulatory schemes intensified and more interactive dialogues with local residents were organised. Most ecological and environmental concerns that emerged in both cities were often addressed as technical concerns that required minor adaptations and local solutions. As of the mid-1990s, the new label 'sustainability' was also adopted to this end. Despite (or perhaps due to) the more pragmatic approaches to combine different voices and urban functionalities in policy plans, most economic regulations and policies stimulated mass-consumption, car-based mobility, individual autonomy and economic growth. Urban sites in Rotterdam and The Hague that were not able to accommodate this way of living were increasingly problematised. New spatial plans led to more multi-national businesses associated with a consumer-based culture since the 1980s. As new plans sought to improve the spatial quality and liveability of previous industrial ports, new boulevard-like city centres and waterfront areas aimed at getting rid of their industrial legacy. Instead, many policy initiatives and public investments were directed towards creating a service-based economy, sometimes explicitly attracting high-income groups. Techno-capitalist spaces, then, were problematised in terms of overcoming all obstacles to development, progress and urban expansion.

Radical contingencies. Some of these technical concerns became increasingly politicised in Rotterdam and The Hague. Since the 1960s, the dark side of port expansion was articulated and expressed by social actors, including the city council. This struggle is not new, but re-emerged in late 20th century. As various environmental action groups and local residents defended natural environments and liveable places, the 'balanced port expansion' and 'negotiated compensations' became the result of this struggle. Hypothetically, another result would have been to have more compensation or to decrease port expansion altogether. Additionally, the many port strikes in the 1970s and 1980s indicate that man has lost, once again, to machines in the quest for techno-managerial innovation and international port competition. Again, the interest of the working-class was not addressed explicitly and adequately by the press (cf. Van 't Wel, 1987). Since the 1970s and 1980s, modern urban planning and new economic developments were fiercely criticised by local residents and local political parties. Residents protested and ecological movements advocated for a more human-friendly and ecology-minded city (e.g. less automobiles, offices and large-scale plans).

Case genealogies: Explaining the creation of post-liberal urban eco-spaces

These genealogical points of contact sketch a particular history of current transitions towards sustainable urban spaces. As elaborated in Chapter 2, a genealogical method traces the historical struggles associated with a specific phenomenon. This historical mapping is in no way an 'objective reconstruction', but rather an effort to critically foreground and explain the emergence of a new phenomenon through its struggle-based histories. In the context of this chapter, these case genealogies show that a lot of historical 'groundwork' has been prepared for 21st century transitions. Major historical ruptures and discontinuities in the 1340s, 1850s and 1960s have - in radically different ways - shaped the conditions of possibility of present urban spaces and socio-ecological livelihoods. Additionally, numerous protests and strikes, polluted rivers, discomfort, poisoned lungs, hard physical labour, viruses, illnesses and dead bodies have also been part of this history. As historians of technology would argue, many technical interventions and technologies emerged in the wake of these dark chapters to advance the human condition. However, this does not mean that the struggles are over. Rather, as is often the case, geographical displacements occur and new urban assemblages create new forms of exclusion and environmental injustices.

Different periods do not simply follow one another, but are deeply entangled in complex and contingent ways. This constant iteration of history, the present and the future of urban space-making is nicely captured in popular movies such as *Cloud Atlas* (2012) and *Interstellar* (2014). These movies suggest that we (including the author and readers of this text) constantly meet each other and the same type of social struggles occur in different eras. The creation of new, unique and singular experiences, then, cannot be understood without their rich spatial entanglements. Importantly, this does not make the making of urban sites and livelihoods path-dependent, but open and contingent. New urban mentalities and political rationalities mix past imprints and concerns with new ones.

7.3 Points of contact in governmentality:

Normalising spaces through eco-rationalities

The emergence of a sustainability transition discourse in the two urban contexts was part of new paradigmatic spatial eco-rationalities. That is to say, the linkages between the most recent genealogical episodes should be understood as 'history in the making'. Against the background of techno-capitalist urbanisation in the 1990s and the 2000s, transition discourses emerged in many policy, professional and social contexts (see Chapter 3). Through various routes, this knowledge mixed and fused with the two case histories I described. What, then, are the points of contact between the neo-liberal

eco-waterfront and the neo-communitarian eco-spaces as unravelled in Chapters 5 and 6? This takes us back (or rather forwards) to the transition analytics of the present eco-governmentality.

Episode III (2000s- ...): An age of post-liberal urban eco-spaces

It would be misleading to suggest that both urban transition cases somehow show a kind of higher-level logic that captures all local dynamics. As argued earlier, I reject this type of scientific representative subsumptionism. Similar to the idea of heterogeneous rationality that shapes 'sustainable' urban spaces, both cases *intersect* in terms of extending a set of historical and new problematisations (paradigmatic logic). A new type of spatio-political rationality seems to emerge in the wake of the so-called 'Anthropocene' and new technologies to cultivate urban liveabilities and human environments. The emergence of this new eco-governmentality responds to and extends techno-capitalist spaces in Rotterdam and The Hague in a number of ways. I call the intersections of both cases: *post-liberal eco-urbanism* or *post-liberal eco-spaces*. This neologism denotes a specific way in which eco-oriented urbanisation processes are dealt with, using all kinds of technologies, statist arrangements, community codes, and other *trans-individual* techniques and practices. A *post-liberal eco-governmentality* shapes such spaces and refers to a mix of unprecedented and decentred economic structures, policy strategies, communitarian classes, climatological contexts, environmental purifications, and digital and socio-technical tools. Such highly heterogeneous elements allow new institutional and governing mechanisms to shape populations and spaces in urban regions. This logic also mixes elements from both empirical paradigmatic logics (neo-liberal and neo-communitarian eco-urbanism). Given the rich genealogies of these logics, their points of contact resonate with some historical features of Rotterdam's waterfront area and both TT networks. That is to say, the paradigmatic logic of post-liberal eco-urbanism is also historically tied to problematisations and governing aspects of the neo-industrial and techno-capitalist era (1960s-2000s). Importantly, a post-liberal eco-politics is perhaps even more diverse and heterogeneous than neo-liberal or neo-communitarian spaces.



Visibilities of post-liberal urban eco-spaces

Rotterdam's waterfront and TT networks, as discursive spheres, emerged by problematising environmental deprivation and economic concerns in the mid-2000s. Imagining urban spaces in terms of economic growth and consumer-based models and strict environmental regulations became increasingly challenging. Even though both transition contexts differ in terms of the intensity with which socio-economic and environmental concerns are called into question, a number of new maps and sensibilities emerged in order to grasp these challenges. Specific material sites are increasingly problematised and illuminated as unhealthy, individualistic or 'the old economy'. Importantly, the port economy is not observed as a fundamental concern, but as part of a growth-based economy in need of 'clean' and 'sustainable' reform. As *Maasvlakte 2* designates a geographical stretch. The spatial and economic meaning of old port areas is reframed. The OMSR and the Stadshavens programme bureau are creating a new 'radar'. Water, old port basins and the 1400 hectares of the Stadshavens programme are considered ripe for floating projects, new housing markets and a new type of urban economy prone to local environmental and socio-economic improvements. The role of free individuals in the context of such transitions seems of little significance. As environments need to be integrated in plans and spatial interventions, the figure of 'individual' consumers and professionals play a role as part of new and sometimes eco-oriented markets and creative classes. Similarly, the negotiated geographical places of TT Rotterdam and the decentred DHIT-places suggest that urban areas are considered as 'eco-potentialities' or working spaces. However, the two TT networks problematise the meaning of urban sites more radically, with the underlying aspiration to develop post-capitalist economies and social networks. Increasingly, urban areas are observed as dynamic and vital places that can actually be transformed. Many areas are problematised in such a way that they are in need of moulding and renewal. Waterfront areas, neighbourhoods, vacant places and separate initiatives are observed as flexible and contingent. City authorities support TT networks and port authorities to visualise and imagine a new and more 'sustainable' urban future. The mapping of urban spaces, however, is much more 'large-scale' and institutionalised in the Stadshavens case. The imaginative capacities to reframe an entire part of the city for city and port authorities, architects and contractors are more salient than for local residents, activist youth and urban gardeners. In both cases, a mix emerged of seeing new blue or green routes and dwelling spaces along new port boulevards and vegetarian or organic restaurants (often for the privileged middle-class). This mapping prioritises particular modes of observing and imagining urban spaces in Rotterdam and The Hague.



Epistemologies of post-liberal urban eco-spaces

What are the forms of knowing that supported the seeing and understanding of post-liberal urban eco-spaces? In both empirical cases, transition knowledge is clearly significant. It informs a variety of actors (city and port authorities, architects, planners, concerned residents, activists, etc.) to know that and why we are in the middle of ‘something big’, of ‘a transition’. The terms ‘transition’, ‘sustainable transition’, or even ‘transition management’, are used more often than I expected. This suggests that transition knowledge played and still plays an important role in legitimating the emergence of post-liberal eco-spaces. However, the role of transition knowledge and its associated concepts (complex systems, self-organisation, etc.) should not be overestimated. A wide variety of other epistemic sources were mobilised in the diagnosis and problematisation of all kinds of ‘unsustainable’, ‘unhealthy’ and ‘undeveloped’ experiences and living environments. In some instances, these inspirational sources are derived from distant places such as Totnes, Berlin, New York, or Mexico. In many instances, these modes of knowing reject linear, differentiated and rule-based regulations, and advocate a more systemic, trans-personal, holistic and even animistic worldview. Rotterdam’s waterfront area, for example, is allowed to be considered in its ‘geographical symbiosis’ with its direct environments such as southern districts and local school-going youth. Similarly, knowing climatological and ecological developments and problems (rising water tides, droughts, food crisis, extraction of fossil fuels, etc.) informed a new holistic engagement with renewable and local ‘resources’. Humans are not considered as isolated phenomena, but relational beings that depend on their environments for their survival and well-being. All kinds of tensions and potential conflicts are accounted for in such holistic schemes (e.g. spiral dynamics, transition management, permaculture, experimentalism, ascetic spiritualism, etc.). Contingency and openness are often considered a strength, not a weakness. In this context, a wide range of ‘knowledge institutes’ (next to DRIFT) were directly involved in the production of relevant eco-knowledge: TNO, GGD, DCMR, RDM Campus, TU Delft, Hogeschool Rotterdam, Wageningen University, University Utrecht, etc. By no means did I consider my position as an academic to be unique during field work. I sometimes encountered master and PhD students. This ‘academic density’ is puzzling, as even some of the most fundamental intellectual sources I use seem to circulate in these networks (e.g. transition research, governance, spatial planning, Foucault, Rancière, complex systems theory)³⁵⁷. Despite these holistic and inclusive ideas, scientific evidence of environmental degradation, legal rules, geographical demarcations, water architecture, building procedures are still material requirements and sources of

³⁵⁷ If anyone, a critical constructivist should be able to deal with this onto-epistemological hocus-pocus.

knowledge. Furthermore, a vast range of practical know-how is assumed, promoted and cultivated (e.g. building floating objects, urban farming, permaculture design and new funding schemes). In some cases, this is actually considered crucial for greener and more sustainable livelihoods, but it also refers to building techniques or private leisure activities. Many of these epistemic sources inform a 'vitalist' understanding of the making (and qualitative improvement) of urban spaces.



Technologies of post-liberal urban eco-spaces

What specific techniques, procedures and technologies were employed that allow post-liberal eco-spaces to emerge? First of all, a series of diagnostic techniques were used. Such techniques include scientific projections of climate change impacts, but also everyday conversations about the problems of e.g. current social, economic, architecture, food and health routines. Importantly, even though some problematistion techniques are quite impressive and radical, some instances reinforce a techno-capitalist logic. This especially holds for Rotterdam's extended port area, increasing port activities and vessel and transit capacities. And despite some radical ideas, contrasting ambitions and orientations to develop and organise urban spaces, most decisions are made pragmatically. Spatial displacements and compensations play an important role in the making of new eco-areas. The compensational logic of *Maasvlakte 2* and *Stadshavens* programme does not only produce more land for port activities and urban space in the old port areas, but also new eco-systems and liveable areas. The TT networks are more radical in their ambitions to 'compensate' vacant and unused places. Additionally, they create 'counter-spaces' by transforming state-supported and market-based areas, but also by connecting alternative initiatives to be more 'resilient' or 'sustainable' at a larger scale. To this end, support practices and organisational and institutional procedures accommodate further diagnoses and new explorations to create sustainable livelihoods (local and national TT working groups, OMSR, *Stadshavens* programme, RCI, digital communities, cooperative structures). Institutional and organisational sites safeguard evaluations of 'the progress' and potential new experiments. In both cases, this 'experimentality' informs an open and adaptive mind-set to connect specific initiatives or projects. New coalitions and partnerships can be created each week. However, they can also disentangle within weeks. In both empirical cases, substantive and organisational issues are articulated in specific documents, websites and texts. These more discursive techniques cannot be isolated from material implications and socio-physical interventions. Some of these more socio-material interventions that aim at creating eco-friendly places range from reserving geographical spaces, making water squares, green rooftops, throwing seed bombs, creating roof gardens, engaging in urban farming, constructing floating objects, doing bodily breathing techniques,

connecting an industrial pipeline to an urban heating system, ‘tile out and green in’, cooking and eating together, repairing broken bikes, using computer software for spatial designs, and using 3D printers for maritime products. Some techniques combine historical tools and practices with current goods or material settings, for example shaving sheep for woollen sweaters, or baking artisanal bread, or living on water with solar panels.



Subject formation through post-liberal urban eco-spaces

How did these various efforts create new types of identities? What kinds of subjectivities and socio-material identities can be observed? In both cases, new institutional identities emerged.

In many instances, they are not rigid and rule-based agents, but rather flexible, cooperative and networking actors. Such ‘flex-institutional subjects’ include policy makers that attend inspirational breakfasts with citizens, researchers and students, architects and planners. This also holds for the ‘commanding centres’ such as spatial managers and TT groups and more formal identities (e.g. ‘Sustainability aldermen’), bankers, contractors, engineers and project managers. The flexibility of some professional subjects interweaves with the ways in which citizens are construed. As local residents and participating citizens are able to actually see and know what their (unsustainable) lifestyles mean (e.g. climate change, energy leaks, food waste) and what options are possible (e.g. digital maps, green routes, propose an idea ‘yourself’), this rationality also creates eco-oriented or ecological citizenship. Such (sometimes globally oriented) ecological citizens consider it to be more or less ‘normal’ not to ‘use cars’, consider buying solar panels, consume less or organic (or growing your own food), and especially cooperate with (some) governmental agencies or policy makers³⁵⁸. These eco-oriented identifications are entangled with the historical tendency to create an urban populous that dwells in safe and healthy living and working environments. Related to these kinds of ‘environmental stewardship’, that are often connected to state agencies and policy initiatives, new economic subjectivities emerge. A new working force is created (RDM campus); a new creative class is attracted to populate floating houses; new socio-economic relations are established (new currency and sharing/giving relations); but also new urban farmers and ‘transition jobs’ are becoming meaningful. Such ‘neo-economic identities’ are interesting and fit into new linkages between economic practices and social and ecological ideals. These novel social identities are connected to broader climatological settings and unforeseen crises. As such, a range of adaptive subjectivities and places seem to be created through water squares, green

³⁵⁸ Such eco-oriented citizens are by no means only connected to local transition discourse. It covers many sustainability-led initiatives and plans as part of a broader historical eco-friendly consciousness that emerged since the 1960s and via all kinds of local, national and transnational efforts.

rooftops, alternative food systems and currencies. Furthermore, many unknown but soon to be (proto-)subjectivities are addressed and approached to become part of the 'city-port future' or 'transition family'. These 'eco-identities to come' are attracted and interpellated by what I call 'eco-vangelists' who use a wide range of micro-techniques (e.g. moral appeal via neighbours, informal events or using 'local ambassadors').

7.4 Contingent points of contact: Contesting dominant urban eco-spaces



An important focal point of a transition analytics is the emphasis on conflicts and new contingencies. Fundamental conflicts and struggles about the emergence of post-liberal urban spaces are evident in both cases. Both cases also show a number of technical governing contingencies and concerns. As explained in Chapter 4, technical and radical contingencies are not isolated. Rather, they resonate implicitly or sometimes are even connected explicitly.

Technical contingencies

The politics associated with making post-liberal eco-spaces is complex. A number of technical problematisations and discursive-material pragmatic concerns are evident in both cases. Even though many different technical contingencies can be presented here, I stick to the most relevant and noteworthy ones.

1. *Crafting supportive schemes*

In both cases, a number of supportive schemes needs to be invented and maintained. In the Stadshavens case we can see that the uncanny nature of what counts as a 'floating house', creates all kinds of financial and techno-legal complexities and anomalies. It seems that current financial, institutional and technical schemes simply cannot observe and understand the meaning of 'floating houses and objects'. Traditional procedures, even neoliberal tendering methods, are considered as problematic to foster innovative floating-based waterfront regeneration. Traditional risk-aversion leads to the slow pace of actual material realisation. The lack of adequate supportive schemes and procedures are also evident in the TT networks, especially the DHIT context that struggles with legally capturing the dynamism of a social movement. Similarly, TT networks do not have a one-size-fits-all-logic. Rather, everyday supportive routines and schemes differ per TT initiative and per local project. Interestingly, it seems that in all these cases, well-defined supportive systems are considered as archaic or paternalistic, even though they cannot be disregarded.

2. *Assemblage synchronisations*

Related to negotiating proper supportive systems, a wide range of small irritations, interpersonal micro-tensions and professional disagreements are a constant coordination challenge in post-liberal space-making. Both empirical cases contain many examples of this technical concern of negotiation opposing voices, ideals and positions. In the Stadshavens case, institutional and organisational coordination can be identified in the relationship between port expansion and urban sprawl, between industrial and service-based port economy, between city regulations and potential contractors, between residential associations and port authorities, but also between local residents among themselves (e.g. *Heijpaat*), and different architect bureaus. In the TT case, similar pragmatic tensions are addressed and considered negotiable. Some examples in the TT contexts are relations between private gardeners and community gardeners, between project developers and city plans vis-à-vis vacant places, between young activists and philosophising 'seniors', between spiritual lifestyles and radical alternative economics, between architect bureaus and urban farming, between organisational structures and democratic openness, and between tiles and plants. Such tensed relations in most contexts are considered as pragmatic and technical concerns related to coordination, communication and negotiation. Sometimes, these moments trigger more fundamental and antagonistic tensions associated with the emergence of post-liberal eco-spaces (see radical contingencies below).

3. *Convincing non-believers*

Another concern that can be considered a technical contingency is convincing sceptical citizens and non-believers about the necessity of creating 'a sustainable city'. In both empirical cases we can observe actual believers and 'eco-vangelists'. Obviously, not everyone is convinced that sustainability and eco-friendly urban spaces are worthwhile. Such scepticism comes from certain political parties, critical residents that oppose 'distortion' of their panoramic view, and 'lagers' that do not engage with sustainability (often low-income and marginalised groups). In some cases, institutional and official authorities also require more 'evidence' or 'arguments' about the actual unsustainability of contemporary economic systems and consumerist ways of life. In this context, we find strict legalists, project developers, conservative politicians and policy makers related to economic development. In such instances, a complex network of loosely related ideas, initiatives and (micro) techniques is employed aimed at convincing non-believers or almost-believers to think and act more sustainably.

Radical contingencies

In relation to these technical concerns, both empirical cases illustrate a number of conflicts, socio-material antagonisms and more radical contingencies. Even though politicisations and antagonistic struggles are present in both empirical settings, I argue that they are more radical and outspoken in the TT networks. This is no surprise, as the history and ambition of TT discourses is (partly) to challenge the ways in which modern socio-economic and energy systems are organised. The Stadshavens case also challenges the traditional waterfront regime and presents radically new imaginaries, but it often does so within the discursive parameters of governmental and market institutions. The marginalisation of TT-related activities in the broader public debate and attention, compared to Stadshavens projects, can be explained by the difference in public relation strategies, need for public profiling and trust in hegemonic institutions. I present only the most significant and prevalent radical contingencies of both empirical cases.

1. *Intensifying techno-capitalism and eco-markets*

Even though the Stadshavens case sometimes represents an intensified techno-capitalist logic of market-based regulations, technological fixes and creative entrepreneurialism, the TT networks are not void of these tendencies. This especially holds for strategic policy makers, architects, engineers and some politicians. Ecological concerns, then, are addressed in terms of issues that can best be tackled by a new supply-and-demand equilibrium for e.g. solar panels, house isolation or sustainable floating houses. Importantly, such new eco-markets are not 'natural' or 'self-emerging' spaces of new commodities and services. In fact, a fine-grained network of technological and regulatory means and practices allows such markets to emerge, thereby recreating socio-economic relations. I noticed that a number of policy actors, engineers, consultants and architects are part and parcel of the rise of new eco-markets. Furthermore, a number of PR-advisors, semi-official policy meetings and networks seek to shape and connect demands and supplies regarding eco-friendly technologies and services. Even though this techno-capitalist tendency to shape urban regions is not the most dominant logic, it plays a role in some of the debates about the role of the state, traditional market economies and local community engagements. Disagreements and conversations about these issues are more explicit in the direct vicinity of TT events and participants, less so in the Stadshavens case.

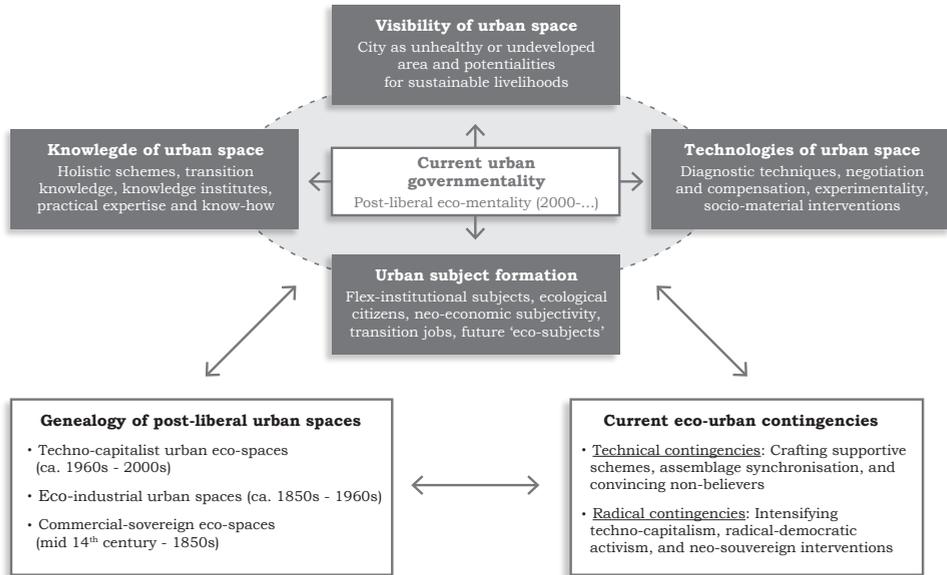
2. *Radical democratic eco-activism*

One could say we find radical counter-statist and counter-capitalist ideas and activities in the margins of the post-liberal eco-assemblage. Such initiatives range

from bypassing minor legal norms and greening grey spaces, to the creation of counter-currencies and alternative and community-based food systems. These methods and activities aim to challenge some taken-for-granted notions in late-capitalist liberal democracies. Even though the notion of radical democratic activism suggests a radical approach and ‘underground networks’, participants that engage in such forms of activism ‘simply’ aim to stimulate openness, accessibility and more inclusive and holistic forms of urban life. In both empirical cases this might refer to the marginalisation of veganism, spiritual authorities, alternative economics, but also the inclusion of ethnic minorities, elderly and kids in eco-oriented events (e.g. intercultural festivals, urban farming). Whereas techno-capitalist tendencies are more prevalent in the Stadshavens case, the TT case contains more traces of radical democratic activism that centre-stages open and eco-friendly living environments. In these contexts, many concerns are related to neo-communal ties and socio-cohesion in specific neighbourhoods (e.g. local barbeque or community gardening event).

3. *Neo-sovereign interventions*

These two radical contingencies suggest an age in which state interventions decrease and sovereign power withdraws. Nevertheless, state power does not retreat, it transforms. That is to say, even though many aspects of both cases problematise a bureaucratic and regulatory state, a wide range of novel sovereign methods and events emerge. This is evident in the context of the importance of environmental agencies, urban planners and engineers, establishing a legal status for ‘official recognition’ and safeguarding economic restructuring and clean and liveable areas. State presence is sometimes related to techno-capitalist tendencies to improve urbanisation. Many of these active involvements are associated with the historical role of the state concerning public hygiene and health (e.g. urban smog, urban farming), safety (e.g. risks of climate change, safety contours) and wealth (e.g. employment and income), even though post-liberal eco-spaces are increasingly shaped by flexible institutions and governing techniques.

Figure 7.1 Transition analytics of POC empirical cases

Urban space-making as transition politics: Eco-gentrification and heterotopia

The technical and radical contingencies associated with post-liberal urban eco-mentality illustrate that the linkages between both cases are imbued with politicisations. That is to say, not only is there a decentred field of power shaping eco-friendly spaces, there are also disagreements about future directions. Such disagreements allow us to return to some of the more fundamental transition political concerns addressed in Chapter 4. Transition politics refers to the struggles associated with the emergence, normalisation and contestations of a new discourse. In both empirical cases, two additional transition political dynamics can be identified: (1) unequal distributions and green or eco-gentrification; and (2) democratic space-making and heterotopic interventions. Furthermore, the question to what extent post-liberal eco-urbanism is ideological or ethical, is also briefly discussed.

Unequal distributions and eco-gentrification

Transition politics is poorly conceptualised in transition research. This led me to explore alternative insights to address struggles associated with urban space-making. Scholars from critical urban studies and urban political ecology argue that socio-environments are organised unequally. Urban landscapes are inherently decentred and hierarchical, with centres and peripheries, creating unequal access to green, healthy and liveable environments. This image of unequal eco-distributions are mostly

linked to the radical contingencies (see above). We witnessed a spatial politics in both empirical cases that requires further reflection here.

Historically, both Rotterdam and The Hague, as urban regions, experienced a geographical organisation informed by social and class divisions. In Rotterdam, this division has been marked by the schism between the more wealthy Northern parts (connected to the Holland region) versus the poorer Southern parts (often populated by port workers and their families). The Hague has been characterised by a similar division between the higher and safer sand areas (privileged elites and nobilities) versus the rougher peat areas (for workers and poor residents). Even though the 20th century has improved living and working conditions for many residents, current events remind us of this difference. However, in the wake of emerging environmental and sustainability discourses, these uneven landscapes did not vanish. During my field work, unequal access to certain spaces and sites was also clearly evident. In some cases I was welcomed unconditionally, I could sit down, have some tea and a cookie without further notice (e.g. Gandhi-garden). In other instances, I had to bring my passport, my presence was registered (e.g. Rotterdam port authority) and I had to walk through a metal detector and was even frisked (e.g. national parliament). The difference between these forms of accessibility is related to the presence of 'institutional power' and formalised routines associated with this power. I noticed that whenever I interviewed 'high profile actors' or attended 'important meetings' in institutional contexts, access was less open. What kinds of spatial inequalities actually emerge in practice? In what way do sustainable and eco-friendly spaces divide groups, residents and quality of livelihoods in both urban regions?

In the Stadshavens case this is relatively evident, as the on-going boulevardisation of Rotterdam's waterfront seems to create an expansion of a vivid city centre for a new creative class and residents from privileged areas. Even though few actual floating houses, offices and services are realised, this future is not illusionary, but even part of the actual plans to attract high-income groups that can live and work on or near Rotterdam's waterways. Arguably, for many residents from Southern parts of Rotterdam, the regeneration of the waterfront (including its floating community aspects) is part of the city centre and its expansion. Connected to the regeneration of the city ports, as we have seen, is the *Maasvlakte 2* expansion and the environmental damage that is officially 'compensated'. These types of eco-gentrifications, however, are not natural processes, but actively pursued in numerous ways (especially the focus on so-called 'economic restructuring'). These forms of eco-gentrification is also countered. That is to say, a number of small architect bureaus, policy actors, professionals and local residents try to improve accessibility of low-income groups and more sceptical citizens. Nevertheless, despite these attempts, the historical disparity between Rotterdam's northern and southern areas remains (and perhaps has even intensified).

Such uneven spatial developments are also evident in the TT case, however to a lesser extent. The many efforts of both TT networks attempt to increase the quality of urban livelihoods, with the aim to care for everyone (sometimes explicitly the vulnerable and marginalised). Urban farming, guerrilla gardening events, and reducing food miles are attempts to redirect socio-environmental flows and gains (e.g. in terms of nutritional value and sense of community). Yet, it remains difficult to reach low-income groups and residents of less privileged areas (Rotterdam South and The Hague's 'peat districts'). In some cases, for example, we can see the emergence of green lifestyles (eating organic food and veganism) and sustainable energy (having solar panels and insulated homes) only for some groups with ample social capital, networks, resources and skills. Again, this type of unequal spatial unfolding is also challenged and actively countered by some TT activities. However, it also remains difficult to counter this process, especially without sufficient institutional capacities, funding and cultural legitimacy.

Parrhesia, heterotopia and democratising space

Related to these gentrification issues, another transition political dynamic should be mentioned. In both empirical cases, some interesting examples of democratic politics and what Foucault calls *parrhesia* and *heterotopia* (see Chapter 4). The case genealogies showed that a range of social struggles, strikes, parliamentary debates, local resistances and material improvements. In these cases, poor residents and deprived areas were often considered as 'not yet emancipated' or 'unseen' or 'undeveloped' spaces. Following the work of radical political theorists and critical urban scholars, these struggles have not been in vain. They enabled new sensibilities and ways of governing and improving the livelihoods for many bodies and social lives. Popular uprisings created the conditions of possibility to speak about suffering and new discursive spheres accommodated more just and democratic urbanities. These political vitalisms and dynamics are also present in both empirical cases. How, then, do new resistance and protests seek to restructure and democratise urban spaces? In what way do Foucaultian notions of *parrhesia* and *heterotopia* play a role in the creation of new urban imaginaries and material environments in Rotterdam and The Hague?

It is clear that the TT case contains a high number of politicisations and examples of *parrhesia* and heterotopic spaces. Some examples are radical critiques against the harmful effects of capitalist economies, hegemonic health and food systems, waste-producing consumerism, bureaucratic dogmatism and environmental destruction worldwide. These critiques materialise in very specific forms such as March Against Monsanto, Guerrilla Gardening, Flash Mobs, give-away shops, permaculture workshops, repair cafés, but also more mental and bodily engagements such as yoga, community gardening or spiritual techniques. These discourses and material activities are also connected to specific sites and spaces (e.g. the Gandhi-garden, Facebook comments

sections or human bodies). In these ways, hegemonic urban spaces that are considered unsustainable, unhealthy, commodified or overregulated, then, are able to transform into more inclusive, open and democratic spaces. Sometimes, marginalised groups, unemployed, solitary elderly and urban youth are actively involved in what might count as public or civic life. Indeed, what is crucial in this context is the inclusion of excluded groups and voices. Furthermore, it is critical to move towards creating alternative urban socio-ecological experiences in Rotterdam and The Hague. In some cases, such critiques and heterotopic areas resonated with some of the ideas of policy makers, local entrepreneurs and urban planners. The Stadshavens case, expectedly, shows fewer activist initiatives and projects that democratise urban spaces. Most elements of the Floating Communities' strategy represent a neoliberal and sometimes techno-capitalist 'boulevardisation strategy', downplaying radical democratisation practices. I do consider this as a form of democratisation as the Stadshavens programme aims to do away with the hegemony of industrial port activities in old port areas, creating a multiplicity of social and urban functionalities. However, some fragments of the Stadshavens case clearly indicate a move away from the waterfront image as a hip boulevard for a new creative-class. Some individuals and plans seek to make the waterfront more accessible for low-income groups, for example by making social floating housing or floating public services (discount for low-income groups at a swimming pool)³⁵⁹. Interestingly, in both empirical cases, I encountered some individuals that spoke fearlessly and frankly about green indoctrination and the myth and hype of sustainability. Even though they might engage in *parrhesia*, they also had some non-democratic and techno-capitalist visions about dealing with socio-ecological concerns.

Ideological or ethical?

As mentioned in Interlude 2, these transition political dynamics can be understood in terms of ideological and/or ethical transitions. Following the work of Glynos and Howarth (2007), what aspects can be considered ideological, and what more ethical? Initially, and to a large extent, I expected that the Stadshavens case would represent an ideological transition, and the TT case an ethical transition. During my empirical studies, I noticed that it makes more sense to reframe the boundary between ideological and ethical elements in terms of *types* of spatial politics. This implies that it is difficult (if not impossible) to equate a specific transition discourse or transition context to either an ideological or an ethical transition. Alternatively, it is safe to say that both cases have ideological and ethical elements. These elements can respectively be linked to gentrification and democratisation of Rotterdam and The Hague as urban

³⁵⁹ For a more elaborate reflection on the democratic politics of Rotterdam's waterfront regeneration project, see Jhagroe & Loorbach (2015).

regions. That is to say, the gentrification aspects of both cases (see above) are linked to ideological elements of both urban transitions (a waterfront and a bottom-up socio-ecological transition). Similarly, the democratisation aspects of both cases (see above) are tied to the ethical dimension of both urban transition contexts. Even though this is also a generalisation, I consider it as an appropriate and ethical framing of the transition politics I encountered empirically.

Shifting governmentalities and recurring phenomena

Chapter 4 explained that my approach to urban sustainability transitions is understood in conflictual and spatial terms. That is to say, sustainability-led transformations in and of cities can best be described, analysed and explained in terms of discursive and material struggles over the making of decentred but entangled spaces. A transition, then, does not refer to a major quasi-natural or teleological shift from urban situation A to urban situation B. This is all the more evident when we consider that my empirical studies (Stadshavens case and TT) illustrate that a number of 'new and unprecedented' urbanisation concerns, forms of knowing 'the city' and social interventions, are not new at all. In fact, certain epistemic frames and practical know-how about urbanisation concerns (accumulation and industrialisation), social relations (communal ties), economic transactions (sharing, and local currencies) and nature-human interactions (climatological and geological dynamics) date 'back' to the 19th century and even to Middle Ages. Urbanisation concerns since the mid-19th century and improvement of socio-economic and environmental conditions (for poor residents) are hardly new phenomena. Uneven distributions of environmental qualities and economic welfare also return, albeit under different conditions.

Next to these temporal non-linearities or entanglements, a number of spatial deconstructions characterise these transitions I analysed. As illustrated in various occasions, Rotterdam's waterfront and the TT networks are tied to distant problematisations and modes of intervention. In the Stadshavens case these are climate change, port competition and comparable waterfront degeneration projects. Regarding the TT case, such concerns and social technologies might refer to distant ecological and economic crises, poor farmers and sweat shop workers in the Global South and comparable grassroots Transition Town and local resilience projects. From this viewpoint, it is instructive to recall the notion of assemblage urbanism. Similar to central features of urban assemblage, the emerging sustainable spaces I analyse refer to complex temporal and spatial layering. Furthermore, new emerging eco-urbanities and hierarchies designate complex territorial, institutional and scalar restructurings.

7.5 Extending the analytics: Five ways to create urban eco-spaces

A transition analytics of urban spaces proved to be quite fruitful to map, describe and explain the emergence and normalisation of (un)sustainable urban spaces. While I was doing empirical and analytical work (interviewing, visiting archives, coding), I thought about the lack of *discursive* means to adequately grasp the more general logic underlying my empirical findings. Obviously, I developed an analytical framework in Chapter 4, but I felt this needed fine-tuning and alteration on the basis of my empirical reflections. In order to account for the emergence and rationalities shaping urban eco-spaces, we should extend the typology of Fletcher (2010). Instead of advancing the notion of eco-governmentality, I propose to use the term eco-mentality. To me, the terms are synonymous.

1. *Indigenous eco-mentality*

Urban eco-spaces are realised by engaging with people, the built environment and nature holistically. Indigenous knowledge and holistic eco-evolutionary thinking create a repertoire for spiritual and communal engagement. These mentalities use an eco-centric philosophy to create new types of economic and social practice (Howitt, 2001; Kalland, 2002; Breidlid, 2009; Sveiby, 2009). This type of governing villages, communities and cities emerged in ancient societies but also stretch to our day and age, especially since the emergence of deep ecology and the ‘new age’ since the 1960s. Examples: ascetic lifestyle, eco-villages, etc. This spatio-political rationality can be symbolised by the label ‘spirit and soil’.

2. *Disciplinary eco-mentality*

Urban eco-spaces are created by diffusing ethical norms and considered a moral duty. Liveability is moralised and operates through subtle forms of emotive and affective engagement through ‘the self’ (e.g. shame, guilt). Moral authorities are mobilised for legitimacy and sincere ways of living sustainably (Newton, 2003; Bandura, 2007; Knox, 2014). This type of governing emerged and was prevalent in the Middle Ages and societies based on religious and communal traditions. Again, since the 1960s, it enjoyed renewed popularity. Examples: eating organic food, being vegan, recycling, carbon footprint, etc. This spatio-political rationality can be symbolised by the label ‘morals and guilt’.

3. *Techno-sovereign eco-mentality*

State apparatuses and policy practices produce urban eco-spaces. State-based programmes and (local) public policies create e.g. green sites and increase environmental quality. Regulatory means, urban planning schemes and legal frameworks justify forms of e.g. 'green' or 'sustainable citizenship' vis-à-vis the legal city (Raco & Imrie, 2000; Naess, 2001; Dovers, 2005; Hobson, 2013). This type of governing emerged in the late Middle Ages and sustained until early modernity, ruled by kings, legal-administrative procedures and order. Examples: sustainability policy, climate change programmes, environmental protection agency, subsidising solar panels, fining pollution, etc. This spatio-political rationality can be symbolised by the label 'fences and fines'.

4. *Neo-liberal eco-mentality*

Urban eco-spaces are enabled by economic frames and understood as a concern for global markets (e.g. technological niches). Social life is commodified through marketisation and cultivating individual freedom. Market mechanisms and economic practices are considered as the most efficient and adequate means to produce a sustainable city and places (Swyngedouw, 2010; Peck & Tickell, 2002; Brand, 2007; Jonas & Weil, 2007). This type of governing emerged in the 1970s in the wake of Thatcher-Reaganism. Examples: McDonalds's using green trucks and selling fruits, emission trading, green investments, sustainable consumption, green capitalism, sustainable growth, etc. This spatio-political rationality can be symbolised by the label 'markets and lifestyles'.

5. *Neo-communitarian eco-mentality*

Urban eco-spaces are created by a series of local initiatives of loosely coupled networks and groups. Initiatives and projects are fuelled by anti-capitalist, post-neoliberal and inclusive urban imaginaries (Jessop, 2002; Gerometta, Haussermann & Longo, 2005; Márquez & Pérez, 2008). Virtual and local communities share ideas, best practices and constantly reinvent themselves by connecting unrelated themes and initiatives 'under the radar'. These communities are highly diverse in terms of age, ethnicity, gender, legal status, financing models, etc. This spatio-political rationality can be symbolised by the label 'action and connection'.

Figure 7.2 Urban eco-mentalities revisited³⁶⁰

	Indigenous eco-mentality <i>'spirit and soil'</i>	Disciplinary eco-mentality <i>'morals and guilt'</i>	Techno-sovereign eco-mentality <i>'fences and fines'</i>	Neoliberal eco-mentality <i>'markets and lifestyles'</i>	Neo-communitarian eco-mentality <i>'action and connection'</i>
1. Urban gaze (visualising urban spaces)	<i>City as a spiritual place</i>	<i>City as a moral space</i>	<i>City as a techno-legal order</i>	<i>City as a market</i>	<i>City as a community</i>
2. Urban episteme (knowing urban spaces)	<i>'Ancient' and 'indigenous' knowledge, eco-centrism, systems-thinking, holism</i>	<i>Morality, ecological science, natural laws, environmental ethics</i>	<i>Law, bureaucratic rules, rational planning schemes</i>	<i>Economics, local budgeting, market dynamics and consumer preferences</i>	<i>Eco-systems thought, deep ecology, holism of 'the people' and 'the planet'</i>
3. Urban techne (intervening in the urban spaces)	<i>Handcrafting, 'do it ourselves', community engagement</i>	<i>Ethical arguments, shame and guilt, empathy, moral codes</i>	<i>Fines, rights and obligations, taxation and urban planning</i>	<i>Privatisation, tendering, competition, individual freedom</i>	<i>Open source, locally tailored, connecting initiatives, bottom up</i>
4. Subject formation (shaping the urban spaces)	<i>Sustainable creatures and ecological communities</i>	<i>Sustainable residents, ethical people and moral order</i>	<i>Sustainable citizens, law-abiding residents and green spaces</i>	<i>Sustainable consumers, eco-businesses and green markets</i>	<i>Fluid communities, bottom up citizenship, learning communities</i>

This matrix does not 'finish' the empirical reflection. Rather, it is an invitation to further this approach and typology. It simply allows one to conceptually and empirically sensitise how everyday struggles and rationalities render knowable and governable urban spaces. The notions of 'neo-liberal eco-spaces' and 'neo-communitarian eco-spaces' have a distinct political rationality, respectively 'neo-liberal eco-mentality' and 'neo-communitarian eco-mentality'. Additionally, the notion of 'post-liberal eco-mentality' shapes post-liberal eco-spaces, referring to the intersections between the latter logics. I did not include post-liberal eco-mentality in this matrix, as it refers to a specific intersection between other logics. Similarly, I did not adopt commercial-sovereign, eco-industrial and techno-capitalist rationalities. These specific paradigmatic logics are combinations of the rationalities presented here, and perhaps elements of new rationalities and eco-mentalities. For me, the transition analytical matrix is enriched by the two in-depth empirical studies. The matrix itself can be extended, broadened and modified, based on theoretical, historical and empirical research.

³⁶⁰ Disclaimer: this matrix is highly euro-centric and needs to be expanded and reworked.

It is important to note, again, that these logics should always be considered as hegemonic modes of urban space-making. That is to say, there is nothing inherently democratic or counter-hegemonic about any political rationality. However, specific rationalities might be less salient or dominant vis-à-vis other rationalities and broader hegemonic discourses. This implies that indigenous and neo-communitarian eco-mentalities can be expected to be marginal(ised) more often than techno-sovereign and neo-liberal eco-mentalities. Furthermore, as discussed before, all spatio-political rationalities contain contingencies. Technical and more radical tensions and contingencies emphasise the indeterminate and open-end character of each and every eco-mentality. Similarly, urban genealogies can deconstruct the normality of a current phenomenon, as we have seen. Genealogical methods and interventions, therefore, also add to the contingency of hegemonic urban governing practices and architectures.

7.6 Conclusion: Empirical reflections and new terminologies

This chapter reflected upon the two empirical studies using the transition analytics proposed in Chapter 4. The two empirical settings are embedded in singular socio-historical narratives, but also linked in time and space. Historically, some intersecting rationalities have governed the discursive and territorial spaces in Rotterdam and The Hague (eco-industrial urban eco-spaces and techno-capitalist urban eco-spaces). The current spatio-political rationality can be called: post-liberal eco-mentality. This suggests that the transition towards 'sustainable' urban spaces - I prefer to speak of urban eco-spaces - simply cannot be understood as an isolated phenomenon. Transition politics in relation to these new eco-mentalities are immanent. Historical and contemporary struggles and problematisations shape and reshape the ways in which urban spaces are imagined (which includes this dissertation and readers' responses). These complexities make it difficult to even speak about 'a transition' or 'the transition'. In both empirical cases, different transitions are entangled with different histories and futures (e.g. housing, food, architecture, energy, health, water management, urban planning). What binds these shifts together is the spatial. A spatial focus proves to be quite instructive in grasping the multiplicity of mainstream sector-based and institutionalised categories. These intersecting complexities are accounted for by addressing the multi-spatial and multi-temporal dynamics of emerging eco-mentalities.



Chapter 8

Rebel cities and green revolts?

Conclusions and discussions

Chapter 8. Rebel cities and green revolts? Conclusions and discussions

“I can't go back to yesterday because I was a different person then”.

Lewis Carroll, *Alice in Wonderland*

“History will have to record that the greatest tragedy of this period of social transition was not the strident clamor of the bad people, but the appalling silence of the good people”.

Martin Luther King, Jr.

“If you think in terms of a year, plant a seed; if in terms of ten years, plant trees; if in terms of 100 years, teach the people”.

Confucius

8.1 Introduction

This chapter presents the conclusions of this study and raises some points for discussion. Let me first briefly highlight the journey this study undertook. This thesis started by presenting the problematic of urban transition politics. I argued that (academic) transition discourse overlooks ‘the political’. Transition politics can be understood adequately in spatial terms, in particular via urban space-making. Currently, transition research, however, does not provide a convincing framework to analyse urban transition politics. Alternatively, I explored a new conceptual vocabulary: a *transition analytics of urban spaces*³⁶¹. I then

³⁶¹ One of my colleagues once told me: “one actually knows what one has studied after the actual study”. This retrospective experience is also true in my case. During my research and writing process I was able to articulate that the main objective of this dissertation was, and still is, to critically examine the transition politics of sustainable urban spaces. I particularly tried to describe, explain and criticise the phenomenon of sustainable urban spaces. Only in retrospect I developed a *transition analytics*. This analytics glues together all chapters, connecting methodological, conceptual, empirical and reflexive aspects of the study.

presented two empirical cases to deploy a transition analytics in particular settings. These reconstructions described the genealogies of two urban transition contexts (Rotterdam's sustainable waterfront regeneration and socio-ecological grassroots networks). Both cases signify transition sayings and doings that seek to normalise specific types of urban eco-spaces. The 'seeking' is significant, as there are many contingencies, struggles and conflicts that make the normalisation and mainstreaming of sustainable urban spaces challenging. I argued that these empirical cases present distinct spatio-political rationalities, while also showing entanglements in time and space. So, what did we learn? What conclusions can be drawn in view of the research question? What conceptual and practical lessons can be articulated?

This chapter is structured as follows. Section 8.2 returns to the research questions as formulated in Chapter 1. Even though it is futile to suggest that these 'answers' somehow cover 'all findings', they do disclose some main insights vis-à-vis the central problematic of transition politics in urban settings. Section 8.3 extends these findings by translating them into key contributions. For the sake of clarity, I cluster the findings thematically and not in separate methodological, conceptual and empirical contributions. I believe that specific themes or concerns should be highlighted, all of which contain methodological, conceptual and empirical aspects. Importantly, I present my contributions to the field of transition research, even though they can be of interest to scholars in critical urban studies and governmentality research (even social sciences and humanities more broadly). Section 8.4 discusses some implications of this study and presents a number of strategic considerations. I argue that transition discourses and transition subjects are in a unique socio-academic position to uncover and problematise ideological transition forces, while pursuing ethical and democratic forms of urbanisation. Section 8.5 discusses some 'limitations' of this study and presents a number of themes for future research. Limitations refer to constraints I encountered during my research, but also to an attitude of academic modesty and immanent imperfection. While doing research, I also experienced new academic 'lines of flight', new research themes, new empirical domains, new methods and new conceptual perspectives that deserve further examination. I explicitly present several issues that can advance, what I call, 'critical transition research'. Finally, section 8.6 presents two thematic afterthoughts, reflecting on the inherent tensions and challenges associated with (un)sustainability politics and 'being radical' while adopting a transition discourse.

8.2 Back to the research questions

Chapter 1 presented the problematic and the central research question that guided this study. The central research question, or rather quest, was: *How are sustainable urban spaces created, normalised and contested; and what does this mean for pursuing urban sustainability transitions today?* In accordance with this question, a set of sub-questions was formulated to unpack the different elements of the central question. Therefore, it is instructive to briefly reflect on these sub-questions.

Reflecting on sub-question 1: Problematising research on urban transition politics

The first sub-question was formulated as follows: *How does sustainability transition research address and understand politics in urban environments?* I argue that research on sustainability transitions (in particular STIA and CORSA) suffers from a broader social and academic post-political condition. Most transition approaches lack critical scrutiny of issues like power, legitimacy and politics. More specifically, I contend that three types political fixations create a depoliticised gaze in transition scholarship: (1) Westphalian politics (nation-state based procedural negotiations); (2) (neo-)liberal politics (network-based deliberations often involving market-models); and (3) anthropocentric politics (human-centric conflicts within 'society'). Even though STIA and CORSA contain some elements that go beyond these frames, most transition researchers downplay inherent inequalities and antagonistic struggles associated with nation-state institutions, deliberative democratic arenas and anthropocentric politics. Consequently, transition research so far actually advances a partial understanding of transition politics. Even though struggle-based insights and explanations do play a role in transition research (Gees, 2010), it remains a marginal(ised) issue. This is particularly problematic for sustainability transition research given its societal and academic aspirations, namely to understand and implicitly pursue socio-technical and societal transformations towards more sustainable forms of living.

In order to understand transition politics in post-Westphalian, post-(neo-)liberal and post-human terms, a more *spatial* framing of transition politics is instructive. The specificity of 'urban spaces' and the rise of so-called 'sustainable cities', offer a great entry point to explore and understand transition politics outside its commonsensical frames of nation-state, (neo-)liberal interactions and anthropocentric frames. Cities and urban processes have a rich history with regard to technological innovations (pipelines, electricity networks, mobility, etc.). They are complex multi-spatial phenomena full of contradictions and social tensions. And even though some transition researcher adopt insights from social and economic geography to highlight uneven spatial developments (mostly STIA), there are few conceptual and critical engagements with the transition politics of urban (un)sustainability. Interestingly, transition research does present

some 'suggestions' to further explore urban transition politics: (1) on the geography and spatiality in transitions; (2) on antagonisms and fundamental struggles in transitions; and (3) on the non-human (or rather 'post-human') in transitions. These hints are crucial to more adequately understand the politics of how sustainable urban spaces emerge and unfold.

Reflecting on sub-question 2: Conceptual grounding of transition analytics

The second sub-question builds on the first and is formulated as follows: *How can the creation, normalisation and contestation of sustainable urban spaces be conceptualised and analysed empirically?* In order to articulate an adequate analytical method, I argue that an underlying critical understanding of social theory and empirical materials is crucial. A critical constructivist position enables one to consider a 'literature review' and 'conceptual grounding' as social practices, and suggests that hegemonic modes of knowing should be challenged on the basis of an ethical commitment. To this end, I propose that instead of a conceptual framework that can be applied to empirical contexts, an analytics is more prone to the linkages between conceptual and empirical research, but also between reflexive and critical work. An analytics serve(d) as the pivotal point around which my conceptual and empirical studies revolve(d). This analytics extends the hints provided by transition researchers (see above) and is informed by roughly two relatively unexplored fields of knowledge in transition research: (1) radical political theory and critical urban research; and (2) urban governmentality. The combination of these two fields is crucial. Together, they are able to overcome some post-political concerns in the contexts of urban environments and spaces. As such, they add richness to the conceptual field and language of transition studies. I argue that the first field (radical political theory and critical urban research) radicalises transition politics in general, and in urban settings in particular. This is crucial to move away from natural science assumptions regarding evolutionary and complex systems and techno-capitalist innovations in STIA and CORSA. Such insights also allow for a struggle-based understanding of long-term transformations in societies and cities. Specific works in the fields of critical urban research and urban political ecology provide insights about the conflictual nature of urban ecologies and human-nature systems. The second body of knowledge addresses the strategic and more pragmatic features in transition research (e.g. SNM and TM). Foucault's work on governmentality offers particularly interesting analytical tools regarding everyday transition politics and practices. Foucaultian work on governmentality sensitises how particular regimes and practices shape the conduct of individuals and populations. Discourses related to '(un)sustainability', can then be understood as discoveries that become objects for governmental concern (e.g. regarding hygiene, health, socio-economic conditions, environmental quality, economic growth). Research on urban governmentality in

particular, imagines how urban regimes and practices shape and determine what types of spaces and conduct counts as ‘normal city life’. An urban governmentality approach does not highlight radical antagonisms and urban struggles, but offers a particular language to understand how ‘unsustainable’ urban lives and spaces are problematised and rendered governable. These two bodies of knowledge complement each other in the broader quest to more adequately understand urban transition politics.

My transition analytical method reframes transition politics by illuminating the blind spots in transition research regarding struggles associated with the transformation of urban spaces. It brings together some basic premises of transition research about long-term transformations, strategic agency therein, current urban sustainability discourses, and insights from critical urban studies and governmentality research³⁶². The ‘conceptual marriage’ between these elements is captured in what I call a *transition analytics of urban spaces*. Underlying this analytics is an ontology called ‘assemblage urbanism’ to account for the material-discursive, hierarchical and radically contingent nature of urban spaces. A public park, for example, is material (trees, fence, grass), it has a semantic and institutional space (legal, cultural meaning), it promotes certain conduct (walking, playing) while criminalising other (dumping litter), and it has the potential to radically transform (e.g. into a residential area). A transition analytics consists of three dialectically entangled building blocks: *genealogy* of urban space, *governmentality* of urban space and *contingencies* of urban space. These interacting building blocks refer to how historical struggles (genealogy) shape the conditions for the emergence and normalisation of regimes and practices that govern urban spaces (governmentality). A transition analytics thus focusses on the ways in which discursive spaces and territorial sites are historically shaped, rendered visible, knowable and, ultimately, governable³⁶³. The analytics also allows me to sensitise new uneven developments and contestations (contingencies). In the context of sustainability discourses and socio-environmental concerns, a typology can be articulated, highlighting different political rationalities to govern urban spaces. Importantly, a transition analytics presents a ‘critical mentality’ for social diagnostics and can critically assess relations of power and the reproduction of hegemonic discourse.

³⁶² Instead of referring to and using terminology from STIA and CORSA and SNM and TM, I opted for a more flexible and pragmatic approach by using terminology that could be combined with language from critical urban research and urban governmentality (e.g. regimes, practices, governing, dominant, transitions, critique, alternative, multi-spatial, uneven developments).

³⁶³ The main analytical question associated with urban governmentality are: (1) visibilities of urban spaces (how are urban spaces imagined, observed and defined?); epistemologies of urban spaces (what epistemic claims and repertoires are utilised to know the nature or truth about urban spaces?); (2) technologies of urban spaces (what practices and procedures are used to intervene in urban spaces?); and (4) subject formation (what identities and socio-material relations are produced through urban space-making?).

Reflecting on sub-question 3: Genealogical shifts and new eco-mentalities

Sub-question 3 was formulated as follows: *How can the creation, normalisation and contestation of sustainable urban spaces be understood empirically?* There are no empirical generalisations or laws. Neither are there only local contexts. These two opposites are combined and integrated by the notion ‘paradigmatic logic’. My empirical studies illustrate how ‘general’ and ‘local’ dynamics come together in specific regimes, spaces and practices³⁶⁴. A transition analytics is employed in these empirical contexts, thereby sensitising different paradigmatic logics. I uncovered three *contemporary* paradigmatic logics³⁶⁵: (1) a ‘neo-liberal eco-mentality’; (2) a ‘neo-communitarian eco-mentality’; and (3) a ‘post-liberal eco-mentality’, as the points of contact between 1 and 2.

Regarding the first empirical setting, Rotterdam’s sustainable waterfront responds to a long era of commercial port expansion and modernist city planning. However, ongoing rational planning and industrial-economic growth (of the port) were challenged since the 1960s. Increasingly, environmental quality and space became social concerns. Rotterdam’s waterfront restructuring started in the 1980s and ushered in the ‘boulevardisation’ of old city ports. The current paradigmatic logic is embedded in a waterfront project that started in the mid-2000s by further urbanising old port areas and using market-based strategies and sustainable technologies (*neoliberal eco-waterfront*). The neo-liberal eco-waterfront is shaped by an urban eco-governmentality that uses particular visibilities, epistemological schemes and socio-technical interventions to make new waterfront areas and subjectivities. Neo-liberal eco-waterfront spaces are also confronted with new contingencies and tensions, related to institutional rules, sceptical citizens, intensified neoliberalisation and gentrification.

Next to this market and institution-oriented case, a transition analytics of counter-hegemonic urban space-making can be articulated (second empirical setting). Two TT contexts (Rotterdam’s Gandhi-garden and The Hague’s DHIT) present a transnational movement aimed at building local resilient communities in the wake of contemporary crises (e.g. peak oil, environmental destruction, economic deprivation). These TT networks respond to a period in which ‘the environment’ and ‘ecology’ emerged in direct relation to industrial activities and socio-economic conditions. TT networks emerged in (and after) a period in which mass consumption, individualisation, state regulations

³⁶⁴ For the sake of clarity, I presented two empirical ‘cases’ and associated sets of ‘empirical materials’ through archival work (physical and digital archival records), desk work (secondary literature, documents, websites and social media) and field work (interviews and observations). I analysed the vast empirical materials (using software, Atlas.ti), employing descriptive coding and analytical coding (based on the transition analytical building blocks).

³⁶⁵ Here, I do not evoke all genealogical eras of both cases. Even though they are relevant for the current dynamics, I briefly highlight main recent transition political dynamics in this concluding chapter.

and market forces shaped the meaning of ecology in Rotterdam and The Hague. The current paradigmatic logic of this case represents community-based initiatives and actions to relink ecology, economy and communal life in these cities ‘from below’ (*neo-communitarian eco-city*). A new eco-mentality emerged in the late 2000s and backgrounds techno-capitalist urbanism, while rendering visible and knowable eco-friendly urban spaces ‘from below’. Again, this spatio-political rationality is not a totality. In fact, a number of concerns render this governing logic contingent, such as being radical or pragmatic, convincing non-believers, and a tendency to pursue techno-capitalist solutions. A transition analytics of Gandhi-garden and DHIT provides a particular perspective on transition politics, especially given the non-institutional and post-capitalist tendencies associated with TT discourses and initiatives.

These transition analytics can also be brought together. Instead of statically comparing both cases, they are reflected upon in terms of how their urban governing regimes and new contingencies touch in time and space. The post-liberal eco-city responds to industrial breakthroughs and technical innovations to boost economic production, which had severe repercussions for the industrial working force and their biological and socio-environmental living conditions. More recently, more technical governing regimes shaped ecological and environmental issues in the context of ongoing marketisation and capitalist innovations. The most recent paradigmatic points of contact express novel institutional governing practices that introduce more flexibility and eco-friendly citizens embedded in new communities, markets and technologies (*post-liberal eco-spaces*). Additionally, new types of holistic schemes and economic realities emerge. The prefixes ‘neo’ and ‘post’ highlight the mixing of old and new knowledge and technologies, creating unprecedented urban arrangements. These types of eco-spaces in Rotterdam and The Hague, however, are quite unstable and self-undermining. Practical concerns emerge, such as the stability of supportive schemes, organisational synchronisation and convincing non-believers. More radical contingencies and struggles include the intensification of techno-capitalism, radical-democratic activist events, and innovative statist interventions.

There are broader political dynamics associated with post-liberal space-making. In both empirical cases, we can find accumulation of wealth and eco-comfort, uneven spatial developments, and green gentrification. These empirical inquiries suggest that urban transition politics is not a general or generalisable phenomenon. Rather, there are different expressions of transition politics associated with different paradigmatic logics. Neo-liberal transition politics refers to struggles related to new middle-class urban lifestyles, space for sustainable markets and entrepreneurs and eco-oriented technological innovations. Neo-communitarian transition politics is related to struggles over non-state projects, post-capitalist experiments and urban communal lifestyles. Post-liberal transition politics is tied to trans-individual arrangements (communities,

technologies, markets) that together shape green places and conduct. Empirically, transition politics should be understood as a complex and plural phenomenon.

Reflecting on sub-question 4: Democratising space and transition ethics

In addition to these sub-questions, it is important to address strategic concerns. This is captured in sub-question 4: *What do these inquiries mean for pursuing urban transformations in the 21st century?* An important aspect associated with doing critical constructivist work is to be accountable and propose ethical and democratising perspectives and strategies. More strategic issues of 'what to do' are addressed more explicitly below. For now, it suffices to note that my transition analytical work (both conceptual and empirico-paradigmatic) has a number of implications for pursuing urban transformations today.

First, anyone who is instilled with intellectual and political sensations (e.g. a reader, an urban planner or a revolutionary) should be able to tease out the normalised hegemonic power relations embedded in current urban landscapes. This is crucial diagnostic work that combines knowing a specific 'urban problem' in its proper spatio-historical context. A genealogical method is instructive here. In my work, I noticed that thinking, reading and critical reflection are perhaps not well-known forms of 'action', but they refer to important discursive work. This ethico-epistemological work should be a collective effort, not the work of an individual or local participatory project. Forgotten and downplayed historical and current urban concerns can then be visualised, known and become integrated in social and public discourse. Second, my spatio-political inquiry suggests that pursuing urban transitions resonates with two conflicting political tracks: gentrification and democratisation. Urban assemblages are hierarchically structured, but also contain many forces moving in different directions. I consider gentrification and democratisation as opposing and contradictory forces. This conceptual pair enables one to critically look at (un)even distributive effects and intersecting issues (health, food, safety, housing, food). Gentrification reproduces and deepens urban inequalities and accumulations of economic and ecological flows, profits, and distant suffering of (non-)humans. Gentrification processes ('inside' an urban region) create socio-economic inequalities between different districts and neighbourhoods. These can also be identified at a more global level of interacting urban centres and peripheries. This is not a given or a natural process, but a conflict-based process that normalises social absurdities and socio-ecological tensions. Contrastingly, radical forms of democratisation call the current urban order including this uneven spatial process into question. Democratising space refers to pursuing more sustainable, just and solidary forms of urban space-making. Even though there can be middle ground between these two processes, I argue that 21st century cities all over the world are increasingly confronted with the tension between gentrification and democratisation.

For me, a transition ethics is important against this background. Transition ethics informs a critical diagnosis of current urban normalisations of social conflicts, while challenging gentrification processes and pursuing urban democratisation.

‘Answering’ the central research question

How do these sub-questions and sub reflections add up? In what way can the central research question be addressed more directly? The general objective of this study is to critically analyse the transition politics of urban spaces. The more specific and tangible objectives are to critically explain the creation, normalisation and contestation of sustainable urban spaces. Following the logic of critical explanation (Glynos & Howarth, 2007), I unpack critical explanation as describing, explaining and criticising. Even though this three-tiered objective is traditionally presented separately, they cannot be disentangled. I argue that my transition analytics offers a framework to describe, analyse and criticise the creation, normalisation and contestation of sustainable urban spaces. Following the objective, the central research question was formulated as follows: *How are sustainable urban spaces created, normalised and contested; and what does this mean for pursuing urban sustainability transitions today?* Here, I only focus on the first half of this research question. The second part is addressed at length later in this chapter. A transition analytics of urban spaces proves that the three objectives actually coincide (description, explanation, critique) as I constantly combined these goals in my conceptual, empirical and reflexive work. Furthermore, the three interrelated transition political processes, creation, normalisation and contestation of sustainable urban spaces, are captured in the transition analytics. The building blocks of my transition analytics of urban spaces (genealogy, governmentality and contingency) present an analytical trinity that glues together the three critical explanatory objectives (description, explanation and critique) as well as the three transition political dynamics (creation, normalisation and contestation). As argued earlier, this makes my transition analytics the very heart of my research. The coming together of the research objectives and questions into the transition analytics was not planned beforehand. Rather, it is a retrospective understanding of how the main research flows and works comes together. The entanglement of the research objectives and the first part of the central research question can be visualised schematically.

Figure 8.1 Retrospection on research objectives and questions

	How are sustainable urban spaces created?	How are sustainable urban spaces normalised?	How are sustainable urban spaces contested?
Q: How did I describe? A: <i>Loosely use transition analytics to construct empirical cases and their paradigmatic logics</i>	Genealogy and governmentality of urban space	Governmentality of urban space	Governmentality and contingencies of urban space
Q: How did I explain? A: <i>Explicitly using transition analytics of urban spaces</i>	Logics of urban genealogy and urban governmentality	Logics of urban governmentality	Logics of urban governmentality and technical/radical urban contingencies
Q: How did I criticise? A: <i>Undermining hegemonic knowledge and foregrounding marginalised voices</i>	Articulating historical urban hegemonies and struggles	Articulating current urban hegemonic regimes and practices	Articulating gentrification and democratisation aspects

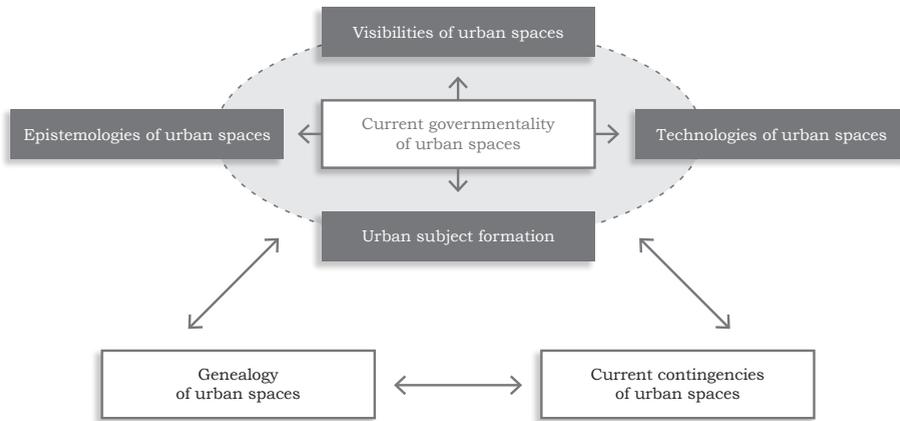
On a more substantive note, a transition towards sustainable urban spaces starts with the idea that urbanisation is a historical socio-material and struggle-based process. The making of green and sustainable spaces ties together (often forgotten) struggles over institutional norms, economic models, mental frames, bodily routines and material sites. The rise of sustainable urban spaces in this sense begins with the emergence of *unsustainable* and *unliveable* urban livelihoods (in the 19th, 20th and 21st century). These struggles and problematisations gave birth to a set of sensibilities, epistemic schemes and technical tools that seek to govern urban spaces and populations differently (to use a popular word, more ‘sustainably’). Specific spatio-political rationalities and governing arrangements create new legal, economic, cultural and disciplinary techniques to give rise to new urban eco-oriented subjectivities. Urban sustainability enables residential areas, urban planning, everyday use of energy, food consumption, waterfront sites and material flows to become objects of concern and intervention that offer new ways to improve the health and wellbeing of urban residents. New spatial and scalar arrangements, however, are also subject to new tensions and conflicts. Whereas an urban transition fosters the democratisation of the city, it also gentrifies urban experiences, extending existing unequal relations between urban populations. There is no actual stable and fully optimistic ‘end stage’. If anything, the historical struggles change form and new spatial tensions and hierarchies rise. Transition thinkers and practitioners have to come to terms with the uncomfortable reality that transition *politics* is associated with all aspects and phases of sustainable space-making.

8.3 General reflections and contributions: Fruits and food for thought

This study sought to shed light on transition politics in urban environments. In this section I reflect on some of my contributions. In a way, it is impossible to say what the actual contributions are or will be. The actual results and contributions depend on the reader, when and where it is interpreted in social reality and the everyday routines within which this text will (or will not) be mixed. Nevertheless, I believe I have contributed in a number of ways to certain intellectual and societal goals. Instead of separately discussing methodological, conceptual and empirical contributions, I present thematic issues. These issues are sometimes more methodological or conceptual, but they are clustered in such a way that they often cover methodological, conceptual and empirical-thematic aspects.

Transition analytics and reframing transition discourse

One of the key contributions of this study is the development of a critical transition analytics of urban spaces. I present an analytical framing of transition processes and practices while having some implicit or underlying resonances with transition approaches. I consider my contribution as the introduction of a specific type of transition heuristic by connecting genealogy, governmentality and contingency in urban settings. This combination allows one to critically understand the complexities associated with the transformations of urban space. This analytics is developed because existing transition approaches have two major and interrelated blind spots: the political and the urban. I found it more useful and interesting to develop a new vocabulary and analytics instead of fine-tuning existing theories. However, my conceptual vocabulary and analytical tools can also contribute to existing transition theories and models (e.g. TM or MLP). This illustrates how one's conceptual contribution assists, alters or improves existing and dominant frames. A transition analytics highlights the spatio-political logic of sustainability transitions. A transition analytics of urban spaces enables one to understand how struggles, contingencies and negotiations transform the way in which urban spaces and populations are visualised, known and governed.

Figure 8.2 Transition analytics of urban spaces

The three central building blocks of this analytics (genealogy, governmentality and contingencies) are implicitly linked to some features of transition scholarship, such as a historical and long-term scope, dominant and alterative regimes, tensions and strategic agency (cf. Geels, 2010). For me, a transition analytics of urban spaces sensitises the specificities of transition politics and its spatial character. Instead of comparing the building blocks of a transition analytics to the MLP, TM or SNM, I reject many of the implicit depoliticised assumptions in these transition models. A transition analytics, as I see it, is able to enrich the field of transition research, especially its technical and radical spatio-political dynamics. A transition analytics is deeply entangled with a general epistemology of critical constructivism and a spatio-political ontology of ‘the city’ (assemblage urbanism). From this viewpoint, transitions should be understood in more dialectical terms, not only in terms of complexity and contingency. This means that a transition analytics can also identify and explain ‘counter-transitions’, ‘forgotten struggles’, ‘recurring concerns’ and ‘pre-modern practices’. Together, this set of methodological and analytical tools adds to the field of transition research without adhering to the assumptions and parameters of dominant research approaches.

My transition analytics has a number of implications for dominant transition theories. At the level of the political, I argue that both STIA and CORSA would benefit from explicitly engaging with insights developed in radical political theory and governmentality. These works are able to counter some depoliticisations in transition theories, and reframe how social and technological transitions relate to power, legitimacy and politics more broadly. SNM and TM, then, would not aim to ‘connect’ or ‘innovate’, but rather fields of struggle that emphasise dissensus. Importantly,

politics is always situated struggle. Therefore, the symbolic and physical spatiality of transition processes and practices should be foregrounded. This allows transition scholars to understand how specific regimes, niches, systems or transitions are related, and together sustain specific urban imaginaries, practices and experiences. A transition analytics can inform STIA by highlighting that socio-technical regimes can also be understood as *social techniques* and technologies as *technologies of power* that shape particular spaces and the conduct of individuals and collectives³⁶⁶. Regarding SNM, one should not only focus on ‘niche management’ but also highlight how and in what way new ‘management niches’ emerge over time. Genealogical mappings of specific forms of managing economic and technological lives, and linkages between these management schemes could lead to a different understanding of management regimes, niches and landscapes in the field of socio-economic and socio-technical life. Regarding STIA’s strategic agency, a transition analytics would first ask when and how SNM actually emerges spatially and what its material effects are related to other forms of ‘management’. In what way does SNM accommodate or challenge dominant socio-technical regimes? This is where transition ethics re-enters the scene. STIA, MLP and SNM can indeed engage in ethical transitions, but only if a number of transition ethical criteria are met (see Interlude 2).

Regarding CORSA, we can imagine how a transition analytics reframes how complexity-informed systems theory touches the ground and includes everyday life. Societal regimes, then, would not consist of general sectors and dominant structures, cultures and practices. Rather, such regimes consist of heterogeneous regimes of practices that regulate decentred institutional, discursive and material spaces. CORSA’s equivalent of strategic agency (TM) would first and foremost highlight that governing and managerial practices are part of broader political rationalities that aim at directing the conduct of individuals and populations. This suggests that when taking up the language of ‘managing’ or ‘governing’ transitions, some people, ideas and experiences will be left out. The more radical aspects in transition management literature could be understood in terms of politicisation and democratisation practices. There is a gap between management and the political that cannot be dissolved, both

³⁶⁶ In some instances, this study focussed on ‘sustainable technologies’ and ‘technological innovations’. The technological plays a central role in transition research, most notable from a STIA point of view. As mentioned in Chapter 4, the work of Foucault radically moves away from technique and technology as neutral concepts and phenomena, often tightly coupled with objective science, industrial innovation and market strategies. Rather, techniques and technologies are prosthetic means that allow humans to improve themselves and their livelihoods in a variety of ways. If we put a Foucaultian frame around ‘technology’, we are able to deconstruct technologies in non-scientific and non-economic terms. This opens the door to also consider economic, cultural, social, ecological and political technologies. This also opens up new forms of urban politicisation and change. If technology is omnipresent, and we use it to improve and enhance ourselves in the 21st century, we should not question whether to have a techno-fix or not, but rather which technologies might be instructive and useful for ethical transitions.

theoretically and ethically (see also Chapter 3 and 4). A transition, in this sense, is a matter of socio-political change that in turn transforms how spaces and populations are sensed and governed. This vocabulary seems underdeveloped, but it can indeed be integrated into existing transition management frameworks. More specifically, the politicising and democratising nature of transitions can be accentuated in problem structuring and envisioning, tactical networking, operational project action and evaluative framing. This would mean that a number of transition management assumptions should be reframed. Transition management can become more radical in its concepts, informed by radical politics theory. At the same time, it can learn a great deal from Foucaultian scholarship about the political dynamics of governing everyday life. Even though a transition management approach harbours many useful insights, it runs the risk of becoming technocratic, managerial and a coordinating toolkit. There is a politics to transition management that takes a back seat. Regarding the political nature of transition management, I suggest it is more adequate to reframe transition management into transition politics. At this level, transition management concepts such as ‘frontrunners’ and ‘envisioning’ can be reframed in more antagonistic terms, such as ‘counter-runners’ or ‘counter-memory’. These experimental terms suggest that transition practices are indeed political practices that should radically antagonise. At the level of management, which is an important part in transition research, transition management can also be inverted by moving away from the techno-rationalist question of managing transitions to the transition of management (‘management transitions’). This implies a shift of focus in how social management regimes and everyday governing practices transform over time. Again, management (or governance) regimes, niches and landscapes can be mapped spatially in view of a specific concern (e.g. food and energy assemblages). And again, transition ethics should inform CORSA and TM to foreground voices and discourses that suffer unevenly from e.g. the hegemonic food system. Selecting stakeholders and relevant actors should be understood against the background of power structures that privilege regime lifestyles while downplaying marginalised livelihoods.

These attempts to unravel linkages between a transition analytics and dominant transition approaches are somewhat general and experimental. It is particularly important that STIA integrates the political and that CORSA integrates the spatial. A transition analytics is different from these dominant approaches because it attempts to be critical and ethical in all its aspects: methodologically, conceptually and empirical-thematically³⁶⁷.

³⁶⁷ Everyone is invited to modify and change the transition analytics and use new or different conceptual elements.

Transition politics and transition ethics

I argue that the ghost of depoliticisation haunts transition research and discourse. This intellectual bug infiltrates many corners of academia. The main transition approaches STIA and CORSA, and their specific understanding of strategic agency to pursue ‘a sustainable transition’, downplay the political in various ways. This study illustrates that in order to more adequately grasp the politics associated with transitions, we have to move away from a diagnostic discourse of eco-reflexive ‘modernisation’ and quasi-rationalist and post-political notion of ‘management’. Alternatively, the concept of *transition politics* does not address politics as a separate conceptual and practical concern, but it challenges a number of core assumptions within transition discourse while covering its main ambitions. In Chapters 3 and 4, I showed how these deconstructions are based on internal contradictions within transition discourse. This led me to follow internal hints and explore their implications to reframe the politics of sustainability transitions. Importantly, this also implies that my study has been transition research all along, even though I sometimes employed rather uncommon transition language. A more adequate framing of transition politics that matches its academic and societal ambitions centre-stages a range of ‘political shades’, namely from fundamental social antagonisms to very specific technical political rationalities that govern everyday experiences. This language is a hybrid of basic ideas and aspirations in transition discourse, radical political thought and governmentality research that highlight hegemonic struggle and socio-material relations of power. My take on transition politics, however, does not suggest that it should become a benchmark to study ‘transition politics’. Rather, it is part of an emerging stream of conceptual and empirical studies engaged with this problematic, creating new concepts and analytical tools (Shove & Walker, 2007; Hendriks, 2009; Avelino, 2012; Grin & Hendriks, 2010). Importantly, transition politics is not a generic phenomenon in all contexts. Transition politics should be understood and situated in particular paradigmatic settings and logics. My study illustrates that transition politics should be differentiated depending on specific spatio-political rationalities and struggles. Differentiating transition politics suggests that we are able to grasp, for example, neo-liberal transition politics, neo-communitarian transition politics, post-liberal transition politics, and much more forms of transition politics.

When studying transition politics, it is crucial to account for this endeavour as a particular type of *political practice*. This means that studying transition politics is neither neutral nor subjective, but cuts against the grain in particular ways, depending on one’s context and strategic agencies. My take on transition politics explicitly moves away from a post-political attempt to conceptualise transition politics on the basis of eco-reflexive modernisation language. Contrastingly, the political ‘returns’ in transition discourse by re-politicising state institutions, market-based

logics, autonomous individualism and society-nature relations. This epistemological move denaturalises and renders abnormal what count as normal institutions, human conduct and socio-ecological experience. In fact, it allows us to challenge our everyday experiences and everyday structures of power. This diagnostic and problematising mentality can be employed in different ways. As mentioned in Interlude 2, it can serve transition ideology or transition ethics. Here, it is instructive to briefly recall these terms. Transition ideology serves the existing power structures that appropriates transition discourse and injects it with hegemonic semantics (e.g. technical fix, market-based solutions). Unavoidably, this leads to a selective capture of contingency and complexity resulting in what I call ideological transitions. Transition ethics, on the contrary, is also based on absorption of contingency and transition discourse, but is used to counter hegemonic structures, targeting everyday inequalities and unjustifiable suffering. Transition ethics starts with allowing 'suffering to speak', not a blind persistence to 'innovate and renew'. I noticed that transition research often obscures its normative, ideological and/or ethical orientations (cf. Shove and Walker, 2008; Smith & Stirling, 2010). The notion of transition ethics is an attempt to explicate one way (i.e. my way) of demystifying this conundrum. Studying transition politics should not be considered as a social practice, but rather a political practice that reproduces or undermines structures of domination.

Critical constructivism: Linking words, matter and critique

In Chapter 2, I presented a methodology called *critical constructivism*. This is a strategic move to account for the missing links and blind spots I encountered with more traditional methodologies. I combine insights from transition methodologies with more critical perspectives in social science. Critical constructivism and its underlying ethico-onto-epistemological trinity of Barad (2007) was very useful in making sense of my position as a researcher working at a practice-oriented research institute (DRIFT). It was rather difficult to connect this general position between 'objectivism' and 'subjectivism' to more specific methods and tools. Some intellectual sources, concepts and works inspired me in making things more tangible, such as assemblage urbanism, a logic of critical explanation, problem and practice oriented insights from Foucault, and more mainstream interpretive research methods. I found it particularly challenging to balance out a critical constructivist mind-set on the one hand and doing in-depth empirical work using technical coding tools and software on the other hand. One could even argue this is a normal concern, and perhaps *should* be challenging in order to account for both extremes ('epistemological concerns' and 'empirical materials'). Critical constructivism enables me to tie together three realities that are often separated in social sciences (including transition research): words, matter and critique.

This trinity roughly refers to epistemology (words), ontology (matter) and ethics (critique). Initially, I intended to focus on ‘words and discourse’, without their material and bodily conditions and entanglements. The focus on social, technological and ecological issues in transition research and the work of Barad and others, pushed me to construe a particular epistemological position to account for the physical and material world without being realist in a naïve way. Transition research engages with the linkage between the social and the material, either in terms of socio-technical, technological, socio-ecological or co-evolving complex systems. Linking the discursive (words) and the material (matter) by means of Barad’s innovative work, creates a different kind of sensibility to account for material-discursive assemblages as intrinsically linked (micro/macro, remote/distant, local/global, institutional/physical, cultural/political, biological/social, etc.). This was particularly useful in understanding the complexities associated with the emergence of, for instance, a community garden, a floating house or alternative food networks. For me, the link between critical constructivism and assemblage urbanism is very clear and instructive (see above and Chapter 2). I was not able to account for these subtleties and complexities using the sometimes non-spatial and ‘rigid’ categories associated with the MLP, TM or SNM (see Chapter 3). ‘Critical’ in critical constructivism adds an interesting layer to this epistemological stance. It allows one to not simply ‘represent the facts’ or ‘present the empirical data’, but critically understand them in their spatio-temporal unfolding based on an ethical horizon.

Next to these general methodological reflections and contributions, this rather conceptual dissertation (at least for some) does not imply shying away from in-depth empirical case studies. Few methods are considered normal ‘transition research methods’ given the sheer diversity and multi-disciplinary of the field (Geels, 2010; Avelino, 2012). During my research I noticed that some methods were instructive such as archival work, field observations, using photography and social media. I did not find many transition scholars that used the same methods. Does this make these methods exotic? Is this methodological discrimination? Are some methods considered to be more scientific and rigorous than these ones? Perhaps not. What is noteworthy is that a critical constructivist approach resonates with transition research methodologies while combining and developing new research methods.

Everyday assemblages and socio-spatial transitions

Transition politics can be analysed in many ways. I address(ed) transition politics by focusing on the spatial dynamics of transitions, in particular urban spaces. This was a pragmatic consideration, as it enabled me to understand transition politics by highlighting the inter-spatiality of transitions and the inherently uneven dynamics and multi-territoriality of transition practices. Institutional and discursive spaces are organised hierarchically and imbued with tensions and conflicts (e.g. legal system,

food preferences). However, struggles and conflicts are also inscribed in material spaces (e.g. a building, a square, a waterfront, a park). To account for the spatiality of transitions, I combined and extended underlying frames embedded in STIA and CORSA. The concept of *assemblage urbanism* was very fruitful, specifically for spatialising concepts such as complexity systems (TM) and socio-technical systems (MLP, SNM). Assemblage urbanism allowed me to navigate between rather abstract notions of territoriality, socio-materiality, thermodynamic intensities and specific urbanisation dynamics (MacFarlane, 2011; Magnusson, 2010). Assemblage urbanism is useful for methodological ‘detailism’, or rather abstract-detailism. That is to say, it enables one to understand societies and cities as historical processes of millions of entangled unfolding details.

Assemblage urbanism is an onto-epistemological starting point and navigational tool that fits a number of assumptions in transition research. This especially relates to complex and socio-technical systems that have multi-scalar, multi-phase and multi-actor dynamics. The Deleuzian notion of assemblage is a nice entry point to grasp the dynamics of transition spaces or cartographies (cf. Coenen, Benneworth & Truffer, 2012). This means that transitions are not only socio-technical, socio-ecological or socio-economic, but also *socio-spatial*. As assemblages are nested and hierarchical processes that create space, they are also open to all kinds of concepts and methodological tools. For example, I believe the work in critical urban research (Lefebvre, 1996; Brenner, 2014) and political ecology (Swyngedouw, 2010; Heynen, 2013) can be linked to an assemblage frame, enriching my understanding of local urban space making and regional socio-ecological flows. This type of ‘urban pointillism’ accounts for local and global histories, while highlighting the radical contingency of current urban space-making.

Historical unsustainably and ecological humans

This study illustrates the historically entangled nature of local problematisations and ‘promising’ spatial interventions. In line with the concept of assemblage urbanism, the spatio-historical complexities of a ‘sustainable city’ should not be underestimated. My conceptual and empirical explorations show that the rise of sustainable urban spaces actually starts with the discovery of ‘the unsustainable city’. This unsustainable city started in the mid-19th century across many Northern countries and was mostly problematised in terms of safety, hygiene, public health and well-being. Interestingly, transition politics and (un)sustainable urban spaces, broadly conceived, can be traced back even earlier. This problematic is embedded in the pair *polis* and *oikos*. In ancient Greek, the *polis* referred to the realm of public debates about issues in the city-state. The *oikos* referred to the sphere of the private household and concerns in and around one’s household and family. Aristotle considered the *oikos* as the basic unit of the

polis, not ‘outside’ the *polis* (Roy, 1999). However, throughout Western urban history, and especially since the 18th and 19th century, this particular discursive distinction intensified and specialised into different spheres of life (public or political life, private or economic life, natural or ecological life) and scientific disciplines (political science, economics, ecology, biology, etc.). Since the urban uproars of the 1960s, and the emergence of reflexive eco-modernism in the 1980s, the classical distinctions between politics, economics and ecology became increasingly fuzzy, especially in urban environments. Public debates about ‘the urban’ and ‘urbanisation’ today are deeply entangled with economic and ecological issues, and consequently, about human and non-human livelihoods in the city. The renewed romantic return of ‘lost nature’ in our cities (e.g. urban farming) resonates with the re-entry of the *oikos* into the *polis*, or the economic-ecological in the political. Sustainability and transition discourses tap into this complex history. My empirical cases show that the emergence of urban ‘eco-mentalities’ can be traced to the mid-19th century. Since then, nature-human and industry-environment divides ushered in new modes of seeing, sensing and knowing ‘the environment’. This also created new means to improve the human condition by improving the qualities of urban environments. However, it would be naïve to suggest that sustainability transitions in some way present radically new phenomena. Concerns and possible solutions related to socio-economic and environmental issues are rarely new. I noticed that radical innovations in my experience (floating houses, urban farming, alternative currencies, etc.) have been developed in other parts of the world, or earlier periods in world history. However, the *combination* of these innovations, epistemic schemes and specific technologies are always singular and unique.

One of the strengths of a genealogical understanding of spatio-political eco-rationalities is the circumvention of sector-specific, nation-specific, technology-specific or context-specific analyses. My transition analytics in two empirical settings illustrates that human beings have always been spatial. That is to say, we have always been struggling with our social, ecological and biological environments while domesticating different spaces (i.e. our society, nature and body). We have tried to safeguard or improve our safety, health and comfort in many ways (also cf. Sloterdijk, 1998, 1999, 2004). However, since the era of modern urbanisation and industrialisation, the quest for eco-improvements professionalised. Even though these improvements have been systematically uneven and unequal for some urban districts and residents, since the mid-19th century the ‘ecological human’ or ‘eco-human’ emerged. Ever since, virtually all attempts to problematise and improve environmental qualities, have been extensions and reinventions of an urban eco-humanity. Transition scholars should be able to explicate how their objects of study and empirical cases are tied to (quite formative) 19th century developments.

The new eco-mentalities I described (neo-liberal, neo-communitarian and post-liberal eco-mentality) are best understood in this historical context. Rotterdam's waterfront sought to 'improve' its harmful industrial foundations and legacies, at least to some extent. Similarly, socio-ecological life improved in Rotterdam and The Hague, for many. These improvements are not isolated or unique. Their paradigmatic logic, both past and present, distant and remote, explains how 'sustainability', 'green' and 'ecology' are inscribed in the apparatuses that govern our conduct and experience³⁶⁸. As such, they are attempts counter to the idea of prior modernist 'improvements' while proposing new social technologies to advance the human condition.

Urban transitions in the age of green techno-capitalism

My empirical studies show that and how transition discourses fit into radically different narratives and socio-spatial processes. One could argue that the TT case, with its neo-communitarian eco-mentality, contrasts and even counters many aspects of the neo-liberal eco-mentality related to the Stadshavens case (also cf. Audet, 2014). What ties these cases together, however, is a rich history of urban industrial and techno-capitalist projects to advance environmental qualities of urban populations and livelihoods. Whereas neo-communitarian logics aim to counter this historical burden, the Stadshavens case seems to thrive on many parts of its legacy. My study shows that sustainability transition discourses are local and historically embedded, but seem to be enmeshed in and confronted with hegemony green techno-capitalism and neo-liberal modes of eco-reflexivity. This means that transition theories and discourses do not simply 'oppose' the unsustainable city, but feed on its broader historical background, namely that of technological fixes, urban technocratic planning and growth-driven consumer economics. To be clear, I expect most transition discourses to support green techno-capitalist systems and neoliberal forms of city-making, not oppose them. Even though radical alternatives emerge, this seems to be rather difficult to change in the near future, simply because of complex historical legacies. In fact, one might even expect that new discourses of e.g. 'smart' and 'resilient' cities extend and complexify projects that are grounded in technocratic planning, based on global market capitalism, individual liberties and urban lifestyles (Vanolo, 2013). In fact, sustainability is rarely contested in practice. It assumes and includes so many aspects that it barely makes sense to oppose it. This is a crucial democratic challenge. In order to have fruitful public debates on eco-futures, the rich and political history of (un)sustainability seems to be downplayed for the sake of technically tackling current socio-economic and environmental concerns.

³⁶⁸ Please be reminded of the dazzling spatio-temporal entanglements in the movie *Cloud Atlas* (2012).

Radical transformation and patient subjectivity

My engagement with the fields of urban critical research, urban political ecology and governmentality research have also resulted in a more critical attitude with some of these scholarships. One of the powerful tools of critical theory and problematising methods is to challenge the powers that be. Many of the intellectual discourses that shape these tools can be traced to the anti-institutional and democratic upheavals of the 1960s and 1970s (in political times). However, the post-structuralist and neo-Marxist vocabularies that shaped and came out of intellectual life in the 1960s, seem to abstain from approving institutional power and actually advancing alternatives (Peters, 2001). For many critical scholars this is almost blasphemy, because alternatives create new unequal power relations and forms of exclusion³⁶⁹. To me, this is where some transition insights might challenge a comfortable post-structuralist position of ‘anti-institutionalisation’. Importantly, this should be advanced without becoming post-political. Unfortunately, transition research as embodied in STIA and CORSA, emerged and flourishes in post-political times. I elaborated how critical scholarship can inform transition research. But what can transition research teach critical scholarship? Radical transformation, be it ‘just’, ‘democratic’ or ‘green’, cannot be pursued without ‘making your hands dirty’. That is to say, what transition research contributes to critical social scientific scholarship is ‘taking the risk’ to become part of ‘the system’ and ‘institutional powers’, in order to deconstruct and explore alternatives. This also modifies and changes one’s radical attitude, which is an intellectual sin for many critical scholars. I would argue that transition research and critical social sciences can and should learn from each other’s intellectual assumptions, vocabularies and social engagements and projects. I consider this thesis to be a modest attempt to explore these linkages. Understanding transformation processes as radical struggles requires research subjectivities to be both bold and patient. The path is full of disappointments, with occasional successes.

8.4 What is to be done?

Ethical contributions and new eco-vanguards

Admittedly, this dissertation does not end with a how-to-guide. Neither does it produce strategic tools to intervene more ‘effectively’. This has never been my ambition. But, do I have anything to say when confronted with the old Leninist question: ‘What is to be done?’ This question is particularly relevant for sustainability transition research

³⁶⁹ Ironically, this even means that some critical theories nicely fit into the logic of late capitalism with its tendency to radically innovative and differentiate products, services and lifestyles. This is elaborated upon later this chapter, with a particular focus on transition knowledge and practice.

and discourse. This field focusses on transformations of a socio-technical or societal 'system', preferably towards a more 'sustainable state'. As argued earlier, if there is any ethical principle that should guide consumers of transition discourse, it can indeed be captured in simple terms for policy makers, scholars, architects, technocrats and radical environmentalists: *democratisation yes, gentrification no!* In this section, I present how this ethical imperative can be translated more specifically. These proposals are deeply entangled with my socio-critical attitude as a scholar. Some of them are linked and feed on one another. Crucially, they should not be understood in terms of a practical guide, but as perspectives that trigger the imagination. Yet, paradoxically, this section does finish with a list of transition do's (pursuing democratisation) and don'ts (pursuing gentrification), depending on one's institutional and symbolic role.

Moving beyond sustainability: The significance of justice and solidarity

The notion 'sustainability' plays a precise discursive role. In many documents, interviews and settings, the discursive label 'sustainability' neutralises radical elements associated with socio-economic and ecological conflicts. It often emerges and develops as a hegemonic notion that connects everyone and everything (business models, eco-minded citizens, state programmes and communal experiences, anarchist ideas). Consequently, it downplays underlying tensions and disagreements. Sustainability, whenever used or reflected upon, is used as an 'umbrella term'. As discussed in Chapter 3 and 4, this makes it a depoliticisation strategy and expresses our current post-political condition of technical and pragmatic techno-fixes (Swyngedouw, 2010). This is not surprising, however, since the recent genealogical tenets of sustainability discourses actually aim to connect and combine different fields, levels and values (e.g. people, profit, planet) (Club of Rome, Brundtland, Agenda 21, Rotterdam and The Hague's sustainability plans). In order to understand the political potential underlying sustainability and foster radical democratic changes, we should reject omnipresent relationalism and be able to 'disconnect' and 'reject'. I argue that in order to address today's socio-economic and socio-ecological concerns in a more critical manner, circumventing the post-political notion of 'sustainability' (or 'resilience'), it is valuable to use more classical and elegant political categories such as 'alienation', 'exploitation', 'inequality', 'equality', 'freedom', 'solidarity' and 'justice'. This is not a post-modern language game, because these concepts signify rich and material struggle-based histories. What such notions do is indulge in direct politicisation and rendering visible suffering and inequalities of human and non-human populations, while opening up alternative imaginaries. It is not impossible to re-politicise in our post-political age. Consider, for example, the work of Piketty (2013). His book *Capital in the Twenty-First Century* encouraged many public debates about the link between capitalism and growth-based economics on the one hand, and structural forms of

economic inequalities on the other hand. Even though Piketty seems to propose progressive taxation within a social-democratic framework, it is interesting to observe that his work triggered renewed public interest in political economy. Similarly, in recent years, whenever radical antagonisms that divide society into ‘two camps’ are articulated, radical diagnostics and alternatives can become imaginable and thinkable (e.g. ‘Occupy Movement’, ‘Arab Spring’)³⁷⁰.

Sustainability discourse is able to do many things, especially connect and become part of a management tool, but it is not manufactured to politicise. Sustainability is designed and devised to depoliticise. Even though sustainability initiatives might problematise ‘climate refugees’ and today’s ‘Chinese gulags’, I believe actual political categories are more refreshing in a post-sustainability and re-politicised era. Therefore, I propose to simply drop notion of ‘sustainability’ and the combination ‘sustainability transitions’. Alternatively, new transition political discourses can be crafted, such as ‘justice transitions’, ‘solidarity transitions’ and ‘ethical transitions’. Our framing and experiences of justice, solidarity and ethics can transform and become transformative for the way we organise society and socio-material relations. These categories can create new political sensibilities to diagnose and propose concrete projects and actions, guided by transition ethics and democratic horizons. An exemplary entry point can be the repoliticisation of ‘climate’. My study illustrates that the notions ‘climate’ and ‘environment’ have been socio-economic and class-based notions in the 19th century and in most of the 20th century. Since the 1960s, however, our climatological and biospheric lives has flattened and de-politicised class differences. Re-connecting ‘the climate’ with ‘socio-economic climates’ as class based differences, allows us to point to the uneven and inherent political nature of what counts as ‘our environment’. In a similar vein, different local struggles can be connected, thereby creating the conditions of more fundamental antagonistic struggles. By combining social, cultural, racial, economic, ecological, gender, income and/or technical issues, intersecting concerns can be repoliticised.

Accommodating the commons through transnational institutions

In my ambition to strip transition politics from its nation-statist, liberalist and anthropocentric assumptions, a persisting question is: what politics is left? In what way can we still account for some kinds of *institutional* frameworks to accommodate conflicts and opposing desires and claims? How can a more democratic understanding of the political community be thinkable? And in what way can uneven techno-

³⁷⁰ Unfortunately, this is not always the case. The rhetoric of U.S. president G.W. Bush, for example, divided the world into people that were “with us” or “with the terrorists” in 2001. This antagonism did not open up discursive space to reframe the geopolitical landscape regarding energy security and diverse socio-political systems. On the contrary, it further militarised discourses and approaches on ‘terrorism.’ In other words, this particular antagonism led to depoliticisation, not politicisation.

capitalist and neoliberal adaptations of sustainability issues be avoided? I argue that this calls for new projects that reimagine and rethink *the commons* at a global scale and transnational institutions for accommodation (Jessop, 2002; McCarthy, 2005; Hardt & Negri, 2009). As mentioned above, many historical separations occurred to disentangle *oikos* from *polis*, nature from society, and economy from ecology in our institutions and language use. However, this has obfuscated evident ties and entanglements between economic life, ecological systems and democratic politics. Such ties become evident (again!) when we are confronted with e.g. urban smog, problems of industrial food systems, human destruction of biodiversity and the phenomenon of so-called ‘climate refugees’ (Argos, 2010). The commons can serve as a new ethical principle to render imaginable new *eco-political communities* that are not restricted to their local legal status (Westphalian), their individual autonomy (liberalist) or their membership in the human race (anthropocentric) (cf. Fraser, 2009). Rather, it takes the common concern to live and die in an equal manner as a starting point. It reframes the ties between states, natures and economies. In the fields of environmental justice, ecological democracy theory and green political thought, such issues are further explored (Hester, 2006; Schlosberg & Carruthers, 2010). New institutional rules and informal cultures (based on new eco-political communities) can be developed to sense the (urban) common need for access clean drinking water, breathable air, and mobility³⁷¹. Obviously, there is no clear transnational institutional design that would simply ‘work effectively’. There will always be struggles and dissent that are expressed through eco-political institutions. Nevertheless, it could be a social pathway to further explore. After the heydays of liberalism that informed democracy and technology since the French Revolution (*liberté*), the two other core values of political modernity can inform an eco-oriented commons: *égalité* and *fraternité*.

Politicising dominant theories and concepts

One of the issues I struggled with during my research was the role of science, universities and scholars in urban transitions. In Chapter 2, I discussed my perspective on knowledge, society and power. However, it seems to be normal - hence hegemonic - to consider scientific practice as a practice that produces ‘neutral knowledge’ and ‘truth’. I argue that we do not only need more politicisation of ‘sustainability’ and ‘green’ discourses, but also more politicisation in theory and academia. But, why would I advocate the politicisation of scientific knowledge? Do I not undermine my own position? Put polemically, and in the words of Althusser: “Philosophy is, in the last instance, class struggle in the field of theory”. In more academic and technical terms, there is a structural inequality of valuation and legitimacy vis-à-vis scientific

³⁷¹ The United Nations is a clear example of Westphalian nation-state politics at a different level.

disciplines, social knowledge and scholarly methods. For example, classical economic theories, legal theories, urban theory, econometrics, cognitive science, political science and statistical analysis are often considered 'neutral' and 'objective', whereas environmental studies, gender studies and ethnographic research is considered more 'subjective' and 'particularistic'. Why, for example, are environmental scholars that propose to regulate industrial activities considered more 'activist' than alleged objective and normal proposals from economics professors? The same holds for the difference between knowledge about industrial agriculture versus permaculture (see also Chapter 6). To me, this means that there are dominant regimes and marginalised voices in scientific and academic life. We need to engage more critically with the ways in which economic, social, architectural and legal theories inspire and inform spatial planning and urban governance. The role and effects of transition theories can also be 'denaturalised' and disclosed. In line with my proposal for a transition ethics, this more critical and self-reflexive position is part of a broader institutional strategy to develop critical transition research. One of the ways to become more reflexive in this regard is to adopt more critical vocabularies about knowledge production in a society that is fixated on 'co-production', 'impact' and 'valorisation'. Alternatively, the works of Althusser, Foucault, Laclau and others could inform a more critical take on relations between dominant scientific disciplines, statist knowledge schemes and everyday life.

Connecting eco-rebels to green technocrats

In transition contexts, it is not only crucial to bring together 'frontrunners' that know how to lead and inspire, but also to explicitly focus on antagonistic actors ('counter-runners'). Often, social enthusiasm is opposed to nitty-gritty bureaucratic details. I argue that both are important and indispensable. We need eco-rebels and eco-technocrats. Similar to the dialogue between critical (urban) scholarship and transition research, it does not suffice to bring together the 'like-minded', this would only result in either ideological transitions and intensified gentrification (reproducing hegemonic discourse) or transition disappointments (if pragmatic and technical considerations are obscured). However, I did not encounter many situations in which rebels or activists sat on the same table with professional technocrats. Whenever it did happen (in the TT case), it created tensions and uncovered underlying historical antagonisms. Therefore, such encounters can be very fruitful. In order to advance democratic and ethical transitions, such conflicts should be addressed both by activists and technocrats. Radically democratic sensibilities, languages and material living conditions can only be achieved by confronting techno-power with activist political emotions. A dialectical move here could accommodate 'activists technocrats' and 'techno-activists'. Such dual discursive positions can be considered 'dangerous' and precisely therefore more effective to advance radical social change.

Experimenting with discourse

Words are crucial. Words are forms of action. In my study, I noticed how minor discursive shifts and slides could have significant ramifications. As words and language allow us to observe and sense reality selectively, the transformation of words can also alter our visibilities. Diagnosing and transforming a specific urban condition or space (in groups or collectively) can become more productive whenever one deconstructs and experiments with local discourse. For example, the lack of healthy food provided by local farmers has been a concern for decades in many Western cities. The emergence of the discursive construct 'urban farming' not only creates new discursive ties between agriculture, healthy living in high-modern cities, but also new socio-environmental experiences and physical infrastructures. In a similar vein, the category of 'floating houses' or 'floating cities' are micro-discursive assemblages that emerge through specific problematisations and enable new imaginaries and material realities. In my study, I encountered dozens of words as traces of discursive deconstructions (e.g. 'repair café', 'give-away shop', 'pro-sumers', 'floating forest', 'green rooftops', 'sustainable breakfast', 'water square', 'guerrilla gardening' or 'sustainable transition'). These discursive cocktails combine radically different - sometimes opposing - histories and experiences, which allows us to re-imagine the urban experience. The power of words and their contingent semantics can be a strategic tool to radically transform how we observe, know and govern cities.

Countering hyper-fluidity and transitionism

During my study I attended workshops and conferences, but also read hundreds of articles, books and policy documents about a counter-movement in the age of modernist urban planning. Instead of 'blueprints' and 'programmes', it seems to be salient to highlight 'change' and 'innovation'. In Chapter 4, I reflected on this move towards a neoliberal and capitalist logic of accelerating flows of goods, ideas and capital. However, instead of centre-staging transitions, accelerations, innovation and experimentation, it seems to be increasingly radical to become non-transformative. Living low-tech and non-flexible is the new radical. Simply expecting a stable job or income and living without high-speed Internet seems to be more radical than accelerating towards a green and (smart) dynamic city. In order to democratise and pursue an ethical transition, constant radical change is not a necessity. In some instances, it can be more radical and ethical to be static.

Instead of explicating what these strategic considerations might imply for different 'reader audiences' and 'target groups', I propose a brief list of transition ethical do's and don'ts for some groups I encountered during my empirical work. For me, the do's

are related to the pursuit of ethical transitions and democratisation. Don'ts refer to activities and ideas that relate to the pursuit of ideological transition and gentrification.

Figure 8.3 Some transition do's and don'ts

Reader audience	Do's: pursuing democratisation (for ethical transitions)	Don'ts: pursuing gentrification (for ideological transitions)
State technocrats and policy makers	<i>Always address most vulnerable and marginalised groups in all policy plans</i>	<i>Govern with technology and market-models, and cultivate DIY mentality</i>
Citizens and activists	<i>Address local and distant inequalities and suffering</i>	<i>Advance 'hip' and boulevard-like projects</i>
Engineers, architects and urban planners	<i>Imagine and design urban functionalities and spaces for poor and disenfranchised residents</i>	<i>Create buildings and areas for the 'creative class' and aesthetic purposes</i>
Investors and entrepreneurs	<i>Invest in and serve discarded districts and regions, preferably using alternative currencies and economics</i>	<i>Invest in and serve the class that can buy real estate and luxurious commodities and services</i>
Urban farmers and gardeners	<i>Address local and distant inequalities and suffering</i>	<i>Advance 'hip' and health-based projects</i>
Scholars and scientists	<i>Employ alternative theories, methods and themes to challenge economic and political power</i>	<i>Employ dominant theories, methods and empirical themes for stable funding and 'usual suspects'</i>

8.5 Limitations and future research:

Towards critical transition scholarship

This study is not perfect. I experienced it as a journey that enabled me - and hopefully the reader as well - to understand the fascinating world of major societal transitions, everyday struggles and emerging urbanities. I believe many things could have been done better. I also discovered many interesting research themes and issues that could have been addressed more elaborately and might become future academic endeavours. Even though these future research issues are relevant for all kinds of social scientists and academic disciplines, I focus on issues that could be elaborated in, or related to, the field of transition research.

I would like to begin by presenting some 'limitations' of this study. First, in my general review of transition research, I focussed on STIA and CORSA and specifically on theories such as SNM and TM. After tracing some insights within transition research, I explored the added value of a governmentality approach (among others). However, this did not result in an elaborate reflection of points of contact between governmentality and specific governance theories that are used in transition research, most notably reflexive governance (Loorbach, 2010; Grin, 2010). The work of Torfing (2005) on 'post-liberal governance' and Howarth's (2010) account of 'governance as hegemony-making' can be instructive here. Second, I also did not engage in urban

politics in terms of formal democratic politics, party politics and electoral behaviour. Even though I reject these framings of politics, I did not analyse transition politics in this way, nor did I unravel how different political parties and their programmes addressed 'sustainability' as part of their ideological framework. However, I did follow the political actors involved as part of broader urban governing logics. Third, my transition analytics is grounded in different intellectual traditions and bodies of knowledge. This, ultimately, led to a more flexible heuristic and playful vocabulary. However, this might also be experienced as 'eclectic' and 'opportunist'. Even though I believe my transition analytics is a powerful tool, its complex background is indeed somewhat eclectic and might benefit from a more straightforward 'choice'. For example, I could focus more explicitly on 'urban governmentality transitions', without integrating insights from critical urban research and urban political ecology. Similarly, I could also focus more explicitly on the latter. Fourth, on a methodological note, I was able to do ethnographic work in the TT case. Ideally, I would do a one-year ethnography in this empirical setting to gain even more fine-grained insights. This period, however, covered approximately 6 months. More importantly, I was able to do little ethnographic work in Stadshavens case. Even though there were some reasons that prevented me from using this method (see Chapter 2), a more local and 'native experience' would allow me to enrich my empirical reconstruction and reflection of Rotterdam's sustainable waterfront regeneration. Furthermore, my empirical cases are both 'Dutch', i.e. they represent Dutch urban regions. Even though I argue that urban assemblages stretch across time and space, it would be interesting to more explicitly and elaborately include peripheral issues, such as rural dynamics and non-Dutch contexts. Fifth, another methodological limitation was my pragmatic use of coding methods and software use for analytical purposes (see Chapter 2). I used coding and software as means to cluster, label, categorise and draw linkages between empirical materials. In my experience, I could have used these analytical tools more systematically. However, during my pragmatic use of qualitative research methods in view of critical constructivism, I noticed that it is not that common to pursue empirical research as a critical social scientist. It is not normal to use qualitative data analysis software assistance. SPSS (quantitative data analysis software) seemed to be installed in all PC's at my university as 'default', Atlas.ti was not. Unfortunately, this expresses a form of institutionalised methodological discrimination. Sixth, I did not use mainstream transition theories, such as SNM, MLP or TM in order to assess how the transition of urban spaces are 'managed' or how new urban socio-technical niches emerge vis-à-vis dominant regimes and landscape developments. My conceptual reflections in this chapter might provide some entry points to this end. Seventh, I did not prepare and execute a 'transition experiment', run a 'transition arena', organise stakeholder workshops or pursue a 'niche strategy', as is advocated by a number

of transition researchers (cf. Loorbach, 2007). It is important to note that I actually did engage in many of these issues, however, in different ways and using different terminologies (especially in the TT case). Finally, even though this study undertook the task of examining urban transition politics, I did not explicitly focus on classical political struggles related to e.g. gender, race, sexuality, age or income. Even though these issues were addressed in some instances, especially vis-à-vis gentrification processes in both cases, these issues were backgrounded by the focus on more traditional socio-environmental and socio-economic struggles. That being said, on the basis of my empirical studies, it is safe to say that the Stadshavens case is dominated by knowledge and actions of and for white middle-class, eco-friendly tech-savvy men at the expense of non-white, marginalised, non-technology-oriented women, children and elderly. This might seem harsh to state, but the grim reality of experiences at less privileged areas in Rotterdam and elsewhere are harsh. The TT case articulates a more pluralistic, inclusive and non-technology oriented reality to safeguard sustainable futures. These issues can be considerations for anyone interested in doing comparable research.

I would now like to explicate some scientific themes and puzzles that I aim to take up in my own future academic work. This also an invitation to other critically-minded transition scholars to explore and examine them together. They are not new themes as such, but problematics I encountered while reading, writing and discussing (about) the research topic. For me, these problematics are connected to a broader ambition to advance a *critical transition scholarship and research*. I was inspired to advance a critical transition research agenda by a number of critical scholarships (Foucaultian research, critical urban studies, etc.), but also by a range of transition researchers that implicitly, or perhaps unknowingly, engage in critical transition research *avant la letter*, such as Stirling, Bulkeley, Avelino, Meadowcroft, Shove, Grin, Smith and Stirling. Critical, in this context, does not refer being critical in a Marxist or normative sense, but in a more Derridaen manner (see Chapter 2). Even though each of these potential research problematics can be taken up separately, they are related and might resonate with other academic endeavours that can further critical transition research. The themes I present here are definitely not ready-made research proposals, but rather conceptual, methodological and thematic issues that can be crystallised for particular research projects and studies.

Conceptualising spatio-political transition dynamics

Transition research produced great insights regarding the development of socio-technical, socio-ecological, socio-economic and other transitions, but many concepts and perspectives remain unexplored. What seem to be missing are not one or two concepts, but approaches and conceptual vocabularies that understand sustainability-

led transitions in *a critical manner*. Transition discourse is dominated by STIA and CORSA, making it difficult to communicate outside of these frameworks as a ‘transition researcher’. The transition analytics I develop in this thesis is simply one attempt to reframe what transition dynamics and practices entail. I particularly focussed on urban spaces. For me, assemblage urbanism resonates with some basic transition ontologies (Geels, 2010), even though it is one specific way to grasp minor and major *spatio-political dynamics* and transformations. However, new spatial categories and ontologies might be explored and studied (e.g. rural areas, oceanic spaces, deserts, actual space...out there). The work of geographers engaged in transition research suggests new research directions and conceptualisations (cf. Lawhon & Murphy, 2011; Coenen & Truffer, 2012; Hodson & Marvin, 2012; Bulkeley, Broto, Hodson & Marvin, 2013; Bulkeley, Broto & Edwards 2015). Importantly, new conceptual vocabularies can be explored without adhering to the dominant discursive parameters ingrained in STIA and CORSA heuristics. This requires a critical attitude towards dominant transition theories, and a deconstructive and creative mind-set to reframe foundational transition concepts and insights.

New methods and degrees of transition scientivism

Our turbulent times require critical scholarship. Critical transition scholars need a specific set of methods. Instead of relying on mainstream methodologies and toolkits, new ‘hammers and tweezers’ can be explored and combined. In Chapter 2, I elaborated on the limitations of traditional methodologies and methods for critical social inquiries. Alternatively, I proposed a critical constructivist epistemology associated with a set of research methods to reconstruct and analyse empirical materials. Critical transition research builds on specific works in the tradition of philosophy of science, critical social analysis and interpretative research methods (Barad, 2007; Glynos & Howarth, 2007; Yanow & Schwartz-Shea, 2011). Disclosing new epistemological positions, argumentations and refinements is crucial. This is especially relevant because critical transition research playfully, but carefully, combines epistemology, social ontologies and ethical issues. As suggested in Chapter 2 and evidenced by my empirical studies, such methodological repertoires have consequences for the role of social scientists, universities and knowledge institutes. I understand critical transition scholarship and their affiliated universities as symbolic media through which social diagnoses, public contestation and ethical commitment can be expected. This means that critical transition scholars are not neutral or objective, or rather neutralising and objectifying, but ‘radical democratisers’ that challenge hegemonic knowledge and introduce concepts and perspectives that democratise. Transition scientists are at the same time activists (*transition scientivists*) and have different roles in different contexts and multi-actor settings (cf. Wittmayer & Schöpke, 2014). What are these roles exactly, and how

can such roles be conceptualised and rendered legitimate vis-à-vis ‘normal academic roles’? What are the risks and dangers associated with advancing emancipatory and democratising scholarship? The multiplicity of (sometimes contradicting) roles of transition scientist requires critical reflection and self-interrogation.

Critical projects and offering democratic services

Unfortunately, critical (transition) research is a marginal and fragile endeavour of contemporary academics. This makes it exciting but also challenging to be a critical scholar. Academic funding has been radically cut over the last years. Scholars and research groups compete for funds (public, semi-public and business money). Critical academic work is rarely considered ‘valuable’ or ‘fundable’. Critical scholarship also requires a new understanding of ‘academic funds’, ‘valorisation’ and ‘impact’. Instead of depending on existing funds and competing with even more scholars, it might be useful to assess in what way critical scholarship enriches and adds to other research programmes. This strategic position requires patience, timing and an appraisal of academic projects and ‘critical projects’ or ‘critical work’. By critical projects, I mean projects that can actually make a difference, in the slipstream or margin of existing or new research projects (e.g. focus on health, bio-diversity, terrorism, housing, local safety). Additionally, mainstream academic funding criteria can be deconstructed and reconceptualised in terms of what values and support systems actually create ‘funds’ and ‘impact’. This way, critical academic projects can rely on underlying social, economic and material value flows and forces, creating a different understanding of how critical scholarship is supported. If, for example, one is able to gain ‘a fund’ from a public organisation or a group of social associations, ‘academic output’ can be considered as exchanging ‘a service’ to reflect on, criticise and democratise a social, technical or organisational concern. Exploring the concept and social use of critical projects, then, can be elaborated in terms of democratic ‘service’ or ‘exchange’. Somewhat ironically, critical transition scholars should therefore not offer objective knowledge and strategic advice, but ideas and tactics to democratise society. It might even be interesting to explore how critical projects can enjoy a legal status, while safeguarding their quality and social legitimacy (comparable with an ombudsman).

Neo-classism? Complexity and class analysis

Transitions are complex struggles. During a visit to Berlin some years ago, I bought a fascinating book titled *Komplexität: ‘Chaostheorie’ und die Linke* by Gernot Ernst (2009). This text explores the emergence of complexity science and chaos theory, outlining its implications for radical projects and leftist intellectuals. It nicely captures a philosophical discussion that is rarely discussed in transition research, namely the relationship between complexity and contingency on the one hand, and dialectics and

contradictions on the other hand. This refers to a rather abstract discussion but also to specific transition concepts and projects. The post-political character of many transition discourses downplays a crucial debate about historical and current traces in complexity theory and socio-technical innovation theories, and neo-Marxist inspired class analysis. Our post-political condition pushes us to move away from class-based diagnostics and analyses, and focus on networks, relations, self-organising systems and other flat ontologies. However, it seems that class struggles did not disappear, but rather take other forms and move around discursively and geographically (cf. Žižek, 2010; Harvey, 2006, 2014). Critical transition scholarship should be able to sensitise what underlying *class complexities and dynamics* are associated with everyday experiences and broader spatial rearrangements. Instead of problematising current social challenges in terms of ‘persistent’ or ‘wicked’ problems, or ‘representational’ concerns, critical transition research might foreground concepts that disclose class differences like alienation, inequality, injustice and exploitation. What these notions do, in a more critical manner, is unravel unequal relations of power (regarding race, gender, income, age, etc., cf. Walby, 2007) that are sustained by dominant socio-technical networks and complex social systems (e.g. urban regeneration plans, transportation networks, smart city projects). This diagnostic also informs a radical transformative attitude concerning the ‘means of urban production’, as cities and urban spaces are mostly produced and reproduced by state regulation, project development, technological systems and consumer economies. The works of Althusser, Badiou, Lefebvre, Bourdieu, Deleuze, Harvey, Swyngedouw and Žižek can be instructive to further explore new conceptual insights. Addressing complexity in relation to new class struggles informs how the means of city production might be dismantled, re-appropriated and democratised by and for the urban commons that are entangled biospherically, ecologically, economically, socio-culturally and bio-organically.

Grasping sustainability via biopolitical practices

Sustainability plays a central role in the quest for a ‘better future’. Urban sustainability transitions, whether techno-capitalist or eco-communitarian, articulate the will to improve the human condition in urban settings. In this context, it is fruitful to further explore a specific Foucaultian concept, namely biopolitics (Lemke, 2011; Dean, 1999; Nadesan, 2008)³⁷². Biopolitics refers the ways in which human bodies, nature and urban space have become problems of government since the 18th century³⁷³. This

³⁷² Initially, I included the concept of (urban) biopolitics in my transition analytics, but it seemed to unnecessarily complexify the framework. Therefore, I emphasised the more flexible and space-oriented concept of (urban) governmentality.

³⁷³ An exemplary case in point are the ways in which “park reformers (...) describe[d] urban parks as biological ‘machine[s] to transform a flawed society” in the 19th century (Certomà, 2013: 11).

biopolitical logic advanced 20th century modernist idea(l)s to govern society and its material conditions such as processing human waste, access to water and food, housing, ambulance, electricity. The 21st century is no different. Recently, organic and ecological life in cities and urban spaces have been considered as concerns and issues that require political action. As Rose-Redwood states, “the ordering of [urban, SJ] space is itself one of the requisites for *producing* governmental power/knowledge. It is in this sense that I insist that geo-power is the basis of a governmentalized biopolitics” (Rose-Redwood, 2006: 480). Our age of sustainability and increasing environmental, health, climate change and food concerns can also be understood in terms of biopolitics. Instead of generalising remarks about how the individual bodies and populations are improved, I argue that everyday *biopolitical practices* should be explored (Shove & Walker, 2007; Rose, 2007; Foucault, 2008). Biopolitical practices refer to everyday social practices that restructure relations between our biological, social and political lives. Importantly, biopolitics can also be a powerful concept to critically investigate whose lives are considered meaningful and improvable, and whose as quasi-objects or negligible (Agamben, 2005; Wolfe, 2012). Critical transition scholarship, then, moves away from problematic institutional and anthropocentric political conceptions and can trace and examine unequal bio-social relations in everyday life.

Democratic materialism of transitions

One of the political concepts that requires further exploration in the context of transitions is radical democratic theory in relation to materiality. Even though some transition scholars criticise transition research for overlooking democratic tensions (Hendriks, 2009; Avelino, 2012), the link between democratic theory and matter seems unexplored. Many sustainability transition narratives explicitly pursue a ‘greener’ and more ‘just’ world against the background of eco-systems, animal life and technological interventions. Even though we have a language for political powers, namely democracy (the people’s power) and technocracy (technical/technological power), we lack discourse to account for ecological powers (e.g. ‘ecocracy’). In my view, critical transition research can also focus on how transition politics can be understood in terms of political power and communities at the intersection of people, ideas, animals and matter. A good candidate to conceptualise this dimension of transition politics is *democratic materialism*³⁷⁴. This notion can be explored by connecting existing work in transition research on democracy (Hendriks, 2009; Lawhon & Murphy, 2012;

³⁷⁴ Here, I do not follow Badiou’s reading that democratic materialism refers to a postmodern multiplicity opposed to a more radical dialectic materialism (Badiou, 2006). Even though Badiou attempts to save democracy from becoming institutionalised, the notion of democratic materialism as I understand it, i.e. in a context of sustainability transitions, is a vitalist notion that captures the potential democratic force of human and animal bodies and their languages, the built environment, technologies and ‘plain matter’.

Jhagroe & Loorbach, 2015) with the work in Science and Technology Studies, New Materialism and Neo-Vitalism (e.g. Latour, Deleuze, DeLanda, Esposito, Bennet, Wolfe, Barad, Morton, Marres). What these scholars do is break with the idea that agency is always human political agency and knowledge is always grounded in human cognition. In other words, they move away from understanding politics in traditional anthropocentric and idealist terms. For post-anthropocentric scholars, there is an inherent *politics* to meaning-matter intersections. Paraphrasing Rancière's conception of politics, it is about the (re-)distribution and (re-)circulation of 'the sensible', that is, of that which is imbued with agency and has the right to live, speak and exist. Democratic materialism enables critical transition scholars to map what objects, artefacts, organisms, subjects and material environments are considered as having 'agency', while others are considered matter to be used instrumentally. Additionally, the potential of 'vibrant matter' to become a transitional and democratising force in a socio-material network (e.g. a new road, Internet, new eco-systems) can be traced and followed critically.

Post-capitalist transition discourse

During my field work, I was fascinated by the ways in which TT participants in particular, aimed at transforming socio-economic relations and the meaning of finances and money. In line with my argument to politicise hegemonic theories, we should be able to embed emerging 'alternative currencies', 'local economies', 'sharing economies' and the 'gift economy' in more robust socio-economic theories that are based on more ethical principles, socio-material conditions and lived experiences. Political economy is a quintessential part of transition discourse (Geels, 2010; Baker, Newell & Phillips, 2014). The work of Marx, Polanyi, Nicholas Georgescu-Roegen, Herman Daly, but also Piketty and others might be instructive to counter dominant theories about e.g. 'economic growth', 'employment', 'jobs', 'investment risks', 'moral hazard', 'material resources' and 'human capital'. Importantly, such theories should not be introduced or explored by adults only. Rather, alternative economic theories can become integrated in school handbooks, academic curricula and economic policy strategists. This also implies that critical transition discourse should cultivate and 'valorise' the emergence of a 'culture of alternative economics in various ways. Recent work on the 'sharing economy' (Heinrics, 2013) and the 'gift economy' (Inaba & Meagher, 2010) can be interesting to explore further, even though they might have some neo-capitalist tendencies.

Planetary citizenship

One of the issues that also deserves more attention is the set of new relations between state, society and nature. I believe this complex restructuring can be rendered tangible through the figure of the citizen. However, citizenship in relation to ‘the economy’ and ‘the planet’ is often conceived through formal state apparatuses, national economies and environmental policy. My study shows that particularly social movements in the fields of climate change, intensive farming and growth-based economics, have put pressure on this classical Westphalian form of environmental citizenship (Dobson & Bell, 2006). The TT movement illustrates how linkages between nation-state, nature and economics can be re-politicised and re-assembled. TT participants engage in post-capitalist experimentation, planet protection and transnational networking. Transition research might further explore this type of political agency as ‘planetary citizenship’ (Thompson, 2001). Planetary citizenship refers to a type of political subjectivity that is not organised via nation-state arrangements, but through cosmopolitan ideals, planetary sensibilities and transnational eco-systems (accentuating e.g. finite resources, planetary boundaries, and carbon footprints). Planetary citizens seek to shape green cosmopolitanism in the wake of socio-economic and ecological crises.

Transitions and ‘the Global South’?

Last but not least, critical transition scholarship cannot afford to stick to the Global North. Even though assemblage thinking suggests that time and space are intertwined and connected, it does matter whether one examines or pursues a transition management discourse in Rotterdam or in Gaza. The focus on cities in the Global South is fertile ground (Pernell & Robinson, 2012). This also echoes with work in the field of transition research in so-called ‘developing countries’ (e.g. Swilling & Annecke, 2012). Such investigations shed new light on what just, ethical and democratic transitions might entail, as well as the drawbacks of such complex processes. Instead of relying on predominantly Western transition theories and discourses, this could disclose new perspectives. Paraphrasing Ananya Roy (2009, 2011), ‘subaltern explorations’ could open new conceptual and methodological toolkits to enrich the meaning of ‘transition research’. Perhaps even more important is a focus on tracing and analysing linkages *between* cities from the ‘Global North’ and the ‘Global South’. For example, by tracing how dominant industrial food products (e.g. chicken from an industrial poultry farm and canned tomato soup) and more alternative ones (e.g. or ‘home grown’ tomatoes) move and circulate inside and between different cities, one discloses the multi-spatiality and global character of a particular food transition.

8.6 Some afterthoughts: (Un)sustainability politics and urban transitions

This dissertation sought to develop an understanding of the politics associated with the rise of urban sustainability. I wish to put forwards some ‘afterthoughts’ regarding the complexities and challenges associated with this inquiry. These afterthoughts draw attention to the *immanent tensions* and *insolvability* of this challenge. I briefly unwrap two issues: 1) the extent to which the politicisation of sustainability actually relates to a better and more open city; and 2) the Janus-face of experimenting our way out of urban regimes and structures of domination.

Political sustainability and the open city?

As one could expect, urban sustainability today does not simply mean ‘a bright future’. I do not adhere to an understanding of sustainability in terms of merely technological, environmental, social or economic concern. If we unpack the notion of sustainability, it historically refers to the quality of life of human and non-human populations. As such, (un)sustainability cuts across domains, levels and spheres of life. The politicisation of sustainability can only be redeemed if we emphasise *political sustainability*. As Kreuger and Gibbs argue:

“(…) sustainability is therefore first and foremost a set of *political* questions about who benefits, who gains, and loses from sustainable development (...) Regarding sustainability, indeed, critical questions emerge about what is being sustained, at what scale, by, for whom, and which institutional mechanisms are being used” (Kreuger & Gibbs, 2007: 7, 9).

And as Swyngedouw (2007) adds, such politicisations of the environment should “revolve around construction of great new fictions that create real possibilities for constructing different socio-environmental futures” (2007: 35-36). Importantly, such futures could be imagined and rendered possible by:

“naming socioenvironmental trajectories and enrolling them in a political process that is radically differentiated and oppositional. Clearly Bush’s [former U.S. president, SJ] notion of and desire for sustainability is not that of a Chinese peasant, a maquiladora woman worker, or a Greenpeace activist. It is important to unravel the nature of the social relationships that unfold between individuals and social groups and how these, in turn, are mediated by and structured through processes of socioecological change” (Swyngedouw, 2007: 37).

Swyngedouw’s ontology of the city is material-discursive and highlights the political in terms of socio-physical tensions. This provides us with ample tools to frame our cities

and everyday lives in terms of struggles and radical transformation. For example, Keil argues that sustainability seems to have translated “into a new governmentality of a neoliberalized global capitalism” (Keil, 2007: 46). In this sense, sustainability might have saved capitalist urbanisation in the 21st century (Luke, 2005). However, urban sustainability is not only a discursive technique to expand neoliberalism and morph capitalism into its next form. It can indeed become a political issue addressing fundamental tensions and unequal relations of power. These questions, then, are about *what type* of urbanisation prevails and what type loses, on the basis of what ethical judgements.

To explore and seek radically new forms of urbanisation and urban myths, suggests a direct confrontation of neoliberal urbanisation and addressing the effects of e.g. environmental deprivation and increase of socio-economic inequality. Urban sustainability, indeed, enables such alternative imaginaries, subversive networks and practices. Take for example the ‘Urban Greening Movement’, ‘Guerrilla Gardening Movement’ or initiatives worldwide to realise a ‘Green City’ or ‘Edible City’ (cf. Birch & Watcher, 2008; Certomà, 2011). These transnational networks suggest that the horizon of neoliberal urbanisation is not determined. The repoliticisation of ‘urban environments’ as our ‘second nature’ creates a frame through which we might see unforeseen forms of urbanisation, initiatives and actions that reshape urban populations. The role of sustainability in urban settings is highly paradoxical and can tip towards further intensification of market-based city formation, but also towards politicisation and resistance. The latter refers to more transformative politics as advanced by e.g. Rancière and Laclau. This paradoxical nature of urban sustainability can be explained by the fact that sustainability discourses emerged out of growth-based economies and capitalist societies. The dialectics of urban sustainability produce an open politics of urban governmentality. In other words, urban sustainability might reproduce the “emerging consensus that all cities are becoming entrepreneurial” (Jonas & While, 2007: 126). At the same time, urban sustainability in the 21st century means that new arenas and political articulations might slowly devour neoliberal urbanism from within, creating the conditions for a green and social future. This makes sustainability discourse radically schizophrenic.

Transition discourses and new urban commons?

Transition discourses and radical change narratives contain the same ambivalence as urban sustainability. Transition discourses emerged in the age of neoliberal urban politics, which makes their strategic meaning highly complex. Transition discourses, politically, stand on the crossroad of radical antagonistic rupture, or pragmatic negotiations with neoliberal urbanisation. In his 2014 paper, René Audet explores how transition discourses have been appropriated and translated into two differing

contexts. These two opposing transition discourses refer to transformative change in the field of global environmental politics: 1) a 'radical-ecocentrist transition discourse'; and 2) a 'managerial-technocratic transition discourse'. Even though both discourses are committed to similar concerns, their procedures and technical tools differ widely (Audet, 2014). Similarly, Hendriks discerns various transition discourses in relation to the democratic system. According to her, transition discourses resonate with elitist and technocratic rule, while others rely on more representational and pluralistic accounts of democracy (Hendriks, 2009). This political ambiguity of transition discourse is also expressed in accounts of 'bottom-up' transition discourses. In their paper on 'Transition Urbanism', Mason and Whitehead exemplify the political paradox of transition discourse in urban settings. They state that a particular transition discourse, they call 'Transition Culture', addresses "(re)localization, which enables a common set of approaches to the complex problems associated with globalization, peak oil, and climate change" (Mason & Whitehead, 2012: 496). The spatial politics of Transition Urbanisms, for example, is ambiguous because it tries to be inclusive and address 'the other' (distant farmers, organic produce), while adhering to a certain demarcated localism (local networks and community). This 'inclusive localism', exemplified by the Transition Towns Movement, might benefit from a more antagonistically politicised everyday urban life (ibid: 512). Scott-Cato and Hillier provide a similar account of the paradoxical nature of transition discourses. They argue that Transition Towns, as exemplary expressions of social innovation, do not employ classical 'class analysis' but still pursue socio-ecological relations outside economic regimes and self-regulatory forms of finance (e.g. alternative currencies) and agriculture (e.g. permaculture). The political ambiguity here refers to the question of whether "small acts of resistance and micro-transformation can destabilise macro systems and effect transformation of the system as a whole" (Scott-Cato & Hillier, 2010: 880). Scott-Cato and Hillier employ a Deleuzian approach to social innovation, ontologically referring to assemblage theory, complexity theory and the notion of regime transitions. This also means that such transition discourses assume and imagine that small acts of resistance might shape broader transformations (e.g. the so-called butterfly effect metaphor). Such 'microruptures' might cumulate over time and produce 'macroruptures' at an institutional and broader socio-ecological level (Buckingham, 2007).

If we take our specific socio-historical experience as a starting point here, we have to ask ourselves some difficult questions. What does it mean to understand the strategic action dimension of transitions in urban settings today? Where do we start? The stakes are high. Urban challenges are associated with entire populations and their existence and survival (both human and non-human). Not only scholars in the field of urban politics and urban political ecology underscore the ties between politics and urbanisation (Harvey, 1981; Swyngedouw, 2010; Davidson & Martin, 2014). A

number of transition scholars have also situated sustainability transition concerns in urban areas (Coenen & Truffer, 2012; Loorbach, 2013; Bulkeley et al., 2010). Urban neoliberalism intersects with the socio-historical diagnosis of eco-reflexive modernisation (Grin, 2005), but also with ‘persistent societal problems’ symptomatic of unsustainable societies (Loorbach & Rotmans, 2006). Importantly, what transition discourses do in relation to urban politics is not given. It depends on the context in which transition discourses gain meaning and re-shape material practices (Shove, Pantzar & Watson, 2012). Transition discourses *might* refer to the radical openness of social relations and the moving away from state and institutional regimes. Local practices outside policy networks and markets require this sense of fluidity and openness.

However, we should be vigilant. As Jodi Dean argues in her paper *Complexity as Capture: Neoliberalism and Communicative Capitalism*, contemporary neoliberalism in which market logics and ‘financialism’ enter virtually all domains of life is not opposed to reflexivity, contingency and complexity, but actually feeds on it (Dean, 2013)³⁷⁵. For Dean, capital needs to move and loop around, so that systemic flexibility and an infinite openness of individual desires keep reproducing heterogeneous markets and regimes. Similarly, Braun argues that there seems to be an ideologically relevant fit between dynamic ecologism, complex systems theory and flexible forms of market-oriented liberalism. So, reflexivity, experimentation and complexity do not only resist capture and institutionalisation, but also express a novel form of capture³⁷⁶. And as transition discourses heavily rely on reflexivity and complexity, by no means should we understand societal complexity, experimentalism and contingency as *automatically* rendering possible a more just, green and sustainable world.

Freedom and resistance can turn into new forms of policing exactly through counter-cultural and free subjects (Rose, 1999). As Deleuze argues in his *Postscript on Societies of Control* (1992), the century ‘disciplinary society’ that emerged in the 18th century and matured in the 20th century, operated on the basis of “vast spaces of enclosure” (family, schools, factory, prison, etc.). Since the 1970s, however, these systems experienced crises and got rid of rigid structures and disciplinary formats. Contrastingly, instead of a disciplinary society, we increasingly live in a society based on free-floating and dispersed forms of fluidity. Revolutions in (communication) technologies and globalisation have shaped an order based on constant modulation and self-moulding of cultural experiences and economic models. This flexibility and fluidity informs what Deleuze calls ‘societies of control’. Stable identities and experiences become ‘outdated’ as the possibilities to simply ‘plug in’ and ‘plug out’ new

³⁷⁵ For a similar but eco-oriented argument see also Braun (2015).

³⁷⁶ This also refers to the double and schizophrenic nature of contemporary capitalism, as analysed by Deleuze and Guattari (1977, 1987).

communities increase. Associated regimes of control also become more fine-grained. As Deleuze puts it:

“imagined a city where one would be able to leave one’s apartment, one’s street, one’s neighbourhood, thanks to one’s (dividual) electronic card that raises a given barrier; but the card could just as easily be rejected on a given day or between certain hours; what counts is not the barrier but the computer that tracks each person’s position” (Deleuze, 1992: 7).

This image elucidates how freedom and creativity on the one hand, and discipline and fixed schemes on the other hand, are not opposed. Technological networks and new ‘open’ and participatory urban regimes can therefore not be taken at face value. As Deleuze stated about young and energised people: “It’s up to them to discover what they’re being made to serve, just as their elders discovered, not without difficulty, the telos of the disciplines” (ibid).



Bibliography

Appendix The coding process

Summary

Nederlandse samenvatting

Bibliography

This bibliography consists of various types of references. I clustered them as follows: academic literature references, policy documents, websites, interviews and field notes. These references are a selection of the sources I used. I only included the most relevant sources and the ones I explicitly refer to in this study.

Literature references

- Agamben, G. (2005). *State of Exception*. Chicago: University of Chicago Press.
- Andersen, N. Å. (2003). *Discursive Analytical Strategies Understanding Foucault, Koselleck, Laclau, Luhmann*. Chicago: University of Chicago Press.
- Appadurai, A. (1996). *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.
- Appadurai, A. (2001). Deep Democracy: Urban Governmentality and the Horizon of Politics. *Environment and Urbanization*, 13(2), 23-43.
- Archer, M., Bhaskar, R., Collier, A., Lawson, T. & Norrie, A. (2013). *Critical Realism: Essential Readings*. New York: Routledge.
- Argos, C. (2010). *Climate Refugees*. Boston: MIT Press.
- Arts, B., Lagendijk, A. & Van Houtum, H. (2009). *The Disoriented State: Shifts in Governmentality, Territoriality and Governance*. Dordrecht: Springer Netherlands.
- Audet, R. (2012). Transition as Discourse and the Issues of Interventionism, Justice and Innovation. In *ISEE2012 Conference - Ecological Economics and Rio* (Vol. 20, pp. 16-20).
- Audet, R. (2014). The Double Hermeneutic of Sustainability Transitions. *Environmental Innovation and Societal Transitions*, 11, 46-49.
- Avelino, F. (2011). *Power in Transition: Empowering Discourses on Sustainability Transitions*. Doctoral thesis, Dutch Research Institute for Transitions (DRIFT), Erasmus University Rotterdam.
- Avelino, F., Grin, J., Pel, B. & Jhagroe, S. (forthcoming). The Politics of Sustainability Transitions. *Journal of Environmental Policy and Planning*.
- Avelino, F. & Rotmans, J. (2009). Power in Transition: An Interdisciplinary Framework to Study Power in Relation to Structural Change. *European Journal of Social Theory*, 12(4), 543-569.
- Bacchi, C. (2012). Why Study Problematizations? Making Politics Visible. *Open Journal of Political Science*, 2(1), 1.

- Badiou, A. (2006). *Bodies, Languages, Truths*. Lecture conducted from Victoria College of Arts, University of Melbourne.
- Badiou, A. & Feltham, O. (2007). *Being and Event*. London: A&C Black.
- Bailin, A. & Grafstein, A. (2010). *The Critical Assessment of Research: Traditional and New Methods of Evaluation*. London: Elsevier.
- Baker, L., Newell, P. & Phillips, J. (2014). The Political Economy of Energy Transitions: The Case of South Africa. *New Political Economy*, 19(6), 791-818.
- Barad, K. (2003). Posthumanist Performativity: Towards an Understanding of How Matter Comes to Matter. *Signs: Journal of Women in Culture and Society*, 28(3), 801-831.
- Barad, K. (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.
- Barad, K. (2011). Erasers and Erasures: Pinch's Unfortunate 'Uncertainty Principle'. *Social Studies of Science*, doi: 0306312711406317.
- Barr, S. & Gilg, A. (2006). Sustainable Lifestyles: Framing Environmental Action in and Around the Home. *Geoforum*, 37(6), 906-920.
- Bassett, K., Griffiths, R. & Smith, I. (2002). Testing Governance: Partnerships, Planning and Conflict in Waterfront Regeneration. *Urban Studies*, 39(10), 1757-1775.
- Bauder, H. & Engel-Di Mauro, S. (2008). Introduction: Critical Scholarship, Practice and Education. In, H. Bauder & S. Engel-Di Mauro (Eds.), *Critical Geographies: A Collection of Readings* (pp.1-7). Vernon, BC: Praxis (e)Press.
- Baumgarten, B. & Ullrich, P. (2012). *Discourse, Power and Governmentality: Social Movement Research with and Beyond Foucault* (No. SP IV 2012-401). WZB Discussion Paper.
- Bandura, A. (2007). Impeding Ecological Sustainability Through Selective Moral Disengagement. *International Journal of Innovation and Sustainable Development*, 2(1), 8-35.
- Beck, U. (1997). *The Reinvention of Politics: Rethinking Modernity in the Global Social Order* (Vol. 1). Cambridge: Polity press.
- Bennett, J. (2009). *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Bergek, A., Jacobsson, S., Carlsson, B., Lindmark, S. & Rickne, A. (2008). Analyzing the Functional Dynamics of Technological Innovation Systems: A Scheme of Analysis. *Research policy*, 37(3), 407-429.
- Berglez, P. & Olausson, U. (2014). The Post-Political Condition of Climate Change: An Ideology Approach. *Capitalism Nature Socialism*, 25(1), 54-71.
- Bhaskar, R. (1975). Feyerabend and Bachelard: Two Philosophies of Science. *New Left Review*, 94(3), 31-55.

- Bhaskar, R. (1978). On the Possibility of Social Scientific Knowledge and the Limits of Naturalism. *Journal for the Theory of Social Behaviour*, 8(1), 1-28.
- Bialostosky, I. J. (2013). *Urban Sustainability and the Technopolitics of Order*. Doctoral dissertation, University of Minnesota.
- Birch, E. & Wachter, S. (2008). *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*. Philadelphia: University of Pennsylvania Press.
- Bijker, W. (1995). *Of Bicycles, Bakelites and Bulbs: Toward a Theory of Sociotechnical Change*. Cambridge: MIT Press.
- Blaikie, N. W. (1991). A Critique of the Use of Triangulation in Social Research. *Quality & Quantity*, 25(2), 115-136.
- Blokker, J. A., Blokker, J. jr. & Blokker, B. (2008). *Nederland in Twaalf Moorden. Niets zo Veranderlijk als Onze Identiteit*. Amsterdam: Uitgeverij Contact.
- Bos, J. J. & Brown, R. R. (2012). Governance Experimentation and Factors of Success in Socio-Technical Transitions in the Urban Water Sector. *Technological Forecasting and Social Change*, 79(7), 1340-1353.
- Boswell, J. & Corbett, J. (2015). Embracing Impressionism: Revealing the Brush Strokes of Interpretive Research. *Critical Policy Studies* 9 (2), doi:10.1080/19460171.2014.971039.
- Brand, P. (2007). Green Subjection: The Politics of Neoliberal Urban Environmental Management. *International Journal of Urban and Regional Research*, 31 (3), 616-632.
- Brand, U. (2010). Sustainable Development and Ecological Modernization—The Limits to a Hegemonic Policy Knowledge. *Innovation-The European Journal of Social Science Research*, 23(2), 135-152.
- Braun, B. (2015). The 2013 Antipode RGS-IBG Lecture: New Materialisms and Neoliberal Natures. *Antipode*, 47(1), 1-14.
- Breidlid, A. (2009). Culture, Indigenous Knowledge Systems and Sustainable Development: A Critical View of Education in an African Context. *International Journal of Educational Development*, 29(2), 140-148.
- Brenner, N. (2009). What is Critical Urban Theory? *City*, 13(2-3), 198-207.
- Brenner, N., Madden, D. J. & Wachsmuth, D. (2011). Assemblage Urbanism and the Challenges of Critical Urban Theory. *City*, 15(2), 225-240.
- Brenner, N. 2014. *Implosions/Explosions: Towards a Study of Planetary Urbanization*. Berling: Jovis.
- Brenner, N., Marcuse, P. & Mayer, M. (Eds.). (2012). *Cities for People, Not For Profit: Critical Urban Theory and the Right to the City*. New York: Routledge.
- Bröckling, U., Krasmann, S. & Lemke, T. (Eds.). (2011). *Governmentality: Current Issues and Future Challenges*. New York: Routledge.
- Boltanski, L. (2011). *On Critique: A Sociology of Emancipation*. Cambridge: Polity.

- Brickell, K. & Datta, A. (Eds.). (2011). *Translocal Geographies*. Aldershot: Ashgate Publishing, Ltd.
- Bridge, G., Bouzarovski, S., Bradshaw, M. & Eyre, N. (2013). Geographies of Energy Transition: Space, Place and the Low-Carbon Economy. *Energy Policy*, 53, 331-340.
- Broto, V.C. (2016). Innovation Territories and Energy Transitions: Energy, Water and Modernity in Spain, 1939–1975. *Journal of Environmental Policy & Planning*, doi: 10.1080/1523908X.2015.1075195.
- Buckingham, S. (2007). Microgeographies and Microruptures. The Politics of Gender in the Theory and Practice of Sustainability. In, R. Krueger & D. Gibbs (Eds.) *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe* (pp. 66–94). New York: Guilford Press.
- Bulkeley, H. (2005). Reconfiguring Environmental Governance: Towards a Politics of Scales and Networks. *Political geography*, 24(8), 875-902.
- Bulkeley, H. & Betsill, M. (2005). Rethinking Sustainable Cities: Multilevel Governance and the 'Urban' Politics of Climate Change. *Environmental politics*, 14(1), 42-63.
- Bulkeley, H., Broto, V. C., Hodson, M. & Marvin, S. (Eds.). (2010). *Cities and Low Carbon Transitions*. New York: Routledge.
- Bulkeley, H. A., Broto, V. C. & Edwards, G. A. (2014). *An Urban Politics of Climate Change: Experimentation and the Governing of Socio-Technical Transitions*. New York: Routledge.
- Bulthuis, P. (1987). *Leven in de Stad. Rotterdam op Weg Naar het Jaar 2000*. Rotterdam: 010 Publishers.
- Caniëls, M. C. & Romijn, H. A. (2008). Strategic Niche Management: Towards a Policy Tool for Sustainable Development. *Technology Analysis and Strategic Management*, 20(2), 245-266.
- Caprotti, F. (2014). Critical Research on Eco-Cities? A walk through the Sino-Singapore Tianjin Eco-City, China. *Cities*, 36, 10-17.
- Certomà, C. (2011). Critical Urban Gardening as a Post-Environmental Practice. *Local Environment*, 16(10), 977-987.
- Clifford, James. (1990). "Notes on (Field) Notes." In, *Fieldnotes. The Making of Anthropology*, (Ed.) R. Sanjek (pp. 47-70). Washington D.C.: Cornell University Press.
- Clifford, J. & Marcus, G. E. (1986). *Writing Culture: The Poetics and Politics of Ethnography: A School of American Research Advanced Seminar*. Berkeley: University of California Press.
- Coenen, L. (2011). A report on the Second International Conference on Sustainability Transitions (2011, Lund, Sweden). *Environmental Innovation and Societal Transitions*, 1(2), 195-197.

- Coenen, L. (2015). Engaging with Changing Spatial Realities in TIS Research. *Environmental Innovation and Societal Transitions*, 16, 70-72.
- Coenen, L., Benneworth, P. & Truffer, B. (2012). Toward a Spatial Perspective on Sustainability Transitions. *Research policy*, 41(6), 968-979.
- Coenen, L. & Truffer, B. (2012). Places and Spaces of Sustainability Transitions: Geographical Contributions to an Emerging Research and Policy Field. *European Planning Studies*, 20 (3), 367-374.
- Collier, S. J. (2009). Topologies of Power Foucault's Analysis of Political Government beyond 'Governmentality'. *Theory, Culture & Society*, 26(6), 78-108.
- Connelly, J., Smith, G., Benson, D. & Clare, S. (2012). *Politics and the Environment: From Theory to Practice*. New York: Psychology Press.
- Cook, I. & Crang, M. (1995). *Doing Ethnographies*. Norwich: University of East Anglia.
- Christensen, C. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston, MA: Harvard Business School Press.
- Crampton, J. W. & Elden, S. (Eds.). (2007). *Space, Knowledge and Power: Foucault and geography*. Aldershot: Ashgate Publishing, Ltd.
- Crang, M. & Thrift, N. J. (2000). *Thinking Space*. New York: Psychology Press.
- Cruikshank, J. (Ed.). (2003). *Critical Realism: The Difference it Makes*. New York: Routledge.
- Daamen, T. (2010). *Strategy as Force: Towards Effective Strategies for Urban Development Projects: The Case of Rotterdam City Ports*. Amsterdam: IOS Press.
- Daniëls, R. (1991). Rotterdam, City and Harbour. *Cities*, 8(4), 283-291.
- Davidson, A. I. (1986). Archaeology, Genealogy, Ethics. In, D. C. Hoy (Ed.), *Foucault: A critical Reader* (pp. 221-233). London: Basil Blackwell.
- Davidson, M. (2014). Is Class Relevant to Urban Politics? In, M. Davidson & D. Martin (Eds.) *Urban Politics: Critical Approaches* (pp. 189-205). London: Sage.
- Davidson, M. & Martin, D. (Eds.). (2014). *Urban Politics: Critical Approaches*. London: Sage.
- Davies, J. S. & Imbroscio, D. (2010). *Urban politics*. London: Sage.
- Deacon, R. (2000). Theory as Practice: Foucault's concept of problematization. *Telos*, 118, 127-142.
- Dean, J. (2013). Complexity as Capture-Neoliberalism and the Loop of Drive. *New formations: A Journal of Culture/Theory/Politics*, 80(80), 138-154.
- Dean, M. (1994). Critical and Effective Histories: Foucault's Methods and Historical. *Sociology*.
- Dean, M. (2008). Governing Society: The Story of Two Monsters. *Journal of Cultural Economy*, 1(1), 25-38.
- Dean, M. (2010). *Governmentality: Power and Rule in Modern Society*. London: Sage.

- Deelstra, T. & Girardet, H. (2000). Urban Agriculture and Sustainable Cities. In, N. Bakker, M. Dubbeling, S. Gündel, U. Sabel-Koshella, H. de Zeeuw. *Growing Cities, Growing Food. Urban Agriculture on the Policy Agenda* (pp. 43-66). Feldafing, Germany: Zentralstelle für Ernährung und Landwirtschaft (ZEL).
- Deleuze, G. (1992). Postscript on the Societies of Control. *October*, 59, 3-7.
- Deleuze, G. & Guattari, F. (1977). *Anti-Oedipus. Capitalism and Schizophrenia*. New York: Viking.
- Deleuze, G. & Guattari, F. (1987). *A Thousand Plateaus*. Minneapolis: University of Minnesota.
- De Goey, F. M. M. F. (1990). *Ruimte voor Industrie: Rotterdam en de Vestiging van Industrie in de Haven 1945-1975*. Delft: Eburon.
- De Haan, F. 2010. *Towards Transition Theory*. Doctoral dissertation, Doctoral thesis, Dutch Research Institute for Transitions (DRIFT), Erasmus University Rotterdam.
- De Klerk, L. A. (1999). *Particuliere Plannen. Denkbeelden en Initiatieven van de Stedelijke Elite Inzake de Volkswoningbouw en de Stedebouw in Rotterdam, 1860-1950*. Rotterdam: NAI Uitgevers.
- De Nijs, T. (2005). Economie. In, T. de Nijs & J. Sillevius (Eds.), *Den Haag, Geschiedenis van de Stad Negentiende en Twintigste Eeuw* (pp. 148-176). Zwolle: Uitgeverij Waanders b.v.
- De Roo de la Faille, L. W. G. (1958). *Van Tankers, Tonnage en de Toekomst van Rotterdam's Haven*. Rotterdam: Wyt & Zonen.
- De Sousa Santos, B. & Rodriguez-Garavito, C. A. (2005). Law, Politics, and the Subaltern in Counter-Hegemonic Globalization. In, B. S. Santos, C. Rodriguez-Garavito, (Eds.) *Law and Globalization from Below: Towards a Cosmopolitan Legality* (pp. 1-26). Cambridge: Cambridge University Press.
- Dicks, B., Mason, B., Coffey, A. & Atkinson, P. (2005). *Qualitative Research and Hypermedia: Ethnography for the Digital Age*. London: Sage.
- Dieleman, J. P. C. (1987). *Denken over Milieubeleid: Het Denken Binnen het Milieubeleid en de Milieubeweging Geanalyseerd Vanuit een Macro-Sociologisch Perspectief*. Publikatiereeks Erasmus Studiecentrum voor Milieukunde, Nr. 6, Rotterdam.
- Dixon, T., Eames, M., Hunt, M. & Lannon, S. (Eds.). (2014). *Urban Retrofitting for Sustainability: Mapping the Transition to 2050*. New York: Routledge.
- Dobson, A. & Bell, D. (2006). *Environmental Citizenship*. Cambridge: MIT Press.
- Doherty, B. (2005). *Ideas and Actions in the Green Movement*. New York: Routledge.
- Doppelt, B. (2009). *Leading Change Toward Sustainability: A Change-Management Guide for Business, Government and Civil Society*. Sheffield: Greenleaf Publishing.
- Dovers, S. (2005). *Environment and Sustainability Policy: Creation, Implementation, Evaluation*. Sydney: Federation Press.
- Dryzek, J. (1997). *The Politics of the Earth*. Oxford: Oxford University Press.

- Ducruet, C. (2011). The Port City in Multidisciplinary Analysis. In, J. Alemany & R. Bruttomesso, *The Port City in the XXIst Century: New Challenges in the Relationship Between Port and City* (32-48): RETE.
- Duineveld, M. & Dix, G. (2011). Power and Discipline in Transitions: Michel Foucault. In, S. Vellema (Ed.), *Transformation and Sustainability in Agriculture: Connecting Practice With Social Theory* (pp. 69-78). Wageningen: Wageningen Academic Publishers.
- Duffy, A. & Jeffries, C. (2011). A New Framework to Guide Urban Water Transitioning. *Proceedings 12th International Conference on Urban Drainage, Porto Alegre/Brazil* (pp. 10-16).
- Dyllick, T. & Hockerts, K. (2002). Beyond the Business Case for Corporate Sustainability. *Business Strategy and the Environment*, 11(2), 130-141.
- Ekamper, P. & Van Poppel, F.W.A. (2008). Zuigelingensterfte per Gemeente in Nederland, 1841-1939. *Bevolkingstrends*, 56(1), 23-29.
- Engelbrecht, W. A. (1939). *Ontwikkelingsgeschiedenis van Rotterdam's haven*. Speech addressed for Rotterdam's Port Association on 7 March 1939.
- Entman, R. M. (1993). Framing: Towards Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51-58.
- Ernst, G. (2009). *Komplexität: 'Chaostheorie' und die Linke*. Stuttgart: Schmetterling Verlag GmbH.
- Evans, P. B. (2002). *Livable Cities? Urban Struggles for Livelihood and Sustainability*. Berkeley: University of California Press.
- Fairclough, N. (1992). *Discourse and Social Change*. Cambridge: Polity.
- Fariás, I. (2011). The Politics of Urban Assemblages. *City*, 15(3-4), 365-374.
- Ferguson, B. C., Frantzeskaki, N. & Brown, R. R. (2013). A Strategic Program for Transitioning to a Water Sensitive City. *Landscape and Urban Planning*, 117, 32-45.
- Feyerabend, P. (1975). *Against Method: Outline of an Anarchistic Theory of Knowledge*. Herald: Atlantic Highlands.
- Fischer-Kowalski, M. (2011). Analyzing Sustainability Transitions as a Shift Between Socio-Metabolic Regimes. *Environmental Innovation and Societal Transitions*, 1(1), 152-159.
- Fletcher, R. (2010). Neoliberal Environmentalism: Towards a Poststructuralist Political Ecology of the Conservation Debate. *Conservation and Society*, 8(3), 171.
- Flynn, T. (2005). Foucault's Mapping of History. In, G. Gutting (Ed.) *The Cambridge Companion to Foucault* (pp. 29-48). Cambridge: Cambridge University Press.
- Flyvbjerg, B. (2006). Five Misunderstandings About Case Study Research. *Qualitative inquiry*, 12(2), 219-245.
- Ford, L. H. (2003). Challenging Global Environmental Governance: Social Movement Agency and Global Civil Society. *Global Environmental Politics*, 3(2), 120-134.

- Foucault, M. (1972). *The Archaeology of Knowledge & the Discourse on Language*. London: Tavistock.
- Foucault, M. (1977). *Language, Counter-Memory, Practice*. Oxford: Blackwell.
- Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. New York: Pantheon.
- Foucault, M. (1984). *Of Other Spaces: Utopias and Heterotopias*. Architecture /Mouvement/ Continuité October ("Des Espace Autres," March 1967 Translated from the French by Jay Miskowic.
- Foucault, M. (2007). *Security, Territory, Population*. London: Palgrave Macmillan.
- Foucault, M. (2008). *The Birth of Biopolitics*. London: Palgrave Macmillan.
- Frantzeskaki, N., Loorbach, D. & Meadowcroft, J. (2012). Governing Societal Transitions to Sustainability. *International Journal of Sustainable Development*, 15(1-2), 19-36.
- Frantzeskaki, N., Wittmayer, J. & Loorbach, D. (2014). The Role of Partnerships in 'Realising' Urban Sustainability in Rotterdam's City Ports Area, The Netherlands. *Journal of Cleaner Production*, 65, 406-417.
- Fraser, N. (2009). *Scales of Justice: Reimagining Political Space in a Globalizing World*. New York: Columbia University Press.
- Fukuyama, F. (1992). *The End of History and the Last Man*. New York: The Free Press.
- Gandy, M. (2004). Rethinking Urban Metabolism: Water, Space and the Modern City. *City*, 8(3), 363-379.
- Geels, F. W. (2002). Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case-Study. *Research policy*, 31(8), 1257-1274.
- Geels, F. W. (2005). *Technological Transitions and System Innovations: A Co-Evolutionary and Socio-Technical Analysis*. Cheltenham: Edward Elgar.
- Geels, F. W. (2010). Ontologies, Socio-Technical Transitions (to Sustainability), and the Multi-Level Perspective. *Research policy*, 39(4), 495-510.
- Geels, F. W. (2011). The Multi-Level Perspective on Sustainability Transitions: Responses to Seven Criticisms. *Environmental innovation and societal transitions*, 1(1), 24-40.
- Geels, F. W. (2012). A Socio-Technical Analysis of Low-Carbon Transitions: Introducing the Multi-Level Perspective into Transport Studies. *Journal of Transport Geography*, 24, 471-482.
- Geels, F. W. & Kemp, R. (2000). *Transities vanuit Sociotechnisch Perspectief*. Maastricht: MERIT.
- Geels, F. W., Kemp, R., Dudley, G. & Lyons, G. (2012). *Automobility in Transition: A Socio-Technical Analysis of Sustainable Transport*. New York: Routledge.
- Geels, F. W. & Verhees, B. (2011). Cultural Legitimacy and Framing Struggles in Innovation Journeys: A Cultural-Performative Perspective and a Case Study of Dutch Nuclear Energy (1945-1986). *Technological Forecasting and Social Change*, 78(6), 910-930.

- Geels, F. W. & Schot, J. (2010). The Dynamics of Transitions: A Socio-Technical Perspective. In, *J. Grin, J. Rotmans and J. Schot. Transitions to sustainable development. New directions in the study of long term transformative change* (pp. 9-101). New York: Routledge.
- Geertz, C. (1973). *The Interpretation of Cultures: Selected Essays*. New York: Basic Books.
- Geertz, C. (2000). *Local Knowledge: Further Essays in Interpretive Anthropology*. New York: Basic Books.
- Geraedts, F. F. J. M. (1988). *Broncommentaren IX. De Hinderwetbescheiden, 1811-1952*. Den Haag: Huygens KNAW.
- Gerometta, J., Haussermann, H. & Longo, G. (2005). Social Innovation and Civil Society in Urban Governance: Strategies for an Inclusive City. *Urban Studies*, 42(11), 2007-2021.
- Gibson, R., Hassan, S., Holtz, S., Tansey, J. & Whitelaw, G. (2005). Sustainability Assessment: Criteria. *Processes and Applications, Earthscan*. New York: Routledge.
- Glynos, J. & Howarth, D. (2007). *Logics of Critical Explanation in Social and Political Theory*. New York: Routledge.
- Graham, L. J. (2005). *Discourse Analysis and the Critical Use of Foucault*. Paper presented at Australian Association for Research in Education Annual Conference, Sydney 27th November - 1st December.
- Grin, J. (2006). Reflexive Modernisation as a Governance Issue, or: Designing and Shaping Re-Structuration. *Reflexive governance for sustainable development*, 57.
- Grin, J. (2010). Understanding Transitions from a Governance Perspective. *Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change* (pp. 221-319). New York: Routledge.
- Grin, J. (2012). The Politics of Transition Governance in Dutch Agriculture. Conceptual Understanding and Implications for Transition Management. *International Journal of Sustainable Development*, 15(1-2), 72-89.
- Grin, J., Rotmans, J. & Schot, J. (2010). *Transitions to Sustainable Development: New Directions in the Study of Long Term Transformative Change*. New York: Routledge.
- Hajer, M. & Versteeg, W. (2005). A Decade of Discourse Analysis of Environmental Politics: Achievements, Challenges, Perspectives. *Journal of Environmental Policy & Planning*, 7(3), 175-184.
- Hall, T. & Hubbard, P. (1996). The Entrepreneurial City: New Urban Politics, New Urban Geographies? *Progress in Human Geography*, 20(2), 153-174.
- Davidson, M. & Martin, D. (Eds.). (2013). *Urban Politics: Critical Approaches*. London: Sage.
- Haahr, J. H. (2004). Open Co-Ordination as Advanced Liberal Government. *Journal of European Public Policy*, 11(2), 209-230.

- Hamann, T. H. (2009). Neoliberalism, Governmentality, and Ethics. *Foucault Studies*, 6, 37-59.
- Hamel, P., Lustiger-Thaler, H. & Mayer, M. (Eds.). (2000). *Urban Movements in a Globalising World*. New York: Routledge.
- Hansen, T. & Coenen, L. (2013). *The Geography of Sustainability Transitions: A Literature Review* (No. 2013/39). Lund University, CIRCLE-Center for Innovation, Research and Competences in the Learning Economy.
- Hansen, T. & Coenen, L. (2014). The Geography of Sustainability Transitions: Review, Synthesis and Reflections on an Emergent Research Field. *Environmental Innovation and Societal Transitions*, doi:10.1016/j.eist.2014.11.001.
- Hanssen, B. (2000). *Critique of Violence: Between Poststructuralism and Critical Theory*. New York: Routledge.
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist studies*, 14(3), 575-599.
- Hardt, M. & Negri, A. (2009). *Empire*. Cambridge: Harvard University Press.
- Hargreaves, T., Haxeltine, A., Longhurst, N. & Seyfang, G. (2011). *Sustainability Transitions from the Bottom-Up: Civil Society, the Multi-Level Perspective and Practice Theory* (No. 2011-01). CSERGE Working Paper.
- Hargreaves, T., Hielscher, S., Seyfang, G. & Smith, A. (2013). Grassroots Innovations in Community Energy: The Role of Intermediaries in Niche Development. *Global Environmental Change*, 23(5), 868-880.
- Harvey, D. (1981). The Urban Process Under Capitalism. A Framework for Analysis. In, M. Dear & A. Scott (Eds.). *Urbanization and Urban Planning in Capitalist Society* (pp. 92-121). New York: Methuen.
- Harvey, D. (1985). *Consciousness and the Urban Experience: Studies in the History and Theory of Capitalist Urbanization* (Vol. 1). Baltimore: Johns Hopkins University Press.
- Harvey, D. (1990). *The Condition of Postmodernity: An Enquiry into the Conditions of Cultural Change*. Oxford: Blackwell.
- Harvey, D. (1993). The Nature of Environment: Dialectics of Social and Environmental Change. In, R. Miliband and L. Panitch (Eds.) *Real Problems, False Solutions: A Special Issue of the Socialist Register* (1-51). London: The Merlin Press.
- Harvey, D. (2000). *Spaces of Hope*. Berkeley: University of California Press.
- Harvey, D. (2001). *MegaCities: Lecture 4*. Twynstra Gudde Management Consultants.
- Harvey, D. (2005). *A Brief History of Neoliberalism*. Oxford: Oxford University Press.
- Harvey, D. (2006). *Spaces of Global Capitalism*. London: Verso.
- Harvey, D. (2008). The Right to the City. *New Left Review* 53, 23-40.
- Harvey, D. (2014). *Seventeen Contradictions and the End of Capitalism*. Oxford: Oxford University Press.

- Heinrichs, H. (2013). Sharing Economy: A Potential New Pathway to Sustainability. *Gaia*, 22(4), 228.
- Hekkert, M. P., Suurs, R. A., Negro, S. O., Kuhlmann, S. & Smits, R. E. H. M. (2007). Functions of Innovation Systems: A New Approach for Analysing Technological Change. *Technological Forecasting and Social Change*, 74(4), 413-432.
- Hellsmark, H. & Jacobsson, S. (2009). Opportunities For and Limits To Academics as System Builders: The Case of Realizing the Potential of Gasified Biomass in Austria. *Energy Policy*, 37(12), 5597-5611.
- Hénaff, M. & Lapidus, R. (1992). The Cannibalistic City: Rousseau, Large Numbers, and the Abuse of the Social Bond. *SubStance*, 21(1), 3-23.
- Hendriks, C. M. (2009). Policy Design Without Democracy? Making Democratic Sense of Transition Management. *Policy Sciences*, 42(4), 341-368.
- Hendriks, C. M. & Grin, J. (2007). Contextualizing Reflexive Governance: The Politics of Dutch Transitions to Sustainability. *Journal of Environmental Policy & Planning*, 9(3-4), 333-350.
- Hesse-Biber, S. N. & Leavy, P. (2010). *The Practice of Qualitative Research*. London: Sage.
- Hester, R. T. (2006). *Design for Ecological Democracy*. Cambridge: MIT Press.
- Hewitt, M. & Hagan, S. (2001). *City Fights, Debates on Urban Sustainability*. London: James & James.
- Heynen, N. (2013). Urban Political Ecology I: The Urban Century. *Progress in Human Geography*, 30, 1-7.
- Heynen, N., Kaika, M. & Swyngedouw, E. (2006). Urban Political Ecology. *The Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, 1-20.
- Hindess, B. (2002). Neo-Liberal Citizenship. *Citizenship Studies*, 6 (2), 127-143
- Hobson, K. (2013). On the Making of the Environmental Citizen. *Environmental Politics*, 22(1), 56-72.
- Hodson, M. & Marvin, S. (2010). Can Cities Shape Socio-Technical Transitions and How Would We Know if They Were? *Research policy*, 39(4), 477-485.
- Hodson, M. & Marvin, S. (2012). Mediating Low-Carbon Urban Transitions? Forms of Organization, Knowledge and Action. *European Planning Studies*, 20(3), 421-439.
- Holden, M., Roseland, M., Ferguson, K. & Perl, A. (2008). Seeking Urban Sustainability on the World Stage. *Habitat International*, 32(3), 305-317.
- Hommels, A. (2005). Studying Obduracy in the City: Toward a Productive Fusion Between Technology Studies and Urban Studies. *Science, Technology & Human Values*, 30(3), 323-351.
- Hooimeijer, F. & Kamphuis, M. (2001). *The Water-Project. A Nineteenthcentury Walk Through Rotterdam*. Rotterdam: 010 Publishers.

- Hoyle, B. S., Pinder, D. A. & Husain, M. S. (1988). Revitalizing the Waterfront. *International Dimensions of Dockland Redevelopment*. Hoboken: Wiley.
- Howarth, D. (2010). Power, Discourse, and Policy: Articulating a Hegemony Approach to Critical Policy Studies. *Critical policy studies*, 3(3-4), 309-335.
- Howitt, R. (2001). *Rethinking Resource Management: Justice, Sustainability and Indigenous peoples*. New York: Psychology Press.
- Hughes, T. P. (1986). The Seamless Web: Technology, Science, Etcetera, Etcetera. *Social studies of science*, 16(2), 281-292.
- Huxley, M. (2006). Spatial Rationalities: Order, Environment, Evolution and Government. *Social & Cultural Geography*, 7(5), 771-787.
- Inaba, J. & Meagher, K. (2010). *The Gift Economy*. Zürich: Lars Muller Publishers.
- Ibelings, B. (2004). Economie: Veel Consumptie, Weinig Productie. In, J.G. Smit (Ed.), *Den Haag, Geschiedenis van de stad (deel 1). Vroegste tijd tot 1574* (pp. 151-181). Zwolle: Waanders.
- Jacobs, J. M. (2012). Urban Geographies I: Still Thinking Cities Relationally. *Progress in Human Geography*, 36(3), 412-422.
- Jacobsson, S. & Bergek, A. (2011). Innovation System Analyses and Sustainability Transitions: Contributions and Suggestions for Research. *Environmental Innovation and Societal Transitions*, 1(1), 41-57.
- Jänicke, M. (2008). Ecological Modernisation: New Perspectives. *Journal of cleaner production*, 16(5), 557-565.
- Jayaram, N. (2007). Revisiting the City: The Contemporary Relevance of Urban Sociology. *Mumbai, India: TATA Institute of Social Sciences*.
- Jessop, B. (2002). Liberalism, Neo-Liberalism and Urban Governance: A State Theoretical Perspective. *Antipode*, 34(3), 452-472.
- Jhagroe, S. & Loorbach, D. (2015). See no Evil, Hear no Evil: The Democratic Potential of Transition Management. *Environmental Innovation and Societal Transitions*, 15, 65-83.
- Jonas, A. & While, A. (2007) Greening the Entrepreneurial City? Looking for Spaces of Sustainability Politics in the Competitive City. In, R. Krueger & D. Gibbs (Eds.) *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe* (pp. 123-159). New York: Guilford Press.
- Jørgensen, U. (2012). Mapping and Navigating Transitions: The Multi-Level Perspective Compared with Arenas of Development. *Research Policy*, 41(6), 996-1010.
- Kaika, M. (2005). *City of Flows: Modernity, Nature, and the City*. New York: Psychology Press.
- Kaika, M. & Swyngedouw, E. (2000). Fetishizing the Modern City: The Phantasmagoria of Urban Technological Networks. *International Journal of Urban and Regional Research*, 24(1), 120-138.

- Kalland, A. (2002). Holism and Sustainability: Lessons from Japan. *Worldviews: Global Religions, Culture, and Ecology*, 6(2), 145-158.
- Keil, R. (2007). Sustaining Modernity, Modernising Nature. In, R. Krueger & D. Gibbs (Eds.), *The sustainable development paradox. Urban political economy in the United States and Europe* (pp. 41-65). New York: Guilford Press.
- Kemp, R., Rip, A. & Schot, J. (2001). Constructing Transition Paths Through the Management of Niches. In, Garud, R., Karnoe, P. (Eds.), *Path Dependence and Creation* (pp. 269-299). Lawrence Erlbaum Associates Publishers, Mahwah, New Jersey.
- Kemp, R., Schot, J. & Hoogma, R. (1998). Regime Shifts to Sustainability Through Processes of Niche Formation: The Approach of Strategic Niche Management. *Technology analysis & strategic management*, 10(2), 175-198.
- Kemp, R. & Rotmans, J. (2005). The Management of the Co-Evolution of Technical, Environmental and Social Systems. In, M. Weber & J. Hemmelskamp (Eds.) *Towards Environmental Innovation Systems* (pp. 33-55). Berlin Heidelberg: Springer.
- Kemp, R. & Rotmans, J. (2009). Transitioning Policy: Co-Production of a New Strategic Framework for Energy Innovation Policy in the Netherlands. *Policy Sciences*, 42(4), 303-322.
- Kemp, R., Schot, J. & Hoogma, R. (1998). Regime Shifts to Sustainability Through Processes of Niche Formation: The Approach of Strategic Niche Management. *Technology Analysis & Strategic Management*, 10(2), 175-198.
- Kenis, A., Bono, F. & Mathijs, E. (2016). Unravelling the (post-)political in Transition Management: Interrogating Pathways towards Sustainable Change. *Journal of Environmental Policy & Planning*, doi: 10.1080/1523908X.2016.1141672.
- Kern, F. (2009). *The Politics of Governing 'System Innovations' Towards Sustainable Electricity Systems*. Doctoral thesis, Science and Technology Policy Research department, University of Sussex.
- Kern, F. & Smith, A. (2008). Restructuring Energy Systems for Sustainability? Energy Transition Policy in the Netherlands. *Energy policy*, 36(11), 4093-4103.
- Kincheloe, J. L. & McLaren, P. (2002). Rethinking Critical Theory and Qualitative Research. In, Y. Zou & E. H. T. Trueba (Eds), *Ethnography and Schools: Qualitative approaches to the study of education* (pp. 87-138). Lanham: Rowman & Littlefield Publishers Inc.
- Klamer, A. & D. Kombrink (2004). *Het Verhaal van de Rotterdamse Haven. Een Narratieve Analyse*. Rotterdam: Stichting Economie & Cultuur, Erasmus University of Rotterdam.
- Knox, J. H. (2014). Climate Ethics and Human Rights. *Journal of Human Rights and the Environment*, 5, 22-34.

- Koerse, W. (2007). *De Grenzeloze Stad: Filosoferen Over Mensen, Stad en Rijd*. Bummum: Thoth.
- Koopman, C. (2013). *Genealogy as Critique: Foucault and the Problems of Modernity*. New York: Indiana University Press.
- Koselleck, R. (1989). Social History and Conceptual History. *International Journal of Politics, Culture, and Society*, 2(3), 308-325.
- Kronsell, A. (2013). Gender and Transition in Climate Governance. *Environmental Innovation and Societal Transitions*, 7, 1-15.
- Krueger, R. & Gibbs, D. (Eds.). (2007). *The Sustainable Development Paradox. Urban Political Economy in the United States and Europe*. New York: Guilford Press.
- Lachman, D. A. (2013). A Survey and Review of Approaches to Study Transitions. *Energy Policy*, 58, 269-276.
- Laclau, E. & Chantal, M. (1985). *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. London: Verso.
- Lakoff, G. (2010). Why it Matters How we Frame the Environment. *Environmental Communication*, 4(1), 70-81.
- Larsson, O. L. (2013). Sovereign Power Beyond the State: A Critical Reappraisal of Governance by Networks. *Critical Policy Studies*, 7(2), 99-114.
- Latham, A. & McCormack, D. P. (2004). Moving Cities: Rethinking the Materialities of Urban Geographies. *Progress in Human Geography*, 28(6), 701-724.
- Latour, B. (1988). *The Pasteurization of France*. Cambridge: Harvard University Press.
- Lawhon, M. & Murphy, J. T. (2012). Socio-Technical Regimes and Sustainability Transitions Insights from Political Ecology. *Progress in Human Geography*, 36(3), 354-378.
- Lefebvre, H. (1991). *The Production of Space*. Blackwell: Oxford.
- Lefebvre, H. (1996). *Writings on Cities*. Oxford: Blackwell.
- Lefebvre, H. (2003). *The Urban Revolution*. Minneapolis: University of Minnesota Press.
- Lemke, T. (2002). Foucault, Governmentality, and Critique. *Rethinking Marxism*, 14(3), 49-64.
- Lemos, M. C. & Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources*, 31, 297-325.
- Levy, D. L. (1997). Environmental Management as Political Sustainability. *Organization & Environment*, 10(2), 126-147.
- Ligtvoet, A. & Chappin, E. J. (2012). Experience-Based Exploration of Complex Energy Systems. *Journal of Futures Studies* 17(1), 57-70.
- Loorbach, D. (2007). *Transition Management: New Mode of Governance for Sustainable Development*. Doctoral thesis, Dutch Research Institute for Transitions (DRIFT), Erasmus University Rotterdam.

- Loorbach, D. (2010). Transition Management for Sustainable Development: A Prescriptive, Complexity-Based Governance Framework. *Governance*, 23(1), 161-183.
- Loorbach, D. & Rotmans, J. (2006). Managing Transitions for Sustainable Development. In, X. Olshoorn, & A. J. Wiczocek (Eds.), *Understanding Industrial Transformation: Views from Different Disciplines*. Dordrecht: Springer.
- Loorbach, D. & Rotmans, J. (2010). The Practice of Transition Management: Examples and Lessons From Four Distinct Cases. *Futures*, 42(3), 237-246.
- Loorbach, D.A., Wittmayer, J., Shiroyama, H., Fujino, J. & Mizuguchi, S. (Eds.) (2016). *Governance of Urban Sustainability Transitions European and Asian Experiences*. New York: Springer.
- Lyotard, J. F. (1984). *The Postmodern Condition: A Report on Knowledge*. Minneapolis: University of Minnesota Press.
- Luhmann, N. (1989). *Ecological Communication*. Chicago: University of Chicago Press.
- Luke, T. (1995). Sustainable Development as a Power/Knowledge System: The Problem of Governmentality. In, F. Fischer & M. Black. (Eds.), *Greening Environmental Policy: the Politics of a Sustainable Future* (pp. 21-32). St. Martin's Press, New York.
- Luke, T. W. (2003). Global Cities vs. "Global Cities:" Rethinking Contemporary Urbanism as Public Ecology. *Studies in Political Economy*, 70, 11-33.
- Luke, T. W. (2005). Neither Sustainable nor Development: Reconsidering Sustainability in Development. *Sustainable Development*, 13(4), 228-238.
- Madison, D. S. (2011). *Critical Ethnography: Method, Ethics, and Performance*. London: Sage.
- Magnusson, W. (2010). Seeing Like a City: How to Urbanize Political Science. In, J.S. Davies & D.L. Imbroscio (Eds.), *Critical Urban Studies: New Directions* (pp. 41-54). Albany: State University of New York Press.
- Magnusson, W. (2014). The Symbiosis of the Urban and the Political. *International Journal of Urban and Regional Research*, 38(5), 1561-1575.
- Malerba, F. (Ed.). (2004). *Sectoral Systems of Innovation: Concepts, Issues and Analyses of Six Major Sectors in Europe*. Cambridge: Cambridge University Press.
- Marcuse, P. (2009). From Critical Urban Theory to the Right to the City. *City*, 13(2-3), 185-197.
- Markard, J., Raven, R. & Truffer, B. (2012). Sustainability Transitions: An Emerging Field of Research and its Prospects. *Research Policy*, 41(6), 955-967.
- Marres, N. (2012). *Material Participation: Technology, the Environment and Everyday Publics*. Basingstoke: Palgrave Macmillan.
- Márquez, F. B. & Pérez, F. P. (2008). Spatial Frontiers and Neo-Communitarian Identities in the City: The case of Santiago de Chile. *Urban Studies*, 45(7), 1461-1483.
- Massey, D. (2005). *For Space*. London: Sage.

- McCarthy, J. (1998). Reconstruction, Regeneration and Re-Imaging: The Case of Rotterdam. *Cities*, 15(5), 337-344.
- McCarthy, J. (2005). Commons as Counterhegemonic Projects. *Capitalism Nature Socialism*, 16(1), 9-24.
- McCoy, K. (2012). Toward a Methodology of Encounters Opening to Complexity in Qualitative Research. *Qualitative Inquiry*, 18(9), 762-772.
- McFarlane, C. (2011). Assemblage and Critical Urbanism. *City*, 15(2), 204-224.
- McGuirk, P. (2012). Geographies of Urban Politics: Pathways, Intersections, Interventions. *Geographical Research*, 50(3), 256-268.
- Meadowcroft, J. (2002). Politics and Scale: Some Implications for Environmental Governance. *Landscape and Urban Planning*, 61(2), 169-179.
- Meadowcroft, J. (2005). Environmental Political Economy, Technological Transitions and the State. *New Political Economy*, 10(4), 479-498.
- Meadowcroft, J. (2009). What About the Politics? Sustainable Development, Transition Management, and Long Term Energy Transitions. *Policy Sciences*, 42(4), 323-340.
- Mens, N. (2007). *W.G. Witteveen en Rotterdam*. Rotterdam: 010 Publishers.
- Methmann, C. P. (2011). The Sky is the Limit: Global Warming as Global Governmentality. *European Journal of International Relations*, doi: 1354066111415300.
- Merrifield, A. (2013). The Urban Question Under Planetary Urbanization. *International Journal of Urban and Regional Research*, 37(3), 909-922.
- Merrifield, A. (2014). *The New Urban Question*. London: Pluto Press.
- Merton, R. K. (1987). Three Fragments From a Sociologist's Notebooks: Establishing the Phenomenon, Specified Ignorance, and Strategic Research Materials. *Annual review of sociology*, 13(1), 1-29.
- Monstadt, J. (2009). Conceptualizing the Political Ecology of Urban Infrastructures: Insights From Technology and Urban Studies. *Environment and Planning. A*, 41(8), 1924.
- Mostafavi, M. & Doherty, G. (Ed.). (2010). *Ecological Urbanism*. Baden: Lars Müller Publishers.
- Mulhall, A. (2003). In the Field: Notes on Observation in Qualitative Research. *Journal of Advanced Nursing*, 41(3), 306-313.
- Murphy, J. T. (2015). Human Geography and Socio-Technical Transition Studies: Promising Intersections. *Environmental Innovation and Societal Transitions*.
- Murthy, D. (2008). Digital Ethnography: An Examination of the Use of New Technologies for Social Research. *Sociology*, 42(5), 837-855.
- Nadesan, M. (2008). *Governmentality, Biopower and Everyday Life*. New York: Routledge.
- Naess, P. (2001). Urban Planning and Sustainable Development. *European Planning Studies*, 9(4), 503-524.

- Næss, P. & Vogel, N. (2012). Sustainable Urban Development and the Multi-Level Transition Perspective. *Environmental Innovation and Societal Transitions*, 4, 36-50.
- Nelson, R. R. & Winter, S. G. (1977). In Search of a Useful Theory of Innovation. *Research Policy*, 5, 33-76.
- Nevens, F., Frantzeskaki, N., Gorissen, L. & Loorbach, D. (2013). Urban Transition Labs: Co-Creating Transformative Action for Sustainable Cities. *Journal of Cleaner Production*, 50, 111-122.
- Newey, G. (2001). *After Politics: The Rejection of Politics in Contemporary Liberal Philosophy*. Basingstoke: Palgrave.
- Newman, S. (2007). *Power and Politics in Poststructuralist Thought: New Theories of the Political*. New York: Routledge.
- Newton, L. H. (2003). *Ethics and Sustainability: Sustainable Development and the Moral Life*. Upper Saddle River: Prentice Hall.
- Nicolis, G. & Prigogine, I. (1989). *Exploring Complexity*. New York: W.H. Freeman.
- Norcliffe, G., Bassett, K. & Hoare, T. (1996). The Emergence of Postmodernism on the Urban Waterfront: Geographical Perspectives on Changing Relationships. *Journal of Transport Geography*, 4(2), 123-134.
- Nortier, B. (1985). *Technologie en Arbeid in de Rotterdamse Haven tussen 1960 en 1980*. Rotterdam: Erasmus University Rotterdam.
- Olsen, W. (2004). Triangulation in Social Research: Qualitative and Quantitative Methods Can Really be Mixed. *Developments in sociology*, 20, 103-118.
- Oosterwijk, B. (2011). *Ik Verlang Geen Dank. Lodewijk Pincoffs (1827-1911)*. Amersfoort: De Vrije Uitgevers.
- Ormrod, D. (2003). *The Rise of Commercial Empires: England and the Netherlands in the Age of Mercantilism, 1650-1770*. Cambridge: Cambridge University Press.
- Osborne, T. & Rose, N. (1999). Governing Cities: Notes on the Spatialisation of Virtue. *Environment and Planning D: Society and Space*, 17(6), 737-760.
- Oudenaarden, J. (2005). *Geschiedenis van Rotterdam. In Meer dan 100 Verhalen*. Amsterdam: Uitgeverij Van Genneep B.V.
- Owen, D. (1995). Genealogy as Exemplary Critique: Reflections on Foucault and the Imagination of the Political. *International Journal of Human Resource Management*, 24(4), 489-506.
- Peck, J. & Tickell, A. (2002). Neoliberalizing Space. *Antipode*, 34(3), 380-404.
- Paredis, E. (2013). *A Winding Road. Transition Management, Policy Change and the Search for Sustainable Development*. Doctoral thesis, Gent: CDO/UGent.
- Perrons, D. (2004). *Globalization and Social Change: People and Places in a Divided World*. New York: Psychology Press.
- Peters, M. A. (2001). *Poststructuralism, Marxism, and Neoliberalism: Between Theory and Politics*. Lanham: Rowman & Littlefield Publishers.

- Piketty, T. (2013). *Le Capital au XXIe Siècle*. Paris: Seuil.
- Pink, S. (2008). An Urban Tour: The Sensory Sociality of Ethnographic Place-making. *Ethnography*, 9(2), 175-196.
- Pink, S. (2011). Sensory Digital Photography: Re-thinking 'Moving' and the Image. *Visual Studies*, 26(1), 4-13.
- Pink, S. (2013). *Doing Visual Ethnography*. London: Sage.
- Pløger, J. (2008). Foucault's Dispositif and the City. *Planning Theory*, 7(1), 51-70.
- Prakash, G. & Kruse, K. M. (2008). *The Spaces of the Modern City: Imaginaries, Politics, and Everyday Life*. Princeton: Princeton University Press.
- Prigogine, I. (1989). The Philosophy of Instability. *Futures*, 21(4), 396-400.
- Prigogine, I. & Stengers, I. (1984). *Order out of Chaos*. New York: Bantam.
- Prigogine, I. & Stengers, I. (1997). *The End of Certainty*. New York: Simon and Schuster.
- Psillos, S. (2005). *Scientific Realism: How Science Tracks Truth*. New York: Routledge.
- Quitza, M. B., Jensen, J. S., Elle, M. & Hoffmann, B. (2013). Sustainable Urban Regime Adjustments. *Journal of Cleaner Production*, 50, 140-147.
- Raco, M. & Imrie, R. (2000). Governmentality and Rights and Responsibilities in Urban Policy. *Environment and Planning A*, 32(12), 2187-2204.
- Rancière, J. (2004). *Disagreement: Politics and Philosophy*. Minneapolis: University of Minnesota Press.
- Raven, R. (2007). Niche Accumulation and Hybridisation Strategies in Transition Processes Towards a Sustainable Energy System: An Assessment of Differences and Pitfalls. *Energy Policy*, 35(4), 2390-2400.
- Raven, R. P. J. M. & Geels, F. W. (2010). Socio-Cognitive Evolution in Niche Development: Comparative Analysis of Biogas Development in Denmark and the Netherlands (1973-2004). *Technovation*, 30(2), 87-99.
- Raven, R., Schot, J. & Berkhout, F. (2012). Space and Scale in Socio-Technical Transitions. *Environmental Innovation and Societal Transitions*, 4, 63-78.
- Ravetz, J. R. (2006). Post-Normal Science and the Complexity of Transitions Towards Sustainability. *Ecological Complexity*, 3(4), 275-284.
- Rees, W. & Wackernagel, M. (2008). Urban Ecological Footprints: Why Cities Cannot be Sustainable - and Why They are a Key to Sustainability. In, M. Marzluff, E. Shulenberger, W. Endlicher, M. Alberti, G. Bradley, C. Ryan, U. Simon & C. ZumBrunnen (Eds.), *Urban Ecology: An International Perspective on the Interaction Between Humans and Nature* (537-555). New York: Springer.
- Rhodes, R. A. (1997). *Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability*. Maidenhead: Open University Press.
- Rigby, D. & Breen, A. (1996). *The New Waterfront. A Worldwide Urban Success Story*. New York: McGraw-Hill Professional.

- Rip, A. & Kemp, R. (1998). Technological change. In, Rayner, S., Malone, E.L. (Eds.), *Human Choice and Climate Change* (pp. 327–399). Columbus: Battelle Press.
- Robertson, R. (1995). Glocalization: Time-Space and Homogeneity-Heterogeneity. In, M. Featherstone, S. Lash & R. Robertson (Eds.), *Global Modernities* (pp. 25-44). London: Sage.
- Rooijendijk, C. (2005). *That City is Mine! Urban Ideal Images in Public Debates and City Plans, Amsterdam & Rotterdam 1945-1995*. Amsterdam: Amsterdam University Press.
- Rootes, C. (1999). Environmental Movements: From the Local to the Global. *Environmental Politics*, 8(1), 1-12.
- Rootes, C. (Ed.). (2003). *Environmental Protest in Western Europe*. Oxford: Oxford University Press.
- Rose, G. (1997). Situating Knowledges: Positionality, Reflexivities and Other Tactics. *Progress in Human Geography*, 21(3), 305-320.
- Rose, N. (1999). *Powers of Freedom: Reframing Political Thought*. Cambridge: Cambridge University Press.
- Rose, N. (2007). *The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century*. Princeton: Princeton University Press.
- Rose, N., O'Malley, P. & Valverde, M. (2006). Governmentality. *Annual review of law and social science*, 2, 83-104.
- Rostow, W. W. (1960). *The Process of Economic Growth*. Cambridge: Cambridge University Press.
- Rotmans, J. (1990). *Image: An Integrated Model to Assess the Greenhouse Effect: An Integrated Model to Assess the Greenhouse Effect* (Vol. 1). Dordrecht: Springer Science & Business Media.
- Rotmans, J. (1998). Methods for IA: The Challenges and Opportunities Ahead. *Environmental Modeling & Assessment*, 3(3), 155-179.
- Rotmans, J. (2006). Tools for Integrated Sustainability Assessment: A Two-Track Approach. *Integrated Assessment*, 6(4), 35-57.
- Rotmans, J. (2006). A Complex Systems Approach for Sustainable Cities. In, M. Ruth (Ed.), *Smart Growth and Climate Change* (155-180). Cheltenham: Edward Elgar.
- Rotmans, J., Hulme, M. & Downing, T. E. (1994). Climate Change Implications for Europe: An Application of the ESCAPE Model. *Global Environmental Change*, 4(2), 97-124.
- Rotmans, J. & Van Asselt, M. (1996). Integrated Assessment: A Growing Child on its Way to Maturity. *Climatic Change*, 34(3-4), 327-336.
- Rotmans, J. & Van Asselt, M.B.A. (2000). Towards an Integrated Approach for Sustainable City Planning. *Journal on Multi-Criteria Decision Analysis*, 9, 110-124.

- Rotmans, J., Kemp, R., Van Asselt, M., Geels, F., Verbong, G. & Molendijk, K. (2000). *Transities & Transitie-management: De Casus van een Emissiearme Energievoorziening*. Maastricht, ICIS / MERIT.
- Rotmans, J., Kemp, R. & Van Asselt, M. (2001). More Evolution than Revolution: Transition Management in Public Policy. *Foresight*, 3(1), 15-31.
- Rotmans, J., Grin, J., Schot, J. & Smits, R. (2003). A Multidisciplinary Research Programme on Transitions and System Innovations. In, *Open Science Meeting of the International Human Dimensions Programme, Montreal* (pp. 18-20).
- Rotmans, J. & Kemp, R. (2008). Detour Ahead: A Response to Shove and Walker About the Perilous Road of Transition Management. *Environment and Planning A: International Journal of Urban and Regional Research*, 40(4), 1006-1012.
- Rotmans, J. & Loorbach, D. (2009). Complexity and Transition Management. *Journal of Industrial Ecology*, 13(2), 184-196.
- Rotmans, J. & Fischer-Kowalski, M. (2009). Conceptualizing, Observing and Influencing Socio-Ecological Transitions. *Ecology and Society: A Journal of Integrative Science for Resilience and Sustainability*, 14(2), 1-18.
- Roy, A. (2009). The 21st-Century Metropolis: New Geographies of Theory. *Regional Studies*, 43(6), 819-830.
- Roy, A. (2011). Slumdog Cities: Rethinking Subaltern Urbanism. *International Journal of Urban and Regional Research*, 35(2), 223-238.
- Roy, J. (1999). Polis and Oikos in Classical Athens. *Greece and Rome (Second Series)*, 46(1), 1-18.
- Rusteikienė J. (2008). Urban Globalization: Political, Economical and Socio-Cultural Changes. *Global Academic Society Journal: Social Science Insight*, 1(2), 35-45.
- Saldaña, J. (2010). *The Coding Manual for Qualitative Researchers*. London: Sage.
- Saunders, C. (2012). Reformism and Radicalism in the Climate Camp in Britain: Benign Coexistence, Tensions and Prospects for Bridging. *Environmental Politics*, 21(5), 829-846.
- Sayer, A. (1992). *Method in Social Science: A Realist Approach*. New York: Psychology Press.
- Schmid, C. (2005). Theory. In, R. Diener, J. Herzog, M. Meili, P. de Meuron & C. Schmid (Eds.), *Switzerland—an Urban Portrait: Vol. 1: Introduction; Vol. 2: Borders, Communes—a Brief History of the Territory; Vol. 3: Materials* (163-224). Berlin: Walter de Gruyter.
- Schot, J. & Geels, F. W. (2008). Strategic Niche Management and Sustainable Innovation Journeys: Theory, Findings, Research Agenda, and Policy. *Technology Analysis & Strategic Management*, 20(5), 537-554.
- Scott, J. C. (1999). *Seeing Like a State. How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press.

- Scott-Cato, M. & Hillier, J. (2010). How Could we Study Climate-Related Social Innovation? Applying Deleuzian philosophy to Transition Towns. *Environmental Politics*, 19(6), 869-887.
- Schreuder, O. (1981). *Sociale bewegingen: Een systematische inleiding*. Deventer: Van Loghum Slaterus.
- Seyfang, G. & Haxeltine, A. (2012). Growing Grassroots Innovations: Exploring the Role of Community-Based Initiatives in Governing Sustainable Energy Transitions. *Environment and Planning C*, 30(3), 381-400.
- Spaargaren, G. (2003). Sustainable Consumption: A Theoretical and Environmental Policy Perspective. *Society & Natural Resources*, 16(8), 687-701.
- Schot, J. & Geels, F. W. (2008). Strategic Niche Management and Sustainable Innovation Journeys: Theory, Findings, Research Agenda, and Policy. *Technology Analysis & Strategic Management*, 20(5), 537-554.
- Scollon, R. & Scollon, S. W. (2004). *Nexus Analysis. Discourse and the Emerging Internet*. New York: Psychology Press.
- Scott, A. (1990). *Ideology and the New Social Movements*. Crows Nest: Allen & Unwin Australia.
- Schlosberg, D. & Carruthers, D. (2010). Indigenous Struggles, Environmental Justice, and Community Capabilities. *Global Environmental Politics*, 10(4), 12-35.
- Seyfang, G. & Smith, A. (2007). Grassroots Innovations for Sustainable Development: Towards a New Research and Policy Agenda. *Environmental politics*, 16(4), 584-603.
- Shove, E. (2004). Efficiency and Consumption: Technology and Practice. *Energy & Environment*, 15(6), 1053-1065.
- Shove, E. (2012). Energy transitions in practice: the case of global Indoor climate change. In G., Verbong & D., Loorbach (Eds.), *Governing the energy transition. Reality, Illusion or Necessity?* (pp. 51-74). New York: Routledge.
- Shove, E. & Walker, G. (2007). CAUTION! Transitions Ahead: Politics, Practice, and Sustainable Transition Management. *Environment and Planning A*, 39(4), 763-770.
- Shove, E. & Walker, G. (2008). Transition Management and the Politics of Shape Shifting. *Environment and Planning A*, 40(4), 1012-1014.
- Shove, E., Pantzar, M. & Watson, M. (2012). *The Dynamics of Social Practice: Everyday Life and How it Changes*. London: Sage.
- Sloterdijk, P. (1998). *Sphären I. Blasen*. Frankfurt am Main: Suhrkamp Verlag.
- Sloterdijk, P. (1999). *Sphären II. Globen. Makrosphärologie*. Frankfurt am Main: Suhrkamp Verlag.
- Sloterdijk, P. (2004). *Sphären III. Schäume. Plurale Sphärologie*. Frankfurt am Main: Suhrkamp Verlag.

- Smit, J. G. & Van Kan, F. J. W. (2004). Politiek en Bestuur: Graaf, Hof en Dorp. In, J.G. Smit (Ed.), *Den Haag, Geschiedenis van de stad (deel 1). Vroegste tijd tot 1574* (pp. 88-150). Zwolle: Uitgeverij Waanders b.v.
- Smith, A., Stirling, A. & Berkhout, F. (2005). The Governance of Sustainable Socio-Technical Transitions. *Research policy*, 34(10), 1491-1510.
- Smith, A. & Stirling, A. (2008). *Social-Ecological Resilience and Socio-Technical Transitions: Critical Issues for Sustainability Governance*. STEPS Working Paper 8, Brighton: STEPS Centre.
- Smith, A. & Stirling, A. (2010). The Politics of Social-Ecological Resilience and Sustainable Socio-Technical Transitions. *Ecology and Society*, 15(1), 11.
- Smith, A. & Raven, R. (2012). What is Protective Space? Reconsidering Niches in Transitions to Sustainability. *Research Policy*, 41(6), 1025-1036.
- Soja, E. W. (1989). *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*. London: Verso.
- Soja, E. W. (2000). *Postmetropolis Critical Studies of Cities and Regions*. Hoboken: Wiley-Blackwell.
- Spaargaren, G., Oosterveer, P. & Loeber, A. (2012). *Sustainability Transitions in Food Consumption, Retail and Production*. New York: Routledge.
- Späth, P. & Rohrer, H. (2010). 'Energy Regions': The Transformative Power of Regional Discourses on Socio-Technical Futures. *Research policy*, 39(4), 449-458.
- Späth, P. & Rohrer, H. (2012). Local Demonstrations for Global Transitions-Dynamics Across Governance Levels Fostering Socio-Technical Regime Change Towards Sustainability. *European Planning Studies*, 20(3), 461-479.
- Spivak, G. C. (2010). Can the Subaltern Speak? In, R. Morris (Ed.), *Critique of Postcolonial Reason* (21-78). New York: Columbia University Press.
- Stake, R. E. (1978). The Case Study Method in Social Inquiry. *Educational Researcher*, 7, 5-8.
- Stal, K. (1998). *Den Haag in Kaart Gebracht. 750 Jaar Groei in Plattegronden Uit het Gemeentearchief*. Den Haag: Gemeente Den Haag.
- Steinkrüger, J.-E. & Zehetmair, S. (2012). Heterotopien und Panoptiken der Freizeit. Das Beispiel Vergnügungsparks und Fußballstadien. In, H. Füller & B. Michel (Eds.), *Die Ordnung der Räume. Geographische Forschung im Anschluss an Michel Foucault* (225-239). Berlin: Münster.
- Stirling, A. (2009). Participation, Precaution and Reflexive Governance for Sustainable Development. In, A. Jordan & N. Adger (Eds.), *Governing Sustainability* (pp. 193-225). Cambridge: Cambridge University Press.
- Stirling, A. (2011). Pluralising Progress: From Integrative Transitions to Transformative Diversity. *Environmental Innovation and Societal Transitions*, 1(1), 82-88.
- Stokvis, P.R.D. (1987). *De Wording van Modern Den Haag. De Stad en Haar Bevolking*

- van de Franse Tijd tot de Eerste Wereldoorlog. Zwolle: Waanders Uitgeverij b.v.
- Suurs, R. A. & Hekkert, M. P. (2009). Cumulative Causation in the Formation of a Technological Innovation System: The Case of Biofuels in the Netherlands. *Technological Forecasting and Social Change*, 76(8), 1003-1020.
- Sveiby, K. E. (2009). Aboriginal Principles for Sustainable Development as Told in Traditional Law Stories. *Sustainable development*, 17(6), 341-356.
- Swanton, D. (2010). Flesh, Metal, Road: Tracing the Machinic Geographies of Race. *Environment and Planning, D*, 28(3), 447-466.
- Swilling, M. & Annecke, E. (2012). *Just Transitions: Explorations of Sustainability in an Unfair World*. Capetown: UCT Press.
- Swyngedouw, E. (1992). The Mammon Quest: 'Glocalisation', Interspatial Competition and the Monetary Order: The Construction of New Scales. In, M. Dunford & K. Kafkalas (Eds.), *Cities and regions in the new Europe* (pp. 39-68.). London: Belhaven Press.
- Swyngedouw, E. (1996). The City as a Hybrid: On Nature, Society and Cyborg Urbanization. *Capitalism Nature Socialism*, 7(2), 65-80.
- Swyngedouw, E. (2006). Metabolic Urbanization: The Making of Cyborg Cities. In, N. Heynen, M. Kaika & E. Swyngedouw (Eds.) *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism* (pp. 21-40). London: Routledge.
- Swyngedouw, E. (2007). 'Impossible/Undesirable Sustainability and the Post-political Condition'. In, R. Krueger & D. Gibbs (Eds.), *The Sustainable Development Paradox. Urban political economy in the United States and Europe* (pp. 13-40). New York: Guilford Press.
- Swyngedouw, E. (2009). The Antinomies of the Postpolitical City: In Search of a Democratic Politics of Environmental Production. *International Journal of Urban and Regional Research*, 33(3), 601-620.
- Swyngedouw, E. (2010). Impossible Sustainability and the Post-Political Condition. In, M. Cerreta, G. Concilio & V. Monno (Eds.), *Making Strategies in Spatial Planning* (pp. 185-205). New York: Springer.
- Tampio, N. (2009). Assemblages and the Multitude Deleuze, Hardt, Negri, and the Postmodern Left. *European Journal of Political Theory*, 8(3), 383-400.
- Thomas, J. (1993). *Doing Critical Ethnography*. London: Sage.
- Thompson, J. (2001). Planetary Citizenship: The Definition and Defence of an Ideal. In, B. Gleeson & N. Low (Eds.), *Governing for the Environment. Global Problems, Ethics and Democracy* (pp. 135-146). Basingstroke: Palgrave.
- Torring, J. (1999). *New Theories of Discourse: Laclau, Mouffe and Žižek*. Hoboken: Blackwell Publishing Ltd.
- Truffer, B. & Coenen, L. (2012). Environmental Innovation and Sustainability Transitions in Regional Studies. *Regional Studies*, 46(1), 1-21.

- Truffer, B., Murphy, J. T. & Raven, R. (2015). The Geography of Sustainability Transitions: Contours of an Emerging Theme. *Environmental Innovation and Societal Transitions*, doi:10.1016/j.eist.2015.07.004.
- Tushman, M. L. & Anderson, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly*, 31(3), 439-465.
- Valverde, M. (2011). Seeing Like a City: The Dialectic of Modern and Premodern Ways of Seeing in Urban Governance. *Law & Society Review*, 45(2), 277-312.
- Van Dam, T. (1990). *De Rotterdamse Haven. 650 jaar*. Amsterdam: De Bataafsche Leeuw.
- Van den Bergh, J. C. & Oosterhuis, F. H. (2008). An Evolutionary Economic Analysis of Energy Transitions. In, J. C. J. M. Van den Bergh & F. R. Bruinsma (Eds.), *Managing the Transition to Renewable Energy: Theory and Practice From Local, Regional and Macro Perspectives* (pp. 149-176). Cheltenham: Edward Elgar.
- Van den Bergh, J. C., Truffer, B. & Kallis, G. (2011). Environmental Innovation and Societal Transitions: Introduction and Overview. *Environmental Innovation and Societal Transitions*, 1(1), 1-23.
- Van de Laar, P., Lucassen, L. & Mandemakers, K. (2006). *Naar Rotterdam: Immigratie en Levensloop in Rotterdam Vanaf het Einde van de Negentiende Eeuw*. Amsterdam: Aksant Academic Publishers.
- Van der Brugge, R. & Van Raak, R. (2007). Facing the Adaptive Management Challenge: Insights From Transition Management. *Ecology and Society*, 12(2), 33.
- Van Es, E. (2013). *Cultuurhistorische Verkenning: 19e-Eeuwse Wijken in Noord. Oude Noorden, Agniesebuurt en Provenierswijk*. Rotterdam: Gemeente Rotterdam.
- Van Raak, R. (2016). *Transition Policies: Connecting System Dynamic, Governance and Instruments in an Application to Dutch Healthcare*. Doctoral thesis, Dutch Research Institute for Transitions (DRIFT), Erasmus University Rotterdam.
- Van Schendelen, M. P. C. M. (1984). *Consociationalism, Pillarization and Conflict-Management in the Low Countries*. Amsterdam: Boom.
- Van Schipstal, I. L. & Nicholls, W. J. (2014). Rights to the Neoliberal City: The Case of Urban Land Squatting in 'Creative' Berlin. *Territory, Politics, Governance*, 2(2), 173-193.
- Van 't Wel, (1987). *Technologie en Protest in de Rotterdamse Haven. 1880-1986*. Rotterdam: Erasmus University Rotterdam.
- Van Zanden, J. L. (1998). *The Economic History of the Netherlands 1914-1995: A Small Open Economy in the 'long' twentieth century*. New York: Routledge.
- Vanolo, A. (2013). Smartmentality: The Smart City as Disciplinary Strategy. *Urban Studies*, doi: 0042098013494427.
- Vellema, S. (2011). Materiality, Nature and Technology in Agriculture: Ted Benton. In, S. Vellema (Ed.), *Transformation and Sustainability in Agriculture* (pp. 79-90).

- Wageningen: Wageningen Academic Publishers.
- Verbong, G. & Loorbach, D. (Eds.). (2012). *Governing the Energy Transition: Reality, Illusion or Necessity?* New York: Routledge.
- Vergragt, P. & Szeijnwald Brown, H. (2010). Managing Urban Transitions: Visioning and Stakeholder Collaboration. A Case Study in Transforming Residential Housing in Worcester, MA. Paper for Sussex Energy Group conference: Energy Transitions, February 25–26.
- Visker, R. (1995). *Michel Foucault: Genealogy as Critique*. London: Verso.
- Von Eggers, M. N. (2013). Governmentality, Police, Politics: Foucault with Rancière. *Kulturrevolution*, 64, 45-50.
- Voss, J. P. & Bauknecht, D. (Eds.). (2006). *Reflexive Governance for Sustainable Development*. Cheltenham: Edward Elgar.
- Voß, J. P., Smith, A. & Grin, J. (2009). Designing Long-Term Policy: Rethinking Transition Management. *Policy Sciences*, 42(4), 275-302.
- Voß, J. P. & Bornemann, B. (2011). The Politics of Reflexive Governance: Challenges for Designing Adaptive Management and Transition Management. *Ecology and Society*, 16(2), 9.
- Waasdorp, A. (2004). Het Begin: de Ontstaansgeschiedenis van de Haagse Regio. In, J.G. Smit (Ed.), *Den Haag, Geschiedenis van de stad (deel 1). Vroegste tijd tot 1574* (pp. 11-26). Zwolle: Uitgeverij Waanders b.v.
- Walby, S. (2007). Complexity Theory, Systems Theory, and Multiple Intersecting Social Inequalities. *Philosophy of the Social Sciences*, 37(4), 449-470.
- Walcott, S. M. (1999). Fieldwork in an Urban Setting: Structuring a Human Geography Learning Exercise. *Journal of Geography*, 98(5), 221-228.
- Wals, A. E. & Jickling, B. (2002). “Sustainability” in Higher Education: From Doublethink and Newspeak to Critical Thinking and Meaningful Learning. *International Journal of Sustainability in Higher Education*, 3(3), 221-232.
- While, A. (2011). The Carbon Calculus and Transitions in Urban Politics and Urban Political Theory. In, H. Bulkeley, V. Castan-Broto, M. Hodson & S. Marvin (Eds.), *Cities and Low Carbon Transitions* (pp. 42-53). New York: Routledge.
- Whitehead, A. N. (2013). *The Concept of Nature*. New York: Dover Publications.
- Whitehead, M. (2007). The Architecture of Partnerships: Urban Communities in the Shadow of Hierarchy. *Policy & Politics*, 35(1), 3-23.
- Whitehead, M. (2008). Cold Monsters and Ecological Leviathans: Reflections on the Relationships Between States and the Environment. *Geography Compass*, 2(2), 414-432.
- Wieczorek, A. J. & Hekkert, M. P. (2012). Systemic Instruments for Systemic Innovation Problems: A Framework for Policy Makers and Innovation Scholars. *Science and Public Policy*, 39(1), 74-87.

- Williams, D. M. (2003). Recent Trends in Maritime and Port History. In, R. Loyen, E. Buyst & G. Devos (Eds.), *Struggling for Leadership. Antwerp-Rotterdam Port Competition 1870-2000* (pp. 11-26). Heidelberg: Physica-Verlag Rudolf Liebing GmbH & Co.
- Winsemius, P. (1986). *Gast in eigen huis. Beschouwingen over milieumanagement*. Alphen aan de Rijn: Samson Tjeenk Willink.
- Wijzenbeek, T. (2004). Wooncultuur en sociale verschillen. In, J.G. Smit (Ed.), *Den Haag, Geschiedenis van de stad (deel 1). Vroegste tijd tot 1574* (pp. 252-286). Zwolle: Uitgeverij Waanders b.v.
- Wittmayer, J., Roorda, C. & Van Steenberghe, F. (Eds.). (2014). Governing Urban Sustainability Transitions: Inspiring Examples. *International Journal of Sustainable Development*, 15(1), 19-36.
- Wittmayer, J. M. & Schöpke, N. (2014). Action, Research and Participation: Roles of Researchers in Sustainability Transitions. *Sustainability Science*, 9(4), 483-496.
- Wolfe, C. (2010). *What is Posthumanism?* Minneapolis: University of Minnesota Press.
- Wolfe, C. (2012). *Before the Law: Humans and Other Animals in a Biopolitical Frame*. Chicago: University of Chicago Press.
- Wuite, R. A. (1990). *Het Kortenbosch: Biografie van een Haagse Arbeidersstraat. Van 1648-1873*. Den Haag: Migrantenuitgeverij Warray.
- Wyly, E. (2010). City. In, J.S. Davies, (Ed.), *Critical Urban Studies: New Directions*. New York: SUNY Press.
- Yanow, D. & Schwartz-Shea, P. (2011). *Interpretive Approaches to Research Design: Concepts and Processes*. Abingdon: Taylor & Francis.
- Žižek, S. (1999). *The Ticklish Subject*. London: Verso.
- Žižek, S. (2010). *Living in the End Times*. London: Verso.

Policy documents

- DCMR (2014). *Lucht in Cijfers 2013: De Luchtkwaliteit in Rijnmond*. Rotterdam: DCMR.
- Den Haag In Transitie [Bredius, L.](2013). *Stadslandbouw: Collaborative Urban Farming. Een strategie in ontwikkeling*. The Hague: DHIT.
- DRIFT (2011). *Merwe-Vierhavens: Van Woestijn Naar Goudmijn*. Rotterdam: DRIFT.
- Department of Housing, Spatial Planning and Environmental Management. (1989). *Nationaal Milieubeleidsplan (NMP)*. The Hague: Housing, Spatial Planning and Environmental Management.
- Dutch Senate. 2009–2010 Document 32 127, C., 9.
- Floating Pavilion. (2014). *Newsletter 4 March 2014, Drijvend Paviljoen*.
- Haags Milieucentrum (2013). *Benut de Kansen! Mogelijkheden voor Stadslandbouw in de Regio Den Haag en Hoe Die te Verwezenlijken*. The Hague: Haags Milieucentrum.
- Início (2004). *Benaderen Bedrijven Stadshavens. Plan van Aanpak September 2004*. Presentation. [<http://www.inicio.nl/html/pdf/Stadshavens%20Rotterdam.pdf>].

- Municipality of Rotterdam (2000). *Agenda Voor de Openbare Vergadering van de Commissie voor Buitenruimte en Milieu* (cie. BuMi), 29 juni 2000. 00SOB02672.
- Municipality of Rotterdam (2003). *Rotterdam Zet Door. Op Weg naar een Stad in Balans*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2004). *Havenplan 2020. Ruimte voor Kwaliteit*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2006). *Perspectief voor Iedere Rotterdammer. Coalitieakkoord 2006-2010*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2007). *Stadsvisie Rotterdam*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2010). *Plan-MER Stadshavens Rotterdam. Hoofdrapport*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2010). *Werken aan Talent en Ondernemen. Collegewerkprogramma 2010-2014*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2011a). *Verkenning Drijvend Bouwen in Buitendijks Rotterdam*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2011b). *Investeren in Duurzame Groei. Programma duurzaam*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2011c). *Stadshavens Rotterdam. Structuurvisie*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2012). *Stimuleren van Stadslandbouw in en om Rotterdam. Food & the City*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam (2014). *Volle Kracht Vooruit. Coalitieakkoord 2014-2018*. Rotterdam: Municipality of Rotterdam.
- Municipality of Rotterdam, district North (2014). *Noord is Noord. Een Boekje Vol Inspiratie*. Rotterdam: Municipality of Rotterdam, district North.
- Municipality of Rotterdam (2015). *Voortgangsrapportage 2015. Bestaand Rotterdams Gebied*. Rotterdam: Municipality of Rotterdam.
- Municipality of The Hague (2006). *Tien voor Milieu: Contournota voor Milieubeleid 2006-2010*. The Hague: Municipality of The Hague.
- Municipality of The Hague (2010). *Den Haag Maakt het Duurzaam. Integrale Presentatie van het Duurzaamheids- en Milieubeleid*. The Hague: Municipality of The Hague.
- Municipality of The Hague (2013a). *Funfactor Duurzaamheid*. The Hague: Municipality of The Hague.
- Municipality of The Hague (2013b). *Voedselstrategie*. The Hague: Municipality of The Hague.
- Project Bureau Stadshavens Rotterdam (2008a). *1600 ha. Creating on the Edge. Vijf Strategieën Voor Duurzame Gebiedsontwikkeling*. Rotterdam: Project Bureau Stadshavens Rotterdam.

- Project Bureau Stadshavens Rotterdam (2008b). *1600 ha. Implementation Programme. 2007-2015*. Rotterdam: Project Bureau Stadshavens Rotterdam.
- Project Bureau Stadshavens Rotterdam (2009a). *1600 ha. Gebiedsplan Rijnhaven-Maashaven. Concept januari 2009. Showcase van de Rotterdamse Stadshavens*. Rotterdam: Programme Bureau Stadshavens Rotterdam.
- Project Bureau Stadshavens Rotterdam (2009b). *1600 ha. Gebiedsplan RDM-Terrein. Concept Januari 2009. Research, Design & Manufacturing*. Rotterdam: Programme Bureau Stadshavens Rotterdam.
- Project Bureau Stadshavens Rotterdam (2009c). *1600 ha. Gebiedsplan Merwehaven-Vierhaven. Concept Januari 2009. Pionieren aan de Maas*. Rotterdam: Programme Bureau Stadshavens Rotterdam.
- Project Bureau Stadshavens Rotterdam (2009d). *1600 ha. Gebiedsplan Waalhaven-Eemhaven. Concept Januari 2009. De Nieuwe Voorkant van de Haven*. Rotterdam: Programme Bureau Stadshavens Rotterdam.
- Project organisation Maasvlakte 2 (2007). *Maasvlakte 2. Ruimte voor de Toekomst*. Leiden: Drukkerij Groen.
- Programme Bureau Stadshavens Rotterdam (2011b). *Stadshavens Rotterdam. Werk in Uitvoering*. Rotterdam: Programme Bureau Stadshavens Rotterdam.
- Programme Bureau Stadshavens Rotterdam (2013). *Bidbook. Rijnhaven. Metropolitan Delta Innovation*. Rotterdam: Programme Bureau Stadshavens Rotterdam.
- PvdD, PvdA, HSP, GL. (2011). *(H)eerlijk Haags. Een Initiatiefvoorstel Voor een Stedelijke Voedselstrategie*. The Hague: PvdD, PvdA, HSP, GL.
- Rijksinstituut voor Milieu (1988). *Zorgen voor Morgen. Nationale Milieuverkenning (1985-2010)*. Alphen aan den Rijn: Samsam H.D. Tjeenk Willink.
- Rotterdam Port Authority (2010). *Jaarverslag 2010. 'Wereldklasse doen!'*. Rotterdam: Havenbedrijf Rotterdam N.V.
- Rotterdam Port Authority (2014). *Statuten van het Havenbedrijf Rotterdam*. Rotterdam: De Brauw Blackstone Westbroek.
- Schuttevaer (2011). *Binnenvaart Wil Maashaven Niet Opgeven*. [<https://www.schuttevaer.nl/nieuws/havens-en-vaarwegen/nid15370-binnenvaart-wil-maashaven-niet-opgeven>]. Visited in 2012.
- Transition Town Nijmegen (2012). *Transition Town Nijmegen. Praktisch en Positief*. Nijmegen: Transition Town Nijmegen.
- Trouw (2003). *Rotterdam. Regels Opzij Voor Huizen in Haven*. [<http://www.trouw.nl/tr/nl/4324/Nieuws/archief/article/detail/1763415/2003/12/31/Rotterdam-Regels-opzij-voor-huizen-in-haven.dhtml>]. Visited in 2014.
- Urgenda (2008a). *De Drijvende Stad. Benutten van een Zee van Ruimte*. Rotterdam: Stichting Urgenda.

Urgenda (2008b). *The Floating City. Into an Ocean of Opportunities*. Rotterdam: Stichting Urgenda.

Zweerink, K. (2009). *Het Park aan de Maas. Rotterdams Jaarboekje 2009*. Rotterdam: Gemeentearchief Rotterdam (pp. 179-201).

Archival records

Archief van de stad Alkmaar, 1254 (1325) - 1815 (1816), inventarisnummer 38 Register van Resoluties van de Vroedschap, 16 mei 1549-18 januari 1565 (p. 81).

Archief van het Nutsdepartement Rotterdam (Maatschappij tot Nut van 't Algemeen) en Daarmee Verbonden Instellingen (nr. 66-01, period 1985-1971), Stadsarchief Rotterdam.

Brundtland, G., Khalid, M., Agnelli, S., Al-Athel, S., Chidzero, B., Fadika, L. & Okita, S. (1987). *Our Common Future. Our common future: Report for the World Commission on Environment and Development, United Nations*. New York: United Nations.

Jaarboekjes Die Haghe, Jaarboekje *Die Haghe* (1889), Beeldnummer 59 van 183.

Meadows, H. D., Meadows, D. L. Randers, J. & Behrens III W.W. (1972). *The Limits to Growth. A Report for the Club of Rome's Project on the Predicament of Mankind*. New York: Universe Books.

Municipality of Rotterdam (1965). *Verslag van de Werkcommissie over het Tijdvak van 1 juli 1963 tot 1 januari 1965*. Rotterdam: Commissie Bodem, Water en Lucht, Rotterdam.

Municipality of Rotterdam (1978). *Structuurplan Rotterdam Binnen de Ruit*. Rotterdam: Municipality of Rotterdam.

Municipality of Rotterdam (1990). *Milieubeleidsplan Rotterdam. Een Schone Stad, een Schone Haven*. Rotterdam: Municipality of Rotterdam.

Municipality of The Hague (1923). Gemeenteverslagen Den Haag 1923, beeldnummer 802 van 1169.

Municipality of The Hague (1988). *In de Kern Gezond. Plan voor de Herinrichting van de Openbare Ruimte in de Haagse Binnenstad*. The Hague: Municipality of The Hague.

Municipality of The Hague (1997). *Groenbeleidsplan 1996-2000*. The Hague: Municipality of The Hague.

Municipality of The Hague (2005). *Groen Kleurt de Stad. Beleidsplan voor het Haags Groen. 2005-2015*. The Hague: Municipality of The Hague.

Municipality of The Hague (1962). Verslagen en Handelingen van de Gemeenteraad 1851-2005, Handelingen (1962), beeldnummer 1005 van 1073.

Municipality of The Hague (1963). Verslagen en Handelingen van de Gemeenteraad 1851-2005, Verzamelingen (1963), beeldnummer 808 van 1682.

Municipality of The Hague (1967). Verslagen en Handelingen van de Gemeenteraad 1851-2005, Verzamelingen (1967), beeldnummer 1057 van 1968.

Neiszen, J. H. (1885). *Haven van Rotterdam. Beschrijving van Hare Inrichting en Exploitatie en van Hare Handelsbeweging*. Rotterdam: Van Waesberg.

Websites

<http://www.bamwoningbouw.nl> (visited in 2015)
<http://www.catharinadebruin.nl> (visited in 2013)
<http://www.copdrijvendbouwen.nl> (visited 2014)
<http://www.dcmr.nl> (visited in 2014)
<http://www.denhaaginttransitie.org> (visited in 2013-2015)
<http://www.drijvendpaviljoen.nl> (visited in 2013 and 2014)
<http://www.gemeentearchief.rotterdam.nl> (visited in 2013 and 2014)
<http://geodata.rivm.nl> (visited in 2014)
<http://geothermie.nl> (visited in 2014 and 2015)
<http://www.greytontransition.co.za> (visited in 2013 and 2014)
<http://www.grotestedenbeleid.nl> (visited in 2013 and 2014)
<http://www.haagsebeeldbank.nl> (visited in 2013 and 2014)
<http://haagsemakers.nl> (visited in 2014 and 2015)
<http://www.haagsevaders.nl> (visited in 2014)
<http://www.ksinetwork.nl/what-is-ksi/about-ksi> (visited in 2011 and 2012)
<http://www.ksinetwork.nl/what-is-ksi/about-ksi> (visited in 2011 and 2012)
<http://www.ksinetwork.nl/research/programme> (visited in 2011 and 2012)
<http://www.lml.rivm.nl> (visited in 2014)
<http://www.luchtmeetnet.nl> (visited in 2014)
<http://www.luchtsingel.org> (visited in 2013 and 2014)
<http://www.march-against-monsanto.com> (visited in 2013 and 2014)
<http://www.nutalgemeen.nl> (visited in 2013 and 2014)
<http://www.repaircafedenhaag.nl> (visited in 2014 and 2015)
<https://repaircaferotterdamnoord.wordpress.com> (visited in 2014 and 2015)
<http://www.rotter-dam.nl> (visited in 2014 and 2015)
<http://www.sociocratie.nl> (visited in 2013 and 2014)
<http://www.spido.nl> (visited in 2014)
<http://spiralphysics.org> (visited in 2014 and 2015)
<http://www.stadsarchief.rotterdam.nl> (visited in 2013-2015)
<http://www.stadshavensrotterdam.nl> (visited in 2011-2015)
<http://timebank.cc/the-hague> (visited in 2014 and 2015)
<http://www.transitionnetwork.org> (visited in 2013 and 2014)
<http://www.transitionculture.org> (visited in 2013 and 2014)
<http://www.transitiontowns.nl> (visited in 2013 and 2014)
<http://www.transitiontownnijmegen.nl> (visited in 2013)

<http://www.transitiontownrotterdam.nl> (visited in 2013)

<http://www.vogelwijkenergie.nl> (visited in 2014 and 2015)

<http://vredestuin.org> (visited in 2013 and 2014)

<http://wilgenplantsoen.com> (visited in 2014 and 2015)

Interviews

	Reference	Position and organisation	Date of interview	Location of interview
1	Interview SA	Freelancer, former policy actor, Municipality of Rotterdam	21 February 2014	Rotterdam, the Netherlands
2	Interview SB	Policy actor, Municipality of Rotterdam	24 February 2014	Rotterdam, the Netherlands
3	Interview SC	Architect, engineer	7 January 2014	Amsterdam, the Netherlands
4	Interview SD	Local politician	31 January 2014	Rotterdam, the Netherlands
5	Interview SE	Policy actor, Rotterdam port authority	13 January 2014	Rotterdam, the Netherlands
6	Interview SF	Policy actor, Municipality of Rotterdam	4 December 2013	Rotterdam, the Netherlands
7	Interview SG	Policy actor, Municipality of Rotterdam	29 November 2013	Rotterdam, the Netherlands
8	Interview SH	Policy actor, Municipality of Rotterdam	20 January 2014	Rotterdam, the Netherlands
9	Interview SI	Policy actor, Municipality of Rotterdam	28 November 2013	Rotterdam, the Netherlands
10	Interview SJ	Consultant, related to architecture bureau	10 January 2014	Rotterdam, the Netherlands
11	Interview SK	Policy actor, Municipality of Rotterdam	13 February 2014	Rotterdam, the Netherlands
12	Interview SL	Representative industrial port companies	4 November 2013	Rotterdam, the Netherlands
13	Interview SM	Architect	26 November 2013	Delft, the Netherlands
14	Interview SN	Representatives inland navigation organisation	27 June 2013	Rotterdam, the Netherlands
15	Interview SO	Architect	12 June 2013	Amsterdam, the Netherlands
16	Interview SP	Architect	21 November 2013	Rotterdam, the Netherlands
17	Interview SQ	Architect, urban planner	1 November 2013	Rotterdam, the Netherlands (phone interview)
18	Interview SR	Architect	18 December 2013	Rotterdam, the Netherlands
19	Interview SS	Policy actor, Municipality of Rotterdam	23 January 2013	Rotterdam, the Netherlands
20	Interview ST	Policy actor, Municipality of Rotterdam	13 January 2014	Rotterdam, the Netherlands

Reference	Position and organisation	Date of interview	Location of interview
21	Interview SU Storyteller, freelancer	4 March 2014	Rotterdam, the Netherlands
22	Interview SV Policy actor, Municipality of Rotterdam	27 February 2014	Rotterdam, the Netherlands
23	Interview SW Researcher	15 January 2014	Rotterdam, the Netherlands
24	Interview SX Policy actor, Municipality of Rotterdam & policy actor, Rotterdam port authority	14 November 2013	Rotterdam, the Netherlands
25	Interview SY Architect	6 November 2013	Amsterdam, the Netherlands
26	Interview SZ Policy actor, Rotterdam port authority	14 February 2014	Rotterdam, the Netherlands
27	Interview SAA Policy actor, Municipality of Rotterdam	15 November 2013	Rotterdam, the Netherlands
28	Interview SAB Consultant, related to Municipality of Rotterdam	27 January 2014	Rotterdam, the Netherlands
29	Interview SAC Researcher and spatial planner	28 January 2014	The Hague, the Netherlands
30	Interview SAD Members of a residential organisation	13 February 2014	Rotterdam, the Netherlands
31	Interview SAE Policy actor, Municipality of Rotterdam	15 January 2014	Rotterdam, the Netherlands
32	Interview TA Gandhi-gardener	9 July 2013	Rotterdam, the Netherlands
33	Interview TB Politician, local governor	29 January 2014	Rotterdam, the Netherlands
34	Interview TC Gandhi-gardener	16 October 2013	Rotterdam, the Netherlands
35	Interview TD Member of Transition Towns Rotterdam, related to Gandhi-garden	15 January 2014	Rotterdam, the Netherlands
36	Interview TE Gandhi-gardener	27 August 2013	Rotterdam, the Netherlands
37	Interview TF Gandhi-gardener	6 January 2014	Rotterdam, the Netherlands
38	Interview TG Gandhi-gardener	10 January 2014	Rotterdam, the Netherlands
39	Interview TH Gandhi-gardeners	20 December 2013	Rotterdam, the Netherlands
40	Interview TI Active citizen and professional, related to Gandhi-garden	3 January 2014	Rotterdam, the Netherlands
41	Interview TJ Members Transition Town Rotterdam region	7 June 2013	Oud Beijerland, the Netherlands
42	Interview TK Member of Transition Town Rotterdam region	24 December 2013	The Hague, the Netherlands (phone interview)
43	Interview TL Gandhi-gardener	16 January 2014	Rotterdam, the Netherlands
44	Interview TM Local professional, related to Gandhi-garden	27 December 2013	Rotterdam, the Netherlands

Reference	Position and organisation	Date of interview	Location of interview
45	Interview TN Member of a residential organisation, related to Gandhi-garden	23 January 2014	Rotterdam, the Netherlands
46	Interview TO Policy actor, Municipality of Rotterdam	20 January 2014	Rotterdam, the Netherlands
47	Interview TP Members Transition Town Rotterdam region	5 February 2015	Oud Beijerland, the Netherlands
48	Interview TQ Gandhi-gardener	Different moments during ethnographic work	Rotterdam, the Netherlands
49	Interview TR Gandhi-gardener	11 June 2013	Rotterdam, the Netherlands
50	Interview TS Politician, alderman	11 February 2013	Rotterdam, the Netherlands
51	Interview TT Gandhi-gardener	Different moments during ethnographic work	Rotterdam, the Netherlands
52	Interview TTA Gandhi-gardener	16 September 2013	Rotterdam, the Netherlands
53	Interview TTB Gandhi-gardener	27 September 2013	Rotterdam, the Netherlands
54	Interview TTC Professional designer	9 January 2014	Rotterdam, the Netherlands
55	Interview TTD Policy actor, Municipality of Rotterdam	22 January 2014	Rotterdam, the Netherlands
56	Interview TU DHIT member	11 January 2014	The Hague, the Netherlands
57	Interview TV DHIT member	29 January 2014	The Hague, the Netherlands
58	Interview TW DHIT member	Different moments during ethnographic work	The Hague, the Netherlands
59	Interview TX Freelancer, active professional, related to municipality of the Hague	29 November 2013	The Hague, the Netherlands
60	Interview TY DHIT member	30 January 2014	The Hague, the Netherlands
61	Interview TZ Policy actor, Municipality of the Hague	2 December 2013	The Hague, the Netherlands
62	Interview TAA Active resident, indirectly related to DHIT	23 December 2013	The Hague, the Netherlands
63	Interview TAB Policy actor, Municipality of the Hague	23 December 2013	The Hague, the Netherlands
64	Interview TAC Policy actor, Municipality of the Hague	21 November 2013	The Hague, the Netherlands
65	Interview TAD Politician	5 March 2014	The Hague, the Netherlands
66	Interview TAE Politician, alderman	10 December 2013	The Hague, the Netherlands
67	Interview TAF DHIT member	Different moments during ethnographic work	The Hague, the Netherlands

Reference	Position and organisation	Date of interview	Location of interview
68	Interview TAG DHIT member	Different moments during ethnographic work	The Hague, the Netherlands
69	Interview TAH DHIT member	Different moments during ethnographic work	The Hague, the Netherlands
70	Interview TAI DHIT member	Different moments during ethnographic work	The Hague, the Netherlands
71	Interview TAJ Members of local commune, indirectly related to DHIT	30 January 2014	The Hague, the Netherlands
72	Interview TAK Policy actor, Municipality of the Hague	5 November 2013	The Hague, the Netherlands
73	Interview TAL Policy actor, Municipality of the Hague	14 January 2014	The Hague, the Netherlands
74	Interview TAM Policy actor, Municipality of the Hague	20 December 2013	The Hague, the Netherlands
75	Interview TAN Freelancer, related to municipality of the Hague	8 January 2014	The Hague, the Netherlands
76	Interview TAO Policy actor, Municipality of the Hague	14 January 2014	The Hague, the Netherlands
77	Interview TAP Policy actor, Municipality of the Hague	25 October 2013	The Hague, the Netherlands

Field notes

Reference	Title	Date	Location
1	Fieldnote A Floating Pavilion Rotterdam	1 May 2013	Rotterdam, the Netherlands
2	Fieldnote B Workshop Deep Ecology Transition Towns	28 and 29 September 2013	Leidschendam, the Netherlands
3	Fieldnote C Transition Town Rotterdam (Gandhi-garden introduction)	28 May 2013	Rotterdam, the Netherlands
4	Fieldnote D Transition Town Rotterdam (March Against Monstanto)	12 October 2013	Rotterdam-Hoeksche Waard, the Netherlands
5	Fieldnote E Transition Town Rotterdam (workshop Facebook)	31 May 2013	Rotterdam, the Netherlands
6	Fieldnote F Transition Town Rotterdam (discussion about Monstanto and activism)	4 June 2013	Rotterdam, the Netherlands
7	Fieldnote G Transition Town Rotterdam (visit of Palestinian children)	4 June 2013	Rotterdam, the Netherlands
8	Fieldnote H Transition Town Rotterdam (discussion about economy, society and politics)	9 June 2013	Rotterdam, the Netherlands
9	Fieldnote I Transition Town Rotterdam (discussion about food and nutrition)	11 June 2013	Rotterdam, the Netherlands
10	Fieldnote J Transition Town Rotterdam (<i>Bhagavat Gita</i> and Gandhi)	11 September 2013	Rotterdam, the Netherlands

Reference	Title	Date	Location
11	Fieldnote K Transition Town Rotterdam (discussion about selectivity mass media)	27 August 2013	Rotterdam, the Netherlands
12	Fieldnote L Transition Town Rotterdam (on gardening an health)	14 July 2013	Rotterdam, the Netherlands
13	Fieldnote M Transition Town Rotterdam (on using car and luxury)	25 June 2013	Rotterdam, the Netherlands
14	Fieldnote N Transition Town Rotterdam (peace festival)	21 September 2013	Rotterdam, the Netherlands
15	Fieldnote O Transition Town Rotterdam (discussion about Krishna consciousness)	25 June 2013	Rotterdam, the Netherlands
16	Fieldnote P Transition Town Rotterdam (Gandhi exhibition)	11 September 2013	Rotterdam, the Netherlands
17	Fieldnote Q Transition Town Rotterdam (Gandhi lecture series)	27 November 2013, 8 January 2014	Rotterdam, the Netherlands
18	Fieldnote R Transition Town Rotterdam (on book Jan Rotmans)	14 July 2013	Rotterdam, the Netherlands
19	Fieldnote S Transition Town Rotterdam (bee experience)	25 June 2013	Rotterdam, the Netherlands
20	Fieldnote T Transition Town Rotterdam (on harvest day)	11 September 2013	Rotterdam, the Netherlands
21	Fieldnote U Transition Town Rotterdam (discussion about vandalism and theft)	25 June 2013	Rotterdam, the Netherlands
22	Fieldnote V Transition Town Rotterdam (meeting coordination group)	10 September 2013	Rotterdam, the Netherlands
23	Fieldnote W Transition Town Rotterdam (thee and coffee rituals)	27 August 2013	Rotterdam, the Netherlands
24	Fieldnote X Transition Town Rotterdam (discussion about well and ground water)	25 June 2013	Rotterdam, the Netherlands
25	Fieldnote Y Den Haag in Transitie (email conversation about first meeting)	June 2013	The Hague/ Rotterdam, the Netherlands
26	Fieldnote Z Den Haag in Transitie (meeting at DDH)	10 July 2013	The Hague, the Netherlands
27	Fieldnote AA Den Haag in Transitie (join DHIT meeting)	22 January 2014	The Hague, the Netherlands
28	Fieldnote AB Den Haag in Transitie (movie night Gezonde Gronden)	17 October 2013	The Hague, the Netherlands
29	Fieldnote AC Den Haag in Transitie (money and food on the table)	16 July 2013	The Hague, the Netherlands
30	Fieldnote AD Den Haag in Transitie (discussion about legal status DHIT)	14 August 2013	The Hague, the Netherlands
31	Fieldnote AE Den Haag in Transitie (TT workshop Hendriksen)	25 August 2013	The Hague, the Netherlands
32	Fieldnote AF Den Haag in Transitie (Shivant's perspective)	8 August 2013	The Hague, the Netherlands
33	Fieldnote AG Den Haag in Transitie (discussion about organisational structure)	16 July 2013, 13 August 2013	The Hague, the Netherlands

Reference	Title	Date	Location
34 Fieldnote AH	Den Haag in Transitie (discussion about DHIT mission)	29 October 2013	The Hague, the Netherlands
35 Fieldnote AI	Den Haag in Transitie (DHIT vision and word politics)	29 August 2013	The Hague, the Netherlands
36 Fieldnote AJ	Den Haag in Transitie (on objectivity of Shivant)	3 September 2013	The Hague, the Netherlands
37 Fieldnote AK	Den Haag in Transitie (check-in, check-out)	16 July 2013, 8 August 2013	The Hague, the Netherlands
38 Fieldnote AL	Den Haag in Transitie (preparing and events)	8 August 2013	The Hague, the Netherlands
39 Fieldnote AM	Den Haag in Transitie (cup game)	3 September 2013	The Hague, the Netherlands
40 Fieldnote AN	Den Haag in Transitie (discussion about art in transitions)	29 August 2013	The Hague, the Netherlands
41 Fieldnote AO	Den Haag in Transitie (urban-rural ties)	13 August 2013	The Hague, the Netherlands
42 Fieldnote AP	Den Haag in Transitie (Energy Fair 2013)	6 October 2013	The Hague, the Netherlands
43 Fieldnote AQ	Den Haag in Transitie (idea guidebook connections)	4 September 2013	The Hague, the Netherlands

Appendix

The coding process: Coding empirical materials and cases

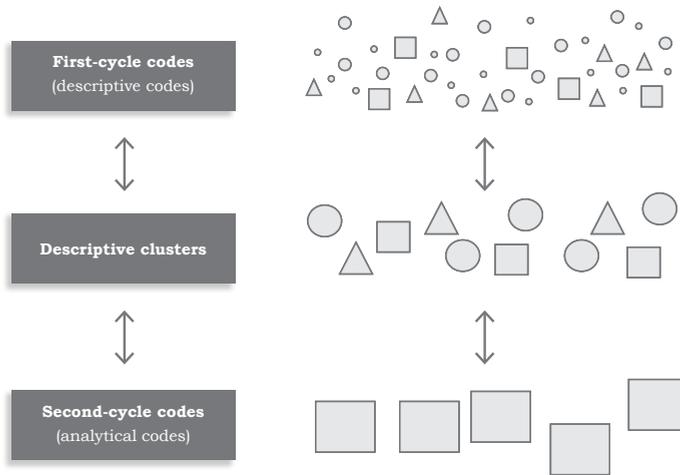
This appendix presents a brief and simplified version of the coding process (see also Chapter 2). In practice, the entire process of coding took over one year and combined the work of Atlas.ti algorithms, micro-interpretations, reflexive moments and occasional epiphanies. The process of coding actually starts when selecting - among others - empirical cases, analytical vocabularies, documents, ethnographic sites and potential respondents.

Technically, the first-cycle coding process began when I assembled hundreds of so-called *Primary Documents* (PDs) for both cases consisting of archival documents, policy texts, interview audio, images, newspaper articles, etc., mostly for the third genealogical episodes. I coded all Transition Towns case PDs. The PDs for the Stadshavens case were abundant, especially the documents (over 1000). After coding around 500 documents, I did not find new descriptive codes, even though I continued to double check (till about 600). All PDs were coded by descriptive codes, but also in other ways. I used *quotations* (literal citations) to code particular fragments (text, audio or image). Quotations nicely captured a specific concern or issue. Sometimes these quotations ended up as actual citations in the empirical chapters. Furthermore, I used *memos*, which allowed me to reflect on particular fragments or descriptive codes. During the process of writing the empirical chapters, these memos were useful to understand the empirical materials and descriptive codes more reflexively.

After the first cycle in the coding process, I clustered the many descriptive codes into more manageable descriptive clusters and themes. These descriptive clusters are presented in the empirical cases, often in terms of two or three themes (Chapters 5 and 6). This enabled me to present a rich and focussed third genealogical episode in both chapters. I used descriptive clusters in combination with the descriptive codes to start second-cycle coding (or analytical codes). So, 'descriptive clustering' bridged first-cycle and second-cycle coding (Saldaña, 2012). For analytical coding, I used the transition analytics for the analytical codes (visibilities, epistemologies, technologies, subjectivities, technical and radical contingencies, and genealogy as relevant histories, see also Chapter 4).

The final step was teasing out the points of contact between both cases. I merged the descriptive codes (using Atlas.ti again), in order to see what types of codes appeared most frequently, co-occurred, were comparable or remained marginal. This process was more prone to my own reflections. Therefore, I explicitly used the descriptive clusters of both empirical cases. Importantly, for the two Transition Town networks (Rotterdam and The Hague), I first coded and clustered them separately. I then merged their descriptive codes and clusters with the ones from the Stadshavens case to tease

out the points of contact of both cases in more analytical terms. These coding steps can be visualised as follows:



In this appendix, I present some of the (most frequent) descriptive codes I used, the descriptive clusters and the analytical codes per case and their points of contact. This resonates with Chapters 5, 6 and 7 (mainly genealogical episodes three), and aims to give a sense of the coding steps and empirical analytical processes against the background of my transition analytics (Chapter 4).

Coding of Stadshavens case

The Stadshavens case (i.e. the empirical materials associated with this case) was coded in three steps. Here, I mainly present most first-cycle codes (descriptive codes), after which the descriptive clusters and second-cycle codes (analytical codes) are presented. First-cycle codes are enlisted from most frequent to less frequent.

- First-cycle codes (or descriptive codes)

Waterfront regeneration (142-0) Geographical and spatial politics (127-0) Modern urban planning (95-0) Floating community and housing (81-0) History of waterfront (74-0) Sustainability (72-0) City politics and policy (68-0) Class differences (67-0) Urban planning (60-0) Struggle (spatial) (60-0) Port economy (56-0) Struggle (economic) (56-0) Green and environment (56-0) Techno-scientific frame (55-0) Urban expansion (55-0) Academic reflection and education (55-0) Housing (51-0) Built environment and material politics (50-0) Adaptivism and experimentalism (50-0) City Ports (49-0) Knowledge and science (48-0) Struggle (legal) (47-0) Port expansion (46-0) Water meaning (46-0) Economic policy and regulations (46-0) Legal framework (45-0) Climate and natural environment (44-0) Stakeholders (41-0) Organisation and mentality of work (40-0) Negotiations (40-0) North and South relations (40-0) DRFIT - EUR - Shivan's role (39-0) Economic practice (39-0) Global economic ties (38-0) Architecture and engineering (38-0) Education and schools (37-0) Neoliberalisation and neoliberalism (37-0) Struggle (ecological) (35-0) Visualisation and gaze (33-0) Financial issues (32-0) International capital and capitalism and competition (30-0) Transportation (30-0) Health issues (29-0) Struggle (administrative bureaucracy) (28-0) cooperation, inspiration and policy tourism (28-0) Culture and leisure (27-0) spatial politics (27-0) Pragmatic, combining values (27-0) Procedures and protocols (26-0) Energy (25-0) Nuisance and pollutions (25-0) Urban connectivism and network relations (24-0) Industry (23-0) Assamblage (social, green) (22-0) Creative class, start-ups (22-0) Architecture (21-0) Liveability (20-0) Diversity and networking (20-0) Democracy and governance (19-0) neoliberal planning and policy (19-0) Electrical and party politics (19-0) Technocracy and technological solutions (19-0) Policy tourism (19-0) National politics and frameworks (19-0) Post industrialisation (18-0) Land and soil (18-0) Consultation and advice (18-0) Struggle (cultural) (17-0) Animal politics (17-0) citizens and participation (17-0) Struggle (techno-scientific) (16-0) Port authority (16-0) Liberalism and freedom (16-0) European politics (15-0) Tendering (15-0) Safety and security (15-0) Administration and bureaucracy (15-0) Gentrification issues (14-0) Boats and floating issues (14-0) Public space (14-0) urban centres peripheries (14-0) Tailor made planning (14-0) Mediators, technology and digitality (13-0) Regional development (13-0) Media and attention (13-0) Legal issues and contracts (13-0) Struggles and negotiations (13-0) Infrastructure (12-0) Sustainable energy (12-0) Social and cultural aspects and practices (12-0) Integration of knowledge and disciplines (12-0) Positionalities (12-0) Biopolitics (11-0) Employment and jobs (11-0) Strategy and method (11-0) Mobility (11-0) City branding (11-0) Communication and advertisement (11-0) Spatial planning (11-0) Transition knowledge (11-0) Valuation and measurement (11-0) Citizenship and globalisation (10-0) Scale, mass and demography (10-0) Engineering practices (9-0) Investments (9-0) Innovation (9-0) Residential concerns (9-0) Floating urbanism (9-0) Flexibility (9-0) Water management (9-0) Environmental policy (9-0) Transition Management (9-0) Holism and eco-thinking (8-0) Tension and arena (8-0) Economic crisis (or other crisis) (8-0) Ecology and green (8-0) Justice (8-0) Culture and ethnicity (8-0) funding (7-0) Neoliberal spaces (7-0) Politicisation (7-0) Mass media (7-0) Evaluations (7-0) Arts and aesthetics (7-0) property (7-0) Race and ethnicity (7-0) Boulevardisation (7-0) Internal conflicts (6-0) Hope and Inspiration (6-0) Critique and speech (6-0) Bottom up networking (6-0) Environmental quality (6-0) Transition (6-0) Energy use (6-0) governmental support (6-0) Public-private partnerships (6-0) Premodern urbanisation (6-0) Chemicals (5-0) Research and science (5-0) Differentiation (5-0) Eco-friendly space (5-0) Neo-liberal eco-gaze (5-0) Seateasing movement (4-0) Semantic shift (policy) (4-0) Biological and chemical processes (4-0) Gardens and urban farming (4-0) Waalhaven (4-0) Antagonistic struggles and conflicts (4-0) Temporal dynamics (4-0) Normalisation and criminalisation (4-0) Job and work experience (4-0) Greening the city (4-0) Entanglements discursive and material (4-0) Computing and algorithms (4-0) Democratising space (4-0) new modes of finance and economics (4-0) Rooftop urbanism (4-0) Gender (3-0) Human suffering and alienation (3-0) Risk (3-0) Self produced identities (3-0) Population control (3-0) Real estate (3-0) Activation and responsabilisation (3-0) Vertical urbanism (3-0) Struggle (personal) (3-0) Successful projects and Initiatives (3-0) Maasvlakte (3-0) eco-policing (3-0) Environmental action group (3-0) Lobbying (3-0) Floating services and infra (2-0) Ethics (2-0) Facilitating (2-0) Creativity (2-0) DIY do it yourself issues (2-0) Comfortism (2-0) Carbon dioxide (2-0) Linking spaces (2-0) Local economy (2-0) Mainstreaming (2-0) Learning (2-0) Transnational networks (2-0) Institutional logic (2-0) International projects and initiatives (2-0) Marketing (2-0) Neo-liberal eco-waterfront governmentality (2-0) Perspectives (solutions) (2-0) Neoliberal gaze (2-0) Neo-liberal eco-techné (2-0) Power play (2-0) Post-modern urban planning (2-0) policy integration (2-0) Speed and process (2-0) Urban park (2-0) ICT and internet (2-0)

- Descriptive clusters

The descriptive clusters are the following combination of descriptive themes:

- Regenerating Rotterdam's waterfront: old and new struggles in the 21st century
 - Spatialising synergies and compromises
 - Future waterfront plans
- Imagining a sustainable waterfront: Rotterdam's CityPorts Programme
 - Re-inventing Rotterdam's city-port nexus
- A blue revolution: the 'Floating Communities Strategy'
 - Maashaven-Rijnhaven: some first experiments
 - RDM-Heijplaat area: revitalising economic life and recreating a work force
 - Merwe-Vierhavens/Waal-Eemhaven: open source urbanism and industrialism
- So, where did the port go?
 - Urban entanglements and the techno-waterfront
 - Displaced struggles: a deconstructing city
- Second-cycle codes (or analytical codes)

The analytical codes are based on the transition analytical building blocks.

- Waterfront genealogy
 - Episode I: Bio-industrial waterfront (ca. 1860-1960)
 - Episode II: Neo-industrial waterfront (ca. 1960-2000)
- Waterfront governmentality (paradigmatic logic of episode III (2000s-...): neoliberal eco-waterfront)
 - Visibilities of the neoliberal eco-waterfront
 - Epistemologies of the neoliberal eco-waterfront
 - Technologies of the neoliberal eco-waterfront

- Subject formation of the neoliberal eco-waterfront
- Contingencies of neoliberal eco-waterfront
 - Technical contingencies of neoliberal eco-waterfront
 - Radical contingencies of neoliberal eco-waterfront

Transition Towns case

The Transition Towns case (Rotterdam and The Hague) and the empirical materials associated with this case, was coded in three steps. Here, I mainly present most first-cycle codes (descriptive codes), after which the descriptive clusters and second cycle-codes (analytical codes) are presented. First-cycle codes are enlisted from most frequent to less frequent in brackets.

- First-cycle codes (or descriptive codes)

Knowledge and education (137-0) Cooperations and networking (86-0) Food and produce (80-0) Organisation, mentality of work (77-0) Urban farming (69-0) Shivan't's role, etnographic reflections (66-0) Communication and conversations (68-0) Financing and funds (65-0) Inspiration, philosophy, knowledge and spirituality (63-0) Politicisations (61-0) Environment (health, ecology and quality of life) (61-0) Sustainability (61-0) Science and research (52-0) Conflicts and tensions (50-0) Mid 20th century (49-0) Youth and kids (49-0) Legal and procedural concerns (49-0) Governmental support (48-0) Class differences (46-0) Transition Knowledge (45-0) Connecting initiatives (45-0) Communal experiences (44-0) Land and soil (43-0) City plans and policy documents (43-0) Electoral and party politics (42-0) Internal tensions and struggles (42-0) Transnational networks (41-0) Spatial and geographical variations and differentiation (41-0) Permaculture and alternative agro (41-0) Public parks and public green spaces (39-0) Local governments and city politics (39-0) Sustainable energy (39-0) Community garden (38-0) Gandhi garden (38-0) Pragmatic solution, combining values and practices (37-0) Legal code (36-0) Environmental policy and regulations (35-0) Spatial planning (34-0) Academic reflections (34-0) Democracy and democratic concerns (34-0) Strategies and methods (33-0) Participation of local and marginalised groups (33-0) Health (hegemonic knowledge and alternatives) (32-0) Official evaluations (31-0) Planning (31-0) Social and cultural status and codes (31-0) Race and ethnicity (31-0) Cyclical dynamics and eco-systems (31-0) DRIFT (30-0) Entrepreneurs and small businesses (30-0) Alternative economics (30-0) Inspiration (30-0) End 20th century (30-0) Protest and activism (29-0) Excursion and workshop (29-0) Graph, map and matrix (29-0) Active citizenry (28-0) Edible plants and urbanism (28-0) Nuisance and pollution (28-0) Neoliberalism and capitalism (culture) (28-0) mobility (28-0) Self-reliance and self-governing (28-0) Liberalism and desire of freedom (28-0) Speech and critique (27-0) Struggle (spatial) (27-0) Neo-communitarian eco-episteme (27-0) Assemblages (green, social etc) (27-0) Historical knowledge (27-0) Green and environmentalism (26-0) DHIT (26-0) Social initiative (26-0) Poverty (25-0) Growth and expansion (25-0) Urban planning (25-0) Struggle (social and ecological) (24-0) Urban garden (24-0) Conflicts about knowledge (24-0) Future visions (23-0) Spatial critique (23-0) policy integration (23-0) Prices and income (23-0) Bureaucracy and technical regulations (23-0) Public health issues (22-0) Volunteers and voluntarism (22-0) Alienation (22-0) Yoga and embodied spirituality (22-0) Music and art (22-0) Eco-consciousness (22-0) Technical issues (22-0) Biopolitics (22-0) Support system (22-0) Beginning 20th century (22-0) Principles and goals (21-0) Regional and national networks and ties (21-0) Neo-communitarian eco-techne (21-0) ICT and technology (21-0) Gaze and (in)visibility (20-0) Policy tourism (20-0) Lessons and learning (20-0) Social media (19-0) Animal politics (19-0) Food and pharmaceutical industry (18-0) Counter-consumerism and post-capitalism (18-0) Medicine and health (18-0) Environmental action group (18-0) Bottom up citizenship (18-0) Facilitation (18-0) PR (17-0) Linking knowledges (17-0) Struggle (legal) (17-0) Green capitalism and a new economy (17-0) Bodily and material engagements (17-0) Police and sovereign power (17-0) Food miles and carbon foot print (17-0) Environmental and animal conservation (17-0) Struggle (mobility and car-use) (16-0) Localism (16-0) TT Rotterdam (16-0) Educational system and schools (concerns) (16-0) Risks and dangers (16-0) Sharing and giving (economics) (16-0) Problematisations (15-0) Water management (15-0) Neo-communitarian eco-gaze (15-0) Criminalisation and marginalisation (15-0) Economic crisis (15-0) Professionalism (15-0) National policy and regulations (environment and economics) (14-0) TT Hoedsche Waard (14-0) Neoliberal policy and planning (14-0) Self-study and self-research (14-0) Struggle (financial and economic) (14-0) Networking (14-0) Struggle (science and research) (14-0) Engineering (14-0) Public and private partnerships and actors (13-0) Carbon dioxide (13-0) Urban critique (13-0) Bio and chemical processes and events (13-0) Property and claims (13-0) Vacant places (13-0) Semantic shift (policy and governing) (13-0) Eco-policing (13-0) Sustainability (policy) (13-0) Modern rational urban planning (13-0) Mass consumerism (13-0) Housing (12-0) End 19th century (12-0) Work-life balancing (12-0) Economics and (un)employment (12-0) Crafts and skills (12-0) Job and work experience (12-0) Conflicts between governments and public organisations (12-0) Religious community (12-0) Generational issues, age and signs (12-0) Legal and economic knowledge (12-0) Internet activities (11-0) Suffering and death (11-0) Beauty and rest (11-0) Planting and yielding (11-0) Joy (11-0) Idealism (11-0) Environmental quality and middle class (11-0) Farming, cooking and eating together (11-0) Classifications and categorisations (10-0) Allotment garden (10-0) Disciplinary episteme (10-0) Semantic skills (sustainability) (10-0) Commerce and marketisation (10-0) Environmental management (10-0) Normalisation and legitimisation (10-0) Open Source participation/activism (10-0) Variation and diversity (10-0) Violence and war (10-0) Greening the grey (10-0) City competition (and city marketing) (10-0) Hypocrisy (9-0) Informal activities (9-0) Welcoming and open-minded culture (9-0) Spatial knowledge (9-0) Infrastructure (9-0) Mass media (9-0) Heterotopia (9-0) Joy and laughter (9-0) Leisure and recreation (9-0)

- Descriptive clusters

Here, I present the descriptive cluster for Transition Town Rotterdam and The Hague separately. The descriptive clusters are the following combination of descriptive themes for Transition Town Rotterdam (Gandhi-garden):

- Transition Town Rotterdam
 - Introducing the Gandhi-Garden
 - The decentred (eco-)activities of the Gandhi-garden
 - Suffering, protests and democratic activism
 - Urban farming, alternative food and an edible city
 - Philosophy, embodied spirituality and inspirational stories
 - Soil, materiality and being post-human
 - Planning and everyday support systems
 - Law, the green state and bottom up citizenship

- Money, sharing and alternative economics
- New communities, glocalism and flexible networking

The descriptive clusters are the following combination of descriptive themes for Transition Town The Hague (DHIT):

- Transition Town Den Haag, a.k.a. DHIT
 - The decentred (eco-)events of DHIT
 - Politicising The Hague and riticizing systems
 - Organisational concerns, working groups and a flexible structure
 - Joy, optimism and activist events
 - Alternative food, health and new collectives
 - Exchanging services and alternative economics
 - Eco-policing, climate change and energy
 - Connecting and upscaling initiatives
- Second-cycle codes (or analytical codes)

The analytical codes are based on the transition analytical building blocks.

- Genealogy of Transition Towns as 'eco-city' (both Rotterdam and The Hague)
 - Episode I: Industrial-sovereign eco- city (1850s-1960s)
 - Episode II: Techno-capitalist eco-city (1960s-2000s)
- Governmentality of eco-city (paradigmatic logic of episode III (late 2000s-...): neo-communitarian eco-city)
 - Visibilities of neo-communitarian eco-city
 - Epistemologies of neo-communitarian eco-city
 - Technologies of neo-communitarian eco-city
 - Subject formation of neo-communitarian eco-city
- Contingencies of neo-communitarian eco-city
 - Technical contingencies of neo-communitarian eco-city
 - Radical contingencies of neo-communitarian eco-city

Points of contact case 1 and 2

The points of contact between the empirical materials associated with the case, was coded in two steps. I did not unravel descriptive clusters, because the objective of presenting points of contact was to present *analytical* entanglements. I mainly present most first-cycle codes (descriptive codes), after which the second-cycle codes (analytical codes) are presented. First-cycle codes are enlisted from most frequent to less frequent in brackets.

- **First-cycle codes (descriptive codes)**

Waterfront regeneration (142-0) Knowledge and education (137-0) Sustainability (133-0) Geographical and spatial politics (127-0) Class differences (113-0) Modern urban planning (95-0) Struggle (spatial) (87-0) Cooperatives and networking (86-0) Urban planning (85-0) Food and produce (81-0) Floating community and housing (81-0) Organisation, mentality of work (77-0) History of waterfront (74-0) Shivants role, ethnographic reflections (68-0) Urban farming (69-0) Communication and conversations (88-0) City politics and policy (68-0) Financing and funds (65-0) Struggle (legal) (64-0) Inspiration, philosophy, knowledge and spirituality (63-0) Housing (63-0) Land and soil (61-0) Environment (health, ecology and quality of life) (51-0) Politicisations (61-0) Urban expansion (59-0) Green and environment (56-0) Post economy (56-0) Struggle (economic) (56-0) Transition Knowledge (55-0) Academic reflection and education (55-0) Techno-scientific frame (55-0) Governmental support (55-0) Science and research (52-0) Sustainable energy (51-0) Built environment and material politics (50-0) Adaptivism and experimentalism (50-0) Conflicts and tensions (50-0) Youth and kids (49-0) Legal and procedural concerns (49-0) Mid 20th century (49-0) City Ports (49-0) Knowledge and science (48-0) Economic policy and regulations (46-0) Water meaning (46-0) Port expansion (46-0) Connecting initiatives (45-0) Legal framework (45-0) Climate and natural environment (44-0) Communal experiences (44-0) Spatial planning (44-0) Transnational networks (43-0) City plans and policy documents (43-0) Internal tensions and struggles (42-0) Electoral and party politics (42-0) Permaculture and alternative agro (41-0) Stakeholders (41-0) Spatial and geographical variations and differentiation (41-0) North and South relations (40-0) Organisation and mentality of work (40-0) Negotiations (40-0) mobility (39-0) Policy tourism (39-0) Local governments and city politics (39-0) DRIFT - EUR - Shivants role (39-0) Public parks and public green spaces (39-0) Economic practice (39-0) Global economic ties (38-0) Gandhi garden (38-0) Architecture and engineering (38-0) Community garden (38-0) Race and ethnicity (38-0) Pragmatic solution, combining values and practices (37-0) Education and schools (37-0) Neoliberalisation and neoliberalism (37-0) Legal code (36-0) Animal politics (36-0) Struggle (ecological) (35-0) Environmental policy and regulations (35-0) Academic reflections (34-0) Democracy and democratic concerns (34-0) Biopolitics (33-0) Visualisation and gaze (33-0) Participation of local and marginalised groups (33-0) Strategies and methods (33-0) Health (hegemonic knowledge and alternatives) (32-0) Financial issues (32-0) Cyclical dynamics and eco-systems (31-0) Social and cultural status and codes (31-0) Official evaluations (31-0) Planning (31-0) End 20th century (30-0) DRIFT (30-0) Alternative economics (30-0) Transportation (30-0) Entrepreneurs and small businesses (30-0) Inspiration (30-0) International capital and capitalism and competition (30-0) Protest and activism (29-0) Health issues (29-0) Excursion and workshop (29-0) Graph, map and matrix (29-0) Nuisance and pollution (28-0) Neoliberalism and capitalism (culture) (28-0) Self-reliance and self-governing (28-0) Active citizenry (28-0) Liberalism and desire of freedom (28-0) Edible plants and urbanism (28-0) cooperation, inspiration and policy tourism (28-0) Struggle (administrative bureaucratic) (28-0) Neo-communitarian eco-episteme (27-0) Culture and leisure (27-0) Speech and critique (27-0) Historical knowledge (27-0) spatial politics (27-0) Problematisations (27-0) Assemblages (green, social etc) (27-0) Pragmatic, combining values (27-0) Green and environmentalism (26-0) Procedures and protocols (26-0) DHIT (26-0) Social initiative (26-0) Poverty (26-0) Growth and expansion (25-0) Nuisance and pollution (25-0) policy integration (25-0) Energy (25-0) Urban garden (24-0) Conflicts about knowledge (24-0) Water management (24-0) Struggle (social and ecological) (24-0) Urban connectivism and network relations (24-0) Industry (23-0) Future visions (23-0) Prices and income (23-0) Bureaucracy and technical regulations (23-0) Spatial critique (23-0) Support system (22-0) Public health issues (22-0) Music and art (22-0) Yoga and embodied spirituality (22-0) Volunteers and voluntarism (22-0) Eco-consciousness (22-0) Assemblage (social, green) (22-0) Beginning 20th century (22-0) Alienation (22-0) Creative class, start-ups (22-0) Technical issues (22-0) Regional and national networks and ties (21-0) ICT and technology (21-0) Neo-communitarian eco-techne (21-0) Principles and goals (21-0) Architecture (21-0) Infrastructure (21-0) Environmental action group (21-0) Diversity and networking (20-0) Gaze and (in)visibility (20-0) Liveability (20-0) Lessons and learning (20-0) National politics and frameworks (19-0) Electoral and party politics (19-0) Democracy and governance (19-0) Technocracy and technological solutions (19-0) neoliberal planning and policy (18-0) Social media (19-0) Food and pharmaceutical industry (18-0) Medicine and health (18-0) Bottom up citizenship (18-0) Post industrialisation (18-0) Consultation and advice (18-0) Facilitation (18-0) Counter consumerism and post-capitalism (18-0) PR (17-0) Linking knowledges (17-0) European politics (17-0) Tendering (17-0) Police and sovereign power (17-0) Bodily and material engagements (17-0) Struggle (cultural) (17-0) Green capitalism and a new economy (17-0) citizens and participation (17-0)

- **Second-cycle codes (or analytical codes)**

The analytical codes are based on the transition analytical building blocks.

- **Genealogical points of contact**
 - Episode 0 (14th-mid-19th century): an age of commercial- sovereign eco-spaces
 - Episode I (1850s-1960s): an age of eco-industrial spaces
 - Visibilities of eco-industrial spaces
 - Epistemologies of eco-industrial spaces
 - Technologies of eco-industrial spaces
 - Subject formation of eco-industrial spaces
 - Contingencies of eco-industrial spaces
 - Episode II (1960s-2000s): An age of techno-capitalist eco-spaces
 - Visibilities of techno-capitalist eco-spaces
 - Epistemologies of techno-capitalist eco-spaces
 - Technologies of techno-capitalist eco-spaces
 - Subject formation of techno-capitalist eco-spaces
 - Contingencies of the techno-capitalist eco-spaces
- **Governmental points of contact (paradigmatic logic episode III (2000s-...): post-liberal eco-spaces)**
 - Visibilities of post-liberal eco-spaces
 - Epistemologies of post-liberal eco-spaces
 - Technologies of post-liberal eco-spaces
 - Subject formation of post-liberal eco-spaces
 - Contingencies of post-liberal eco-spaces

- Contingent points of contact
 - Technical contingencies of post-liberal eco-spaces
 - Radical contingencies of post-liberal eco-spaces

Summary

*“Every revolution is full of romance,
one can wonder what is stronger,
revolution or romance”.*

Geert Mak

“The city is the teacher of man”.

Aesopus

What is the central topic of this study?

This dissertation examines the transition politics of sustainable urban space-making. In the wake of social, economic and environmental challenges, the quandary of our ‘unsustainable society’ has been problematised by various actors. Since the early 2000s, a set of discourses emerged to render visible, knowable and governable so-called ‘sustainability transitions’. Sustainability transitions are presented as long-term sustainability-oriented transformations of societal structures and everyday life. This idea inspired academics, policy makers and civil society actors to diagnose various crises in late-modern societies regarding e.g. climate change, energy and food provision, health care systems and urban mobility. One of most important but often overlooked concerns related to sustainability transitions and their management is *politics*. An increasing number of scholars have criticised transition theory and discourse for downplaying fundamental societal conflicts. I follow this critique and argue that most transition theories and practices suffer from ‘depoliticisation’. Depoliticisation is a historical condition that normalises the idea that societal challenges can be addressed and solved best by proper and effective negotiations, managerial skills and technological innovations. Transition research suffers from depoliticisation in different ways, resulting in an inadequate understanding of transition politics. This is particularly problematic given the widespread ‘radical’ and ‘transformative’ promises of most transition discourses. In order to adequately address depoliticised conceptual frames in transition research, I argue that transition politics should be studied in the context of cities and urban settings. Cities are suitable sites to analyse transition politics given their conflict-based histories, socio-material composition, bedrock of unsustainability concerns and sustainability aspirations.

Objective and research questions

The objective of this thesis is to describe and explain the transition politics of sustainable urban space-making. Transition politics is defined as the (long-term) struggles associated with the creation, normalisation and contestation of a phenomenon, in this case, sustainable urban spaces. This study is both conceptual and empirical, thereby covering and contributing to transition theory and practice. The central research question that guides this study is: *How are sustainable urban spaces created, normalised and contested; and what does this mean for pursuing urban sustainability transitions today?* This question is broken down into four sub questions that resonate with particular chapters.

- Sub question 1: How does sustainability transition research address and understand politics in urban environments? [Chapter 3]
- Sub question 2: How can the creation, normalisation and contestation of sustainable urban spaces be conceptualised and analysed empirically? [Chapter 2 and 4]
- Sub question 3: How can the creation, normalisation and contestation of sustainable urban spaces be understood empirically? [Chapter 5, 6 and 7]
- Sub question 4: What do these inquiries mean for pursuing urban transitions in the 21st century? [Chapter 8]

Why did I conduct this study?

Even though sustainability transition discourses have become popular, transition politics in urban settings is a complex and overlooked issue. It is a challenge for academics, professionals and public audiences interested in sustainable futures, urbanisation and social change. This study is academically and practically relevant.

Academic challenges and relevance

Transition research is dominated by two approaches, the Socio-Technical Innovation Approach (STIA) and the COMplex Reflexive Steering Approach (CORSA). These approaches have a different understanding of what a transition entails conceptually. My problematisation of sustainability transition discourse focusses on the intersection of two challenges in transition research (both in STIA and CORSA): the political and urban spaces. Even though transition research increasingly highlights struggles and politics associated with transition processes and practices, this body of knowledge frames (often implicitly) transition politics in three depoliticised ways: (1) Westphalian transition politics (struggles in and between nation-state systems and political institutions); (2) (neo-)liberal transition politics (struggles in and between non-state networks and markets); and (3) anthropocentric transition politics (struggles in and

between human societies). I argue that these frames are ill-equipped to grasp all kinds of struggles associated with sustainability-led transitions. Instead of taking nation-state institutions, deliberative democratic arenas and human-centric politics as givens, I argue that it is instructive to *spatialise* transition politics. A spatialised understanding of transition politics allows one to grasp struggles via multi-spatiality, the non-institutionalised and materialities. Urban spaces offer particularly fruitful entry points to better understand the multi-faceted politics of sustainability transitions. Recent discourses on ‘sustainable cities’ are not devoid of technological, economic, social and ecological struggles. Even though geography and urban settings are recently addressed in transition research, urban sustainability transitions are rarely addressed in terms of complex spatial struggles. Relatively little is known about how urban transition politics can be understood conceptually and empirically.

Practical challenges and relevance

Transition discourses co-emerged and (often) co-develop with policy programmes, socio-technical experiments, businesses and professionals. Accepting aspirations of specific transition projects may result in post-political and technocratic problem solving. Similarly, only highlighting the flaws and post-political strategies sustains a comfortable and even lazy intellectual position. Even though this study is sceptical about many assumptions within (academic) transition discourse, it does acknowledge its potentially bold position to combine diagnosing the present with pursuing alternative ideas and projects. This uneasy position can be very fruitful and inform interesting questions, such as: to what extent are transition discourses and practices actually depoliticised in specific empirical settings? How do ‘transition managers’ and ‘transition practitioners’ re-articulate historical urban struggles? What do they win and lose by (re-)politicising urban sustainability projects? How are different sustainability-oriented transition struggles related to the city (e.g. in food, energy, housing)? Critical reflections on transition practices can strengthen the radical and creative nature of transition discourse in post-political times and inform more pluralistic, democratic and just cities.

How did I conduct this study?

In order to adequately conceptualise and empirically analyse transition politics in urban settings, I did not rely on existing methodological, conceptual frameworks in transition research because of their underlying post-political and non-spatial assumptions.

Methodology and methods

The methodology I used is called *critical constructivism*. This starting point tries to overcome a number of challenges I encountered with more orthodox methodologies (realism and constructivism). Slightly modifying a critical realist position and informed by the work of Barad (2007), critical constructivism argues that reality: (1) cannot be represented but is constantly made and remade performatively; (2) consists of socio-material entanglements; and (3) is embedded in unequal relations of power-knowledge that invokes critical scholarship. Critical constructivism is a fruitful methodology to study transition politics and the (re)making of urban spaces. The specific ontological starting point for the study is *assemblage urbanism*, highlighting the contingent, socio-material and conflict-laden character of cities and urban spaces.

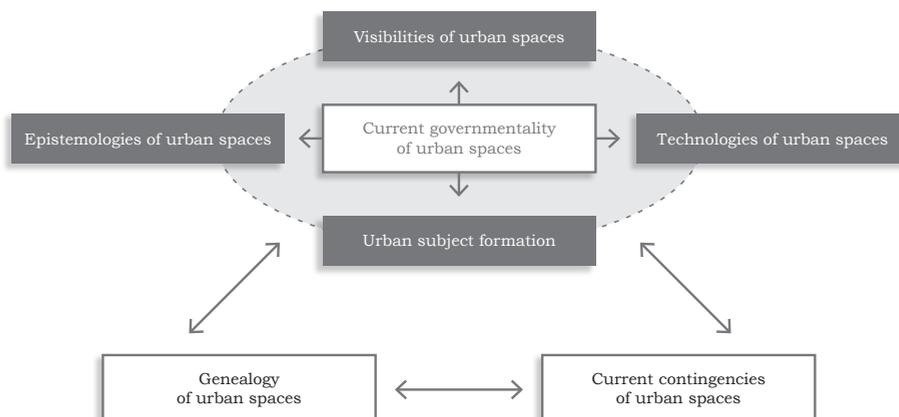
The overall methodological framework is informed by what Glynos and Howarth (2007) call a 'logic of critical explanation'. Critical explanation creatively combines what traditionally is differentiated and defined as describing, explaining and criticising. In my case, I critically explained how sustainable urban spaces are created, normalised and contested. In order to be accountable as an academic, a set of scientific qualities related to a critical constructivist epistemology is presented, namely academic schizophrenia, thick description, member check, critical triangulation, source criticism and critical reflection.

I followed four main research steps: (1) problematising transition research regarding how politics has (not) been understood in relation to urban spaces; (2) exploring alternative literatures (among others: critical urban theory and urban governmentality) as suggested by some transition scholars; (3) construing a more adequate analytical framework to conceptualise and empirically analyse transition politics associated with sustainable urban space-making; and (4) refining and reflecting on the analytical framework based on empirical insights. Utilising a case-study method, I examined two empirical urban sustainability transition settings. This empirical focus was most relevant for step one, three and four. The cases differ in terms of their distance from dominant urban regimes and practices. The first case articulates the sustainable regeneration of Rotterdam's waterfront (Stadshavens case), while the second case articulates an ecological movement called 'Transition Towns Movement' in Rotterdam and The Hague (Transition Towns case). For the empirical studies, empirical information was reconstructed via archival work (physical and digital archives), desk work (secondary literature, documents, websites and social media) and field work (interviews and observations). I analysed the empirical documents using coding methods and computer software (CAQDAS: Atlas.ti). The empirical analyses are informed by the transition analytics elaborated in Chapter 4 and by specific empirical spatio-temporal arrangements ('paradigmatic logics').

Analytical framework

A new analytical framework is developed by extending some insights from transition scholarship. I first explored insights from radical political theory to foreground the political in terms of social antagonisms and fundamental disagreements. In order to situate struggles and antagonisms in urban settings, the fields of critical urban research and urban political ecology inform a more conflictual understanding of urbanisation and urban systems. These insights frame urban transition politics as struggle without adhering to Westphalian, (neo-)liberal and anthropocentric assumptions. I then moved to literature on how urban politics can be understood in more mundane and technical governing terms. To this end, I used insights from Foucaultian research on governmentality (decentred governing practices) tailored to urban settings (urban governmentality). An urban governmentality approach highlights how (parts of) city life are problematised and how this informs political rationalities to render visible, knowable and governable urban spaces and populations. These explorations from non-traditional transition research were then confronted with some basic insights from transition research (mostly CORSA and STIA) to re-conceptualise transition politics in urban settings. In combining these literatures, I integrate three basic insights that constitute the building blocks of my transition analytics: (1) *genealogy* of urban spaces (struggle based history of urban space and problematisation); (2) *current governmentality* of urban spaces (rendering visible, knowable and governable urban spaces, individuals and populations); and (3) *current contingencies* of urban spaces (technical problematisations and radical antagonisms).

Figure S. 1 Transition analytics of urban spaces



These elements are (dialectically) related. A city park, for example, is embedded in a complex genealogy in which conflicts between industrial urbanisation and public green flared up. This struggle-based history made possible and created certain visibilities (maps, graphs), epistemologies (urban planning, landscape architecture), technologies (park regulations, fences) and subject formation (visitors, park service personnel). The city park and its governing practices – or parts thereof – can be problematised in a new situation when, for instance, there is nuisance or waste dumping (technical contingency). The city park can also be politicised when its entire presence is challenged and it has to be replaced by a residential area or a parking lot (radical contingency). Such contingencies often spill over and are loosely connected. These new contingencies are also interwoven with the genealogy (historical struggles) and can also intervene in how the city park is currently visualised, known and governed. This transition analytics enables me to critically describe and explain the rise and normalisation of specific urban spaces. It also allows me to sensitise the uneven developments associated with socio-economic and ecological developments. My transition analytics moves away from pre-given notions of nation-state politics, (neo-)liberal negotiations and human-centric conflicts as assumed in dominant transition research. A simply typology is presented that maps the most common political rationalities associated with urban sustainability: indigenous, disciplinary, techno-sovereign and neoliberal forms of urban governmentality (or eco-mentality). Importantly, a transition analytics of urban spaces is a conceptual approach, but is also a tool to critically examine urban transition politics and its democratic potential.

What are empirical findings of this study?

The transition analytics is employed to map and analyse the transition politics of urban spaces empirically. Two in-depth case studies are presented: Stadshavens case and Transition Towns case, as well as their points of contact and broader reflections.

Case 1: Stadshavens Rotterdam

The first case presents the emergence and establishment of Rotterdam's 'sustainable waterfront'. It particularly focuses on the emergence and establishment of spatial governing regimes and practices around floating houses, offices and living environments. The case reconstruction is based on three major 'genealogical episodes' of Rotterdam's modern waterfront. Episode I (1860-1960) was a period of port-industrialisation and urbanising socio-biological life (*the bio-industrial waterfront*). Episode II (1960-2000) responds to episode I and can be understood as a period of new port-city relations and integration of social and environmental values (*the neo-industrial waterfront*). In episode III (2000-now), the waterfront emerged as a field that is 'unsustainable' and can be experimented with, creating a complex web of new economic activities, architecture

concepts, green imaginaries, and educational practices. This so-called 'boulevardisation' of waterfront spaces (including floating offices) seeks to address a wide variety of urban concerns related to economic restructuring, unemployment, climate change, carbon-neutral energy and environmental quality. Land and water, then, are inscribed in a new waterfront governmentality that moves away from classical urban planning but foregrounds contingency, surprise and out-of-the-box thinking. I call the rise of an entrepreneurial and boulevard-like waterfront, eco-oriented technologies and creative-class subjects a *neo-liberal eco-waterfront*, rendered governable by a *neoliberal ecogovernmentality*. The neo-liberal eco-waterfront, however, is much more contingent than the previous episodes given the techno-legal challenges, marginalised sceptical residents, its neoliberal excesses and uneven spatial developments.

Case 2: Transition Town Rotterdam & The Hague

The second case presents the rise of a socio-ecological movement called the 'Transition Network' or the 'Transition Towns Movement'. It specifically focuses on two transition networks in the Dutch cities: Rotterdam and The Hague. These local networks are embedded in a global movement aimed at building local resilient communities in the wake of contemporary crises (e.g. peak oil, environmental destruction, economic deprivation). Again, this empirical case is structured along the lines of genealogical episodes. These episodes highlight the (intertwined) genealogies of Rotterdam's and The Hague's Transition Town. Episode I (1850s-1960s) was an era in which 'the environment' and 'ecology' emerged in direct relation to industrial activities and socio-economic conditions (*the industrial eco-city*). Episode II refers to a number of more recent decades (1960s-2000s) in which mass consumption, individualisation, state regulations and market forces shaped the meaning of ecology in Rotterdam and The Hague (*the techno-capitalist eco-city*). Episode III (2000s-now) show that and how increasing concerns about urbanisation (e.g. environmental degradation, traffic jams, mass individualisation) gave rise to what became known as TT Rotterdam and The Hague (respectively in 2009 and 2012). These networks struggle against dominant capitalist and individualistic culture and experiment with alternative projects in various domains: renewable energy sources, a sharing and gift-based economy, growing your own food, a new sense of community, alternative models on health and medicine, etc. Whereas TT Rotterdam (the Gandhi-garden) uses community gardens to explore a number of these alternatives materially, TT The Hague aims at initiating and connecting existing initiatives at a more organisational level. Such an ecogovernmentality is shaped by a mix of old and new tensions. An emerging self-governing network refers to a mix of traditional 'indigenous' knowledge and practices (farming, sharing, etc.) advanced by flexible communities in high-modern cities. This rationality gives rise to what I call the *neo-communitarian eco-city*, rendered governable by a *neo-*

communitarian eco-mentality. This new eco-mentality challenges techno-capitalist urbanism while rendering visible and knowable eco-friendly urban spaces 'from below'. Again, neo-communitarian eco-mentality is not a closed totality. In fact, a number of concerns render this governing logic contingent, such as maintaining organisational stability, convincing eco-sceptics and a 'tendency' to pursue neo-liberal lifestyles and techno-capitalist initiatives.

Points of contact and empirical reflections

These empirical studies illustrate how different case histories are associated with complex and heterogeneous governing regimes (as paradigmatic logics). Current political rationalities (as more recent paradigmatic logics) maintain prior logics, but translate old and new problematisations into innovative spatial governing regimes and practices (neo-liberal eco-mentality and neo-communitarian eco-mentality). In the case of all these paradigmatic logics, there are new struggles and contingencies. The rich case histories are not isolated and have points of contact in time and space regarding the eco-struggles, the regimes that govern eco-spaces, and the conduct of individuals and populations. The first genealogical episode (ca. 1850s-1960s) refers to an era in which industrial modernisation and urbanisation concerns created specific necessities for improving the quality of living and working conditions (*industrial eco-mentality*). Genealogical episode II (ca. 1960s-2000s) intensified the technical regimes of state institutions to govern ecological and environmental issues in the context of ongoing marketisation and capitalist innovations (*techno-capitalist eco-mentality*). In genealogical episode III (ca. 2000-now) novel governing practices inscribe eco-friendly in new communities, markets and technologies (*post-liberal eco-mentality*). Additionally, new types of holistic schemes and economic realities emerge. The prefixes 'neo' and 'post' refer to the mix of old and new knowledge and technologies, thereby creating unprecedented spatial governing arrangements. These types of eco-spaces in Rotterdam and The Hague, however, are quite unstable and self-undermining. Some technical contingencies are the stability of supportive schemes, organisational synchronisation and convincing eco-sceptics. More radical contingencies and struggles include the intensification of techno-capitalism, radical-democratic activism and experimental state interventions.

These empirical inquiries suggest that urban transition politics is not a general or generalisable phenomenon. Rather, there are different expressions of transition politics associated with different paradigmatic logics. Transition politics should be understood as a complex and heterogeneous phenomenon. Two main and opposing political forces can be identified, associated with urban sustainability transitions: eco-gentrification and democratisation. Eco-gentrification refers to the uneven distribution of wealth, green areas and spatial development, while democratisation includes all

actions that seek to undermine (spatial) inequalities and injustices, and render visible and thinkable radical alternatives.

What are the main conclusions and points for discussion?

A number of conclusions can be articulated on the basis of the conceptual and empirical inquiries. In light of these conclusions, some research contributions, strategic considerations and future research issues can be formulated.

Main conclusions

The transition politics of sustainable urban space-making should roughly be understood as an entanglement of three insights. First, a transition towards sustainable urban spaces starts with *historical* socio-material and struggle-based processes and practices. The making of green and sustainable spaces (physical, but also legal and cultural) ties together historical (often forgotten) and current struggles over institutional norms, economic models, mental frames, bodily routines and material sites. The rise of sustainable urban spaces, in this sense, starts with the historical emergence of unsustainable and unliveable urban livelihoods. Second, these struggles and problematisations gave birth to a new set of sensibilities, epistemic schemes and technical tools that seek to govern urban spaces and populations differently (i.e. more 'sustainably'). Specific *spatio-political rationalities* and governing arrangements create new legal, economic, cultural and disciplinary techniques to give rise to new urban eco-oriented subjectivities. Urban sustainability is associated with an enormous heterogeneous transitional force, it enables residential areas, urban planning, everyday use of energy, food consumption, waterfront sites and material flows to become objects of concern and intervention that offer new ways to improve the health and wellbeing of urban residents. Third, new spatial and scalar arrangements are also subject to new *tensions and conflicts*. Whereas urban transitions foster democratisation of the city, it also gentrifies urban experiences and extends existing unequal relations between urban populations. There is no actual stable and fully optimistic 'end stage'. If anything, historical struggles change form and new spatial hierarchies and tensions rise.

Academic contributions

One of the key contributions of this study is the development of a *transition analytics of urban spaces*. I present a specific analytical framing of transition processes and practices while having some implicit or underlying resonances with transition approaches. I consider my contribution as the introducing of another 'transition lingo' and heuristic by connecting genealogy, governmentality and contingency in urban settings. This combination allows one to critically understand the complexities associated with the transformation of urban space. This transition analytics has

a number of implications for STIA and CORSA. Both approaches would benefit from explicitly engaging with insights developed in radical political theory and governmentality. These works are able to counter some depoliticisations in transition theories, reframing how social and technological transitions relate to power, legitimacy and politics more broadly. Second, in order to more adequately grasp the politics associated with transitions, we have to move away from a diagnostic discourse of eco-reflexive ‘modernisation’ and quasi-rationalist and post-political notions of ‘management’. Alternatively, the notion of *transition politics* does not address politics as a separate conceptual and practical concern, but it challenges a number of core assumptions within transition discourse while extending its main ambitions. Transition politics often, albeit not always, flirts with hegemonic discourses. Unavoidably, this leads to a selective capture of contingency and complexity resulting in what I call an ‘ideological transition’. ‘Transition ethics’ (another neologism), on the contrary, is also based on absorption of contingency and transition discourse, but is used to counter hegemonic structures, targeting everyday inequalities and unwarranted suffering. Transition ethics starts with allowing ‘suffering to speak’, not the insistence to constantly ‘innovate and renew’. Third, the methodology of *critical constructivism* can reframe how transition research understands the epistemology, ontology and ethics associated with sustainability transitions. Transition research links the social and the material, either in terms of socio-technical, technological, socio-ecological or co-evolving complex systems. Critical constructivism and its situated exponent, assemblage urbanism, can account for spatial and struggle-based complexities that are often obscured in STIA and CORSA. Fourth, the *space-based and paradigmatic* genealogies and inquiries advanced in this study circumvent more narrow sector-specific, nation-specific, technology-specific or context-specific analyses. Fifth, the sheer diversity of transition discourse articulations and the fact that sustainability is rarely contested in practice is a democratic challenge. In order to critically analyse and have fruitful public debates on eco-futures, the rich and political history of (un)sustainability must be restored to challenge the dominance of techno-managerial approaches on current socio-economic and environmental concerns.

Strategic considerations

Even though this study does not present practical and management tools, some strategic considerations can be presented regarding agency in the pursuit of urban sustainability transitions. First, ‘sustainability’ plays a particular discursive role. In many documents, interviews and settings, the discursive label ‘sustainability’ neutralises radical elements associated with socio-economic and ecological conflicts. It often unfolds as a hegemonic notion that connects everyone and everything (business models, eco-minded citizens, state programmes and communal experience), thereby

mystifying underlying tensions and disagreements. I argue that in order to address today's socio-economic and socio-ecological concerns in a more critical manner, circumventing the post-political notion of 'sustainability' (or 'resilience'), it is useful to use more political categories such as 'alienation', 'exploitation', 'inequality', 'equality', 'freedom', 'solidarity' and 'justice'. Second, I argue that new projects should be furthered that reimagine and rethink 'the commons' at a global scale and transnational accommodating institutions (inspired by the United Nations from the 'old world'). New institutional rules and informal cultures (based on new eco-political communities) can be developed to sense the (urban) common need to access clean drinking water, breathing air, minimal nutritional extraction and mobility. Third, even though social enthusiasm is opposed to nitty-gritty bureaucratic details, we need eco-rebels and eco-technocrats. In order to advance democratic and ethical transitions, conflicts should be addressed both by activists and technocrats. Fourth, I argue that we do not only need more politicisation of 'sustainability' and 'green' discourses, also more politicisation in theory and academia. There is a structural inequality of valuation and legitimacy vis-à-vis scientific disciplines, social knowledge and scholarly methods (e.g. economics vs anthropology). One of the ways to become more reflexive in this regard is to adopt critical vocabularies about knowledge production in a society that is fixated on 'co-production', 'impact' and 'valorisation'. Fifth, it seems that 'change', 'innovation', 'experiments' and 'fluidity' are the new normal. Simply expecting a stable job or income and living without high-speed Internet seems to be more radical than accelerating towards a green and (smart) dynamic city. In some instances, it can be more radical and ethical to be static and reject the imperative: flexibility is freedom.

Limitations and future research

This study contains a number of conceptual and methodological limitations. I did not explore particular conceptual linkages (link between governmentality and reflexive governance literature) and empirical materials (I was not able to do ethnographic work in both empirical cases evenly). Such limitations suggest that the overall findings should be carefully reflected upon, depending on the issue. Based on the conclusions and contributions and limitations of this study, a number of scientific themes and puzzles can be explored for future academic work. This is also an invitation to other critically-minded transition scholars to explore and examine them together. They are not so much 'new' themes, but more problematics that I encountered while reading, writing and discussing about the research topic. For me, these problematics are connected to a broader ambition to advance a *critical transition scholarship and research*. First, as transition discourse is dominated by STIA and CORSA, it is often difficult to communicate with a 'transition researcher' from 'the outside'. The transition analytics I develop in this thesis is simply one attempt to

reframe what transition dynamics and practices entail. New conceptual vocabularies can be explored without adhering to the dominant discursive parameters ingrained in STIA and CORSA heuristics³⁷⁷. Radical diversity is key for a vivid academic culture. This requires a critical attitude towards dominant transition theories and a deconstructive mind-set to reframe foundational transition concepts and insights. Second and related, instead of relying on mainstream methodologies and toolkits, new ‘hammers and tweezers’ can be explored and combined. These innovations can inform critical transition scholarship, which frames universities as symbolic media through which social diagnoses, public contestation and ethical commitment can be expected. This means that critical transition scholars are not neutral or objective - or rather neutralising and objectifying - but ‘radical democratisers’ that challenge hegemonic knowledge and introduce concepts, perspectives and projects that seek to democratise social life and experience. Third, the post-political character of many transition discourses seems to downplay a crucial debate about historical and current traces in complexity theory and socio-technical innovation theories and neo-Marxist inspired class analysis. Critical transition scholarship should be able to sensitise what class complexities and dynamics are associated with everyday experiences and broader spatial rearrangements. Addressing complexity and new class struggles informs how the means of city production might be dismantled, re-appropriated and democratised by and for urban commons. Fourth, one of the political concepts that requires further exploration in relation to transitions is radical democratic theory in relation to biological, ecological and material life. Even though we have a language for different political powers, namely democracy (people’s power) and technocracy (technical/technological power), we lack discourses to account for broader eco-political communities outside Westphalian frames (‘ecocracy’). Fifth, thinking about transitions in terms of multi-scalar and multi-spatial transformations, means not only to focus more on the ‘Global South’, but also to focus on tracing and analysing (micro) transition dynamics *between* the Global North and the Global South.

³⁷⁷ As a colleague once told me: “One can perfectly conduct transition research without using the word transition”.

Nederlandse samenvatting

*“Iedere revolutie is vol romantiek,
en je kunt je vaak afvragen wat sterker is,
de revolutie of de romantiek”.*

Geert Mak

“De stad is de leermeester van de mens”.

Aesopus

Wat is het centrale onderwerp van deze studie?

Dit proefschrift onderzoekt de transitiepolitiek van stedelijke ruimtes. Tegen de achtergrond van moderne technologische, sociaal-economische en ecologische uitdagingen wordt de ‘onduurzame samenleving’ steeds vaker geproblematiseerd. Vanaf de jaren 2000 heeft een aantal discourses zich ontwikkeld en zogenaamde ‘duurzaamheidstransities’ denkbaar, zichtbaar en stuurbaar gemaakt. Duurzaamheidstransities worden gezien als fundamentele maatschappelijke omwentelingen die op lange-termijn sociale en economische systemen en praktijken verduurzamen. Dit idee heeft academici, beleidsmakers en maatschappelijke organisaties geïnspireerd om allerlei crises te diagnosticeren, bijvoorbeeld rond klimaatverandering, energie- en voedselvoorziening, gezondheidszorg en stedelijke mobiliteit.

Een onderbelichte, maar zeer belangrijke kwestie, betreft het probleem van de *politiek*. In toenemende mate bekritiseren wetenschappers transitietheorieën en -discourses voor het negeren van fundamentele maatschappelijke strijd. Ik onderschrijf deze kritiek en beargumenteer dat de meeste transitietheorieën en -praktijken ‘gedepolitiseerd’ zijn. Depolitisering, of postpolitisering, is een historische conditie waarin het idee domineert dat maatschappelijke problemen het best kunnen worden begrepen en aangepakt door pragmatische onderhandelingen, goede management skills en technologische innovaties.

Ik betoog dat transitieonderzoek op verschillende manieren ‘lijdt’ aan depolitisering als gevolg van een specifiek begrip van transitiepolitiek. Dit is problematisch gezien de transformatieve ‘belofte’ van wetenschappelijke en maatschappelijke duurzaamheidstransitieprojecten. Om voorbij gedepolitiseerde kaders in transitieonderzoek te komen, bestudeer ik transitiepolitiek in stedelijke omgevingen. Steden zijn geschikte

contexten om transitiepolitiek te analyseren, gezien hun rijke conflictueuze geschiedenis, hun sociaal-materiele samenstelling, en hun rol in de opkomst van onduurzaamheid alsmede duurzaamheidsambities.

Doelstelling en onderzoeksvragen

Dit onderzoek beoogt de transitiepolitiek van duurzame ruimtecreatie in de stad te beschrijven en te verklaren. Transitiepolitiek definieer ik als de lange-termijn strijd verbonden aan de creatie, normalisering en contestatie van een fenomeen, in dit geval duurzame stedelijke ruimtes. Deze studie is zowel conceptueel als empirisch van aard. Daarmee poogt het een bijdrage te leveren aan theorievorming rond duurzaamheidstransities, maar ook praktijkinzichten en handelingsperspectieven te ontwikkelen. De vraag die richtinggevend was voor dit onderzoek is: *Hoe worden duurzame stedelijke ruimtes gecreëerd, genormaliseerd en gecontesteerd; en wat betekent dit voor het hedendaagse streven naar stedelijke duurzaamheidstransities?* Deze vraag is opgedeeld in vier deelvragen die overeenkomen met de hoofdstukken van dit onderzoek.

- Deelvraag 1: Hoe wordt politiek in de stedelijke omgeving geadresseerd en begrepen in transitieonderzoek? [Hoofdstuk 3]
- Deelvraag 2: Hoe kan de creatie, normalisering en contestatie van duurzame stedelijke ruimtes worden geconceptualiseerd en empirisch worden geanalyseerd? [Hoofdstuk 2 en 4]
- Deelvraag 3: Hoe kan de creatie, normalisering en contestatie van duurzame stedelijke ruimtes empirisch worden begrepen? [Hoofdstuk 5, 6 en 7]
- Deelvraag 4: Wat betekenen deze inzichten voor het streven naar stedelijke duurzaamheidstransities in de 21^{ste} eeuw? [Hoofdstuk 8]

Waarom heb ik dit onderzoek verricht?

Hoewel duurzaamheidstransitiediscoursen aan populariteit winnen, krijgt het probleem van transitiepolitiek in de stedelijke omgeving nauwelijks aandacht. Dit is een uitdaging voor academici, professionals en allerlei publieken die bezig zijn met een duurzame toekomst, nieuwe stadsopbouw en sociale verandering. Dit onderzoek heeft een academische en praktische relevantie.

Academische uitdagingen en relevantie

Transitieonderzoek wordt gedomineerd door twee benaderingen: de Socio-Technische Innovatie Benadering (in het Engels: *Socio-Technical Innovation Approach*, STIA) en de Complex Reflexieve Sturings Benadering (in het Engels: *COMplex-Reflexive Steering Approach*, CORSA). Deze benaderingen hebben een ander conceptueel begrip van 'een

transitie'. Mijn problematisering van duurzaamheidstransitiediscoursen richt zich op de intersectie van twee uitdagingen in transitieonderzoek (binnen STIA en CORSA): *het politieke* en *de stedelijke ruimte*. Ondanks het feit dat er binnen transitieonderzoek meer aandacht is gekomen voor sociale conflicten en strijd verbonden aan transitieprocessen en -praktijken, wordt transitiepolitiek binnen dit kennisveld op drie manieren gedepolitiseerd, te weten via: (1) Westfaalse transitiepolitiek (strijd binnen en tussen natiestaten en instituties); (2) (neo-)liberale transitiepolitiek (strijd binnen en tussen niet-statelijke netwerken en markten); en (3) antropocentrische transitiepolitiek (strijd binnen en tussen menselijke samenlevingen).

Ik betoog dat deze dominante depolitiserende frames ontoereikend zijn om belangrijke vormen van strijd rond duurzaamheidstransities adequaat te begrijpen. In plaats van het simpelweg vooronderstellen van natiestatelijke instituties, deliberatieve arena's en menscentrische politiek, beargumenteer ik dat het vruchtbaarder is transitiepolitiek te beschouwen als complexe *ruimtescheppende* processen en praktijken. Een meer ruimtelijk begrip van transitiepolitiek maakt het mogelijk voorbij de depolitiserende frames te denken, door meer waarde te hechten aan gedecentreerde ruimtelijkheid, de niet-institutionaliseerbaarheid van de maatschappij en de materiële werkelijkheid. *Stedelijke ruimtes* zijn buitengewoon interessant om het complexe politieke karakter van duurzaamheidstransities te begrijpen. Het recente denken, spreken en handelen in termen van 'de duurzame stad' is verknoot met allerlei technologische, economische, sociale en ecologische disputen. En hoewel de aandacht voor geografische dynamiek en de stedelijke omgeving is toegenomen in het academische transitiediscours, is er nog weinig begrip van de complexe ruimtelijke strijd verbonden aan stedelijke duurzaamheidstransities. Er is conceptueel en empirisch relatief weinig bekend over stedelijke transitiepolitiek.

Praktische uitdagingen en relevantie

De opkomst van transitiedenken en transitiespreken gaat (vaak) gepaard met de ontwikkeling van beleidsprogramma's, sociaal-technische experimenten, bedrijfsstrategieën en professionele praktijken. Het onderschrijven van de ambities van transitieprojecten kan daarom resulteren in post-politieke en technocratische oplossingsrichtingen. Daarentegen, wie benadrukt dat transitiedenken gebrekkig is en er slechts post-politieke strategieën op nahoudt, suggereert een comfortabele en zelfs luie intellectuele positie. Ondanks mijn scepsis ten aanzien van veel vooronderstellingen binnen (academische) transitiediscoursen, erken ik de spanningsvolle positie van het diagnosticeren van hedendaagse problemen én het streven naar alternatieve denken en samenlevingsvormen. Deze ongemakkelijke stellingname kan juist vruchtbaar zijn en interessante vragen oproepen, zoals: in hoeverre zijn transitiediscoursen en -praktijken eigenlijk postpolitiek in specifieke empirische contexten? Hoe vertalen

‘transitiemanagers’ en ‘transitiedoeners’ historische conflicten rond verstedelijking? Hoe zijn verschillende strijdpunten en duurzaamheidstransities verknoot in stedelijke ruimtes (bijv. rond voedsel, energie, huisvesting)? En wat winnen en verliezen ‘transitieprofessionals’ als ze stedelijke duurzaamheidsprojecten politiseren? Het kritisch reflecteren op transitiepraktijken kan de radicale en creatieve aard van transitiediscoursen versterken. Bovendien is het van groot belang democratische en rechtvaardige steden en toekomsten mogelijk te maken in onze postpolitieke tijd.

Hoe heb ik dit onderzoek verricht?

Om transitiepolitiek in de stedelijke omgeving adequaat te conceptualiseren en empirisch te analyseren, heb ik gepoogd weinig afhankelijk te zijn van methodologieën en conceptuele kaders waarvan de onderliggende aannames postpolitiek en niet-ruimtelijk zijn.

Methodologie en methoden

De methodologie van dit onderzoek is *kritisch constructivisme*. Dit vertrekpunt gaat voorbij aan een aantal beperkingen die ik ondervond met meer orthodoxe methodologieën (realisme en constructivisme). Geïnspireerd door kritisch realisme en het werk van Karen Barad (2007), stelt kritisch constructivisme dat de realiteit: (1) niet kan worden gerepresenteerd maar op performatieve wijze wordt geproduceerd en gereproduceerd; (2) bestaat uit sociaal-materiele verknoppingen en verwickelingen; en (3) is ingebed in ongelijke macht-kennis relaties die aansporen tot kritische wetenschapsbeoefening. Ik betoog dat kritisch constructivisme een vruchtbare methodologie is om de transitiepolitiek van stedelijke ruimtes te onderzoeken. Het meer specifieke ontologische vertrekpunt van deze studie is *assemblage urbanisme*, dat het contingente, sociaal-materiele en conflictueuze karakter van steden en stedelijke ruimtes benadrukt.

Het methodologische kader is geïnformeerd door wat Glynos en Howarth (2007) noemen de ‘logica van de kritische verklaring’. Kritische verklaring combineert wat traditioneel wordt beschouwd als separate onderzoekspraktijken: beschrijven, verklaren en bekritisieren. In de context van deze studie verklaar ik op kritische wijze hoe duurzame stedelijke ruimtes worden gecreëerd, genormaliseerd en gecontesteerd. Om me te verantwoorden als academicus, hanteer ik een aantal wetenschappelijke criteria en kwaliteiten die passen bij een kritisch constructivistische epistemologie, namelijk academische schizofrenie, *thick description*, *member check*, kritische triangulatie, bronnenkritiek en kritische reflectie.

Het conceptueel deel van dit onderzoek volgt vier stappen. Ten eerste, het problematiseren van stedelijke transitiepolitiek binnen het transitieonderzoeksveld. Ten tweede, het verkennen van alternatieve inzichten en literaturen (onder meer

kritisch stedelijk onderzoek en stedelijke governmentaliteit) zoals gesuggereerd door sommige transitieonderzoekers. Ten derde, het ontwikkelen van een meer adequaat analytisch kader om stedelijke transitiepolitiek te conceptualiseren en empirisch te analyseren. Ten vierde, het verfijnen van en reflecteren op het analytisch kader op basis van de empirische inzichten. Voor het empirische onderzoek maak ik gebruik van de gevalsstudiemethode. Ik heb twee empirische cases van stedelijke duurzaamheidstransities nader onderzocht. Deze empirische focus hoort bij de eerste, derde en vierde stap van het conceptueel onderzoek.

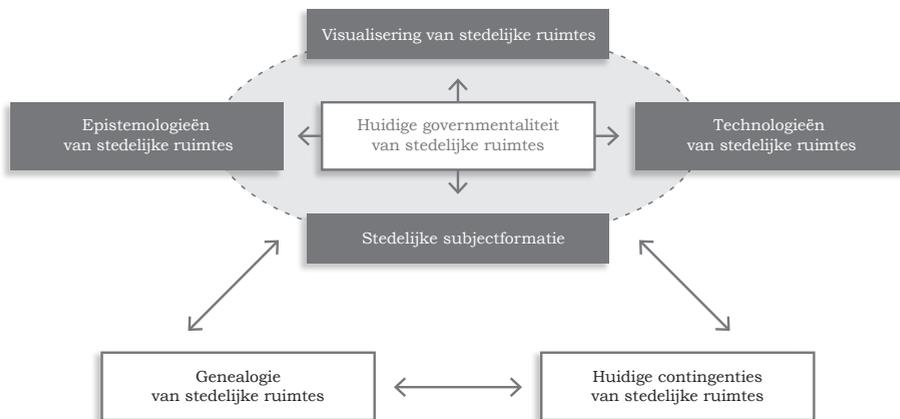
De empirische cases verschillen in termen van hun relatieve afstand tot dominante stedelijke regimes en praktijken. De eerste casus betreft de verduurzaming van het Rotterdamse stadshavengebied (casus Stadshavens). De tweede casus betreft een transnationale sociaal-ecologische beweging, genaamd *Transition Towns*, in Rotterdam en Den Haag (casus *Transition Towns*). Voor de empirische studies heb ik empirisch materiaal verzameld via archiefwerk (fysieke en digitale archieven), bureauonderzoek (secondaire literatuur, documenten, websites en sociale media) en veldwerk (interviews en observaties). Ik heb het empirisch materiaal geanalyseerd met codeermethoden en met behulp van computersoftware voor kwalitatieve data analyse (Atlas.ti). De empirische analyses zijn geïnformeerd door de transitie-analytiek (zoals gepresenteerd in Hoofdstuk 4) en door sturingsarrangementen die op specifieke wijze zijn georganiseerd in ruimte en tijd (zogenaamde 'paradigmatische logica's').

Analytisch raamwerk

Ik heb een analytisch kader en vocabulaire ontwikkeld naar aanleiding van enkele suggesties binnen het transitieonderzoeksveld. Ik heb ruwweg twee onderzoeksvelden verkend buiten het meer traditionele transitieonderzoek. Ten eerste heb ik geput uit radicale politieke theorie om transitiepolitiek beter te begrijpen in termen van fundamentele contestatie en sociale antagonismen. Om tot een beter begrip te komen van de conflictueuze en contingente natuur van stedelijke systemen en mens-natuur relaties, heb ik de disciplines kritisch stedelijk onderzoek en stedelijke politieke ecologie geraadpleegd. Deze inzichten kweken een basisbegrip van stedelijke transitiepolitiek als ruimtelijke en sociaal-materiele strijd zonder Westfaalse, (neo-)liberale en antropocentrische uitgangspunten. Ten tweede heb ik me gericht op wetenschappelijke inzichten die stedelijke politiek begrijpen in termen van pragmatische overwegingen en alledaagse sturingspraktijken. Hiervoor heb ik geput uit Foucaultiaanse literatuur over governmentaliteit (gedecentreerde sturingspraktijken) in de stedelijke context (stedelijke governmentaliteit). Een stedelijke governmentaliteitsbenadering benadrukt hoe (een deel van) het stadsleven wordt geproblematiseerd en hoe politieke rationaliteiten stedelijke ruimtes en populaties vervolgens zichtbaar, denkbaar en stuurbaar maken.

De inzichten uit deze wetenschappelijke disciplines zijn gekoppeld aan enkele basisinzichten uit transitieonderzoek (vooral CORSA en STIA) om tot een nieuwe conceptualisering van transitiepolitiek in de stedelijke omgeving te komen. Na het verkennen en uitwerken van de contactpunten tussen deze wetenschappelijke inzichten, ben ik gekomen tot drie centrale bouwstenen van een transitie-analytiek van stedelijke ruimtes: (1) *genealogie* van stedelijke ruimtes (conflictueuze historie van huidige stedelijke problematisering); (2) *huidige governmentaliteit* van stedelijke ruimtes (zichtbaar, kenbaar en stuurbaar maken van stedelijke ruimtes, individuen en populaties); en (3) *huidige contingenties* van stedelijke ruimtes (technische problematisering en radicale antagonismen).

Figuur S. 1 Transitie-analytiek van stedelijke ruimtes



Deze onderdelen zijn (dialectisch) met elkaar verbonden. Een stadspark is bijvoorbeeld ingebed in een complexe genealogie waarin industriële verstedelijking en publiek groen streken om voorrang. Deze conflictueuze geschiedenis heeft nieuwe visualisaties (plattegronden, grafieken), epistemologieën (stadsplanning, landschapsarchitectuur), technologieën (parkenbeleid, hekwerk) en subjectformaties (bezoekers, schoonmaakdiensten) mogelijk gemaakt. Het stadspark en deze sturingspraktijken, of onderdelen hiervan, kunnen worden geproblematiseerd in een nieuwe situatie als er bijv. overlast of vervuiling is (technische contingentie). Er kan ook worden gepolitiseerd als parken bijvoorbeeld moeten wijken voor een nieuwe woonwijk of parkeerplaats (radicale contingentie). Dergelijke contingenties lopen vaak in elkaar over. Deze nieuwe contingenties hebben op hun beurt weer een complexe geschiedenis die verweven is met de genealogie van het stadspark, en kunnen eveneens inbreken in hoe het stadspark nu zichtbaar, kenbaar en stuurbaar wordt gemaakt.

Deze transitie-analytiek maakt het mogelijk de opkomst en normalisering van specifieke stedelijke ruimtes kritisch te beschrijven en te verklaren. Het maakt tevens een kritische duiding mogelijk van de wijze waarop duurzame verstedelijking gepaard gaat met ongelijke sociaal-economische en ecologische ontwikkelingen. Deze analytische methode vermijdt vooronderstellingen waarbij natie-staatelijke politiek, rationele machtsvrije onderhandelingen en mens-centrische conflicten centraal staan. Op basis van bestaande inzichten over milieupolitiek kan enige variatie worden aangebracht in de politieke rationaliteit rond duurzame verstedelijking. Zo kunnen bijvoorbeeld ‘inheemse’, ‘disciplinerende’, ‘techno-soevereine’ en ‘neoliberale’ stedelijke governmentaliteit (of eco-mentaliteit) worden onderscheiden. Deze eco-mentaliteiten benadrukken verschillende probleemvelden, kennisdomeinen, machtstechnieken en identiteitsvormen die gezamenlijk de ‘duurzame stad’ stuurbaar maakt. Omdat deze transitie-analytiek een kritische duiding van stedelijke transitiepolitiek mogelijk maakt, benadrukt het tevens mogelijkheden voor democratische en rechtvaardige verstedelijking.

Wat zijn de empirische bevindingen van deze studie?

De transitie-analytiek is gebruikt om de transitiepolitiek van stedelijke ruimtecreatie empirisch te beschrijven en te analyseren. Na de twee gevalsstudies, zijn hun contactpunten nader onderzocht en beschouwd.

Casus 1: Rotterdamse Stadshavens

De eerste casus beschrijft de opkomst en normalisering van het duurzame stadshavengebied van Rotterdam. Het richt zich specifiek op de opkomst van regimes en praktijken die drijvende woningen, kantoren en leefomgevingen mogelijk en stuurbaar maken. Deze casusstudie is grofweg ingedeeld in drie ‘genealogische episodes’ van de verduurzaming van het Rotterdamse stadshavengebied. Deze episodes volgen elkaar op en verhouden zich op complexe wijze tot elkaar. Episode I (ca. 1860-1960) verwijst naar een periode van moderne havenindustrialisering en de verstedelijking van sociaal-biologisch leven rond het havengebied (*het bio-industriële stadshavengebied*). Episode II (ca. 1960-2000) problematiseert industriële verstedelijking en hernieuwt industriële stad-haven relaties, onder meer via de selectieve integratie van sociale en ecologische waarden (*het neo-industriële stadshavengebied*). Episode III (ca. 2000-heden) markeert een periode waarin de traditionele havenconomie verder wordt geproblematiseerd als ‘onduurzaam’ en opkomt als een experimenteveld waarin nieuw type economische activiteiten, bouwconcepten, groene vergezichten en onderwijspraktijken worden verknoot. Deze zogenaamde ‘boulevardisering’ van het havengebied (inclusief drijvende kantoren) poogt daarmee uiteenlopende problemen te adresseren, zoals economische herstructurering, werkgelegenheid, klimaatverandering

en CO₂-uitstoot. Land en water worden zodoende ingeschreven in een nieuwe (haven) stedelijke governmentaliteit. Hierbij wordt afscheid genomen van traditionele moderne stadsplanning en gekozen voor planologische verassingen en lokale spontaniteit.

Ik duid de combinatie van deze boulevard-achtige stadshavenontwikkeling, eco-georiënteerde techno-innovaties en creatief ondernemerschap aan met het begrip *neoliberale eco-stadshavens*. De politieke rationaliteit die deze stadshavenontwikkeling zichtbaar, denkbaar en stuurbaar maakt noem ik een *neoliberale eco-mentaliteit*. De opkomst van neoliberale eco-ruimtes is grillig en onderhevig aan onenigheid over de technisch-juridische aard van drijvende objecten, de belangen van omwonenden, verregaande neoliberalisering en ongelijke ruimtelijke ontwikkelingen.

Casus 2: Transition Town Rotterdam & Den Haag

The tweede casusstudie beschrijft de opkomst van een sociaal-ecologische beweging genaamd *Transition Towns Movement* (of *Transition Network*). Twee transitienetwerken in de steden Rotterdam en Den Haag worden specifiek belicht. Deze lokale netwerken zijn ingebed in een mondiale bottom-up beweging gericht op verduurzaming en lokale veerkracht tegen de achtergrond van hedendaagse problemen zoals de olieschaarste, klimaatveranderingen economische crisis. Gelijk aan de eerste empirische studie bestaat de opbouw van deze gevalsstudie eveneens uit drie genealogische episodes. De eerste twee episodes presenteren de verweven genealogie van *Transition Town* (TT) Rotterdam en Den Haag. Episode I (ca. 1850-1960) kenschetst een periode waarin problemen rond industriële activiteiten en sociaal-economische werk- en leefomstandigheden in toenemende mate worden gecontroleerd via de 'omgeving' en het 'milieu' (*de industriële eco-stad*). Episode II (ca. 1960-2000) beslaat een meer recente periode waarin 'milieu' en 'ecologie' ingang vond via massaconsumptie, individuele leefstijlen en wetgeving in steden als Rotterdam en Den Haag (*de techno-kapitalistische eco-stad*). Episode III (ca. 2000-heden) illustreert hoe het recente stadsleven in combinatie met meer recente problematiseringen (bijv. klimaatverandering, fijnstofontwikkeling, massa-individualisering) de ontstaansvoorwaarden creëerde voor TT Rotterdam en Den Haag (respectievelijk in 2009 en 2012). Deze TT netwerken strijden tegen het dominante kapitalistisch-individualistische cultuur en experimenteren met alternatieve projecten, zoals hernieuwbare energiebronnen, deel- en geefconomie, eigen voedselproductie, nieuwe gemeenschapszin, en radicaal andere handelingsperspectieven voor gezondheid en medicijnen. Hoewel TT Rotterdam (c.q. de Gandhituin) een open stadstuin maakt om zulke alternatieven concreet te verkennen, tracht TT Den Haag dergelijke ideeën en initiatieven te verbinden via (vaak informele) netwerkpraktijken.

De politieke rationaliteit die dit type duurzame ruimtecreatie mogelijk maakt kan worden aangeduid met *neo-communitaire eco-mentaliteit*. Deze eco-mentaliteit maakt de *neo-communitaire eco-stad* mogelijk via flexibele zelfsturende netwerken

‘van onderop’ die voormoderne kennis en praktijken (zoals landbouw, zelfvoorziening, delen) doen gelden in laatmoderne steden. Hierbij spelen diverse partijen een belangrijke rol, zoals lokale overheden, bedrijven en andere maatschappelijke partijen. Ook in deze empirische context is er sprake van nieuwe contingenties en contestaties. Er ontstaan nieuwe problemen zoals gebrekkige organisatorische continuïteit, het moeten overtuigen van eco-sceptici en sporadische ‘terugvalneigingen’ in neoliberale leefstijlen en techno-kapitalistische oplossingen.

Contactpunten en empirische reflecties

De empirische studies tonen aan hoe de verschillende casus genealogieën uitdrukking geven aan heterogene stedelijke sturingsregimes. Meer recente politieke rationaliteiten incorporeren oude en nieuwe stedelijke problemen en smeden deze om tot nieuwe ruimtescheppende sturingspraktijken (neo-liberale en neo-communitaire eco-mentaliteit). In beide gevallen ontstaan er tevens nieuwe problemen en onenigheden rond duurzame verstedelijking. De rijke casusgenealogieën kennen een aantal contactpunten in ruimte en tijd ten aanzien van de strijd om leefbare ruimtes en de regimes die eco-ruimtes en het gedrag van individuen en populaties stuurbaar maken. Deze contactpunten kunnen eveneens worden begrepen in termen van genealogische episoden: industriële eco-mentaliteit (episode I ca. 1850-1960); en techno-kapitalistische eco-mentaliteit (episode II ca. 1960-2000). In genealogische episode III (ca. 2000-heden) voegen nieuwe sturingspraktijken eco-vriendelijke burgers in in nieuwe gemeenschappen, markten en technologieën (*post-liberale eco-mentaliteit*). Post-liberaal verwijst naar een periode waarin de noties van vrije individuele keuzes in toenemende mate ongeloofwaardig wordt.

Ik gebruik de noties ‘neo’ en ‘post’ om te verwijzen naar een mix van oude en nieuwe zichtvelden, kennisbronnen en technologieën, die gezamenlijk unieke stedelijke sturingsarrangementen maken. Deze eco-mentaliteiten in Rotterdam en Den Haag zijn contingent en deels zelfondermijnend. Pragmatische en technische contingenties verwijzen hier naar de veranderlijkheid van eco-praktijken, gebrekkige afstemming tussen organisaties en overtuigingsnoodzaak richting eco-sceptici. Meer fundamentele spanningen zijn er ook, zoals de wederkeer van techno-kapitalistische projecten, radicaal-democratisch activisme en experimentele staatsinterventies.

De empirische studies illustreren dat stedelijke transitiepolitiek allerm minst één fenomeen is maar zich in velerlei vormen manifesteert. Transitiepolitiek is afhankelijk van historisch en ruimtelijk ingebedde paradigmatische logica's. De creatie van post-liberale ruimtes gaat gepaard met onderliggende politieke vragen. In beide cases is duidelijk sprake van twee tegengestelde ruimtelijk-politieke krachten in stedelijke duurzaamheidstransities: eco-gentrificatie en democratisering. Terwijl eco-gentrificatie verwijst naar een ongelijke verdeling van rijkdom, groen en ruimtelijke

ontwikkeling, behelst democratisering alle acties die (ruimtelijke) ongelijkheden en onrechtvaardigheden ondermijnen en radicale alternatieven zichtbaar en denkbaar maken.

Wat zijn de belangrijkste conclusies en discussiepunten?

Op basis van bovenstaande onderzoeken kan een aantal conclusies worden geformuleerd. Op basis van deze inzichten worden enkele wetenschappelijke bijdragen, strategische handelingsoverwegingen en toekomstig onderzoekthema's besproken.

Belangrijkste conclusies

De transitiepolitiek van duurzame ruimtecreatie kan worden begrepen als de verstrengeling van drie basisinzichten. Allereerst vangt een transitie richting duurzame stadsontwikkeling aan met *historisch* ingebedde sociaal-materiele conflictueuze praktijken. De creatie van groene en duurzame ruimtes (fysieke, maar ook juridische en culturele ruimtes) hangt af van de verknoping van vroegmoderne (vaak vergeten) en hedendaagse conflicten rond institutionele normen, economische modellen, mentale kaders, lichamelijke routines en de functie van fysieke plaatsen. De opkomst van duurzame stedelijke ruimtes zou daarom moeten worden begrepen tegen de achtergrond van de opkomst van de 'onduurzame stad', van onleefbare en onwerkbare situaties. Ten tweede, de rationalisering van zulke spanningen leidt tot de opkomst van een nieuwe set visualisaties, kennischema's en technische interventiemogelijkheden die (on)duurzame ruimtes en gedragingen stuurbaar maken. Allerhande *sturingsarrangementen* hanteren juridische, economische, culturele, morele en spirituele technieken om nieuwe stedelijke eco-subjecten te vormen. Stedelijke duurzaamheid gaat gepaard met enorme heterogene transitiekracht, het transformeert woongebieden, stadsplanning, dagelijks energiegebruik, voedselconsumptie, oude havengebieden en materiaalstromen tot objecten van zorg en interventie die de gezondheid en welzijn van stadsbewoners poogt te verbeteren. Ten derde, nieuwe sturingsarrangementen die georganiseerd zijn op verschillende schaalniveaus produceren ook *nieuwe spanningen*. Stedelijke transitie genereren weliswaar democratische experimenteerruimte in de stad, ze gentrificeren stedelijke ervaringen en reproduceren ongelijkheid tussen groepen en populaties. Er is geen nieuwe optimistische 'stabiele' situatie. Historische spanningen veranderen van vorm en creëren nieuwe stedelijke machtsrelaties.

Wetenschappelijke bijdragen

De belangrijkste wetenschappelijke bijdrage van deze studie is de *transitie-analytiek van stedelijke ruimtes*. Hoewel het gebruik maakt van wat ongebruikelijke transitieconcepten, adresseert dit analytisch kader transitieprocessen en -praktijken op een

manier die resoneert met de transitiewetenschap. Ik beschouw mijn onderzoek als een introductie van een nieuw 'transitiedialect' (met begrippen als 'genealogie' en 'ecomenaliteit') binnen het bestaande transitievocabulaire. Transitie-analytiek maakt een kritische duiding mogelijk van kleine en grote transities van stedelijke ruimtes. Deze analytiek heeft consequenties voor de dominantie transitiebenaderingen STIA en CORSA. Beide benaderingen zouden bijvoorbeeld verrijkt kunnen worden door expliciet de dialoog - of confrontatie - aan te gaan met inzichten uit radicale politieke theorie en governmentaliteitsonderzoek. Deze meer kritisch-reflexieve kennisvelden kunnen depolitisering binnen transitietheorieën deconstrueren en sociale en technologische transities verbinden aan sociale antagonismen, machtstrategieën en politiek in bredere zin. Ten tweede, om een beter begrip te kweken van transitiepolitiek moeten we afscheid nemen van diagnostische discoursen rond eco-reflexieve 'modernisering' en de quasi-rationalistische en post-politieke notie 'management'. De notie *transitiepolitiek* is een alternatief voor deze diagnostieken en probeert politiek als radicale strijd en contestatie als basisgedachte te verweven met transitiedenken. Zo wordt het mogelijk een aantal centrale vooronderstellingen binnen transitiediscoursen te ondermijnen maar tegelijkertijd transitieambities te verdiepen. Dit leidt onherroepelijk tot een selectieve inkapseling van contingentie en complexiteit in transitiecontexten. Bestaande regimes worden weliswaar getransformeerd, maar met technische en pragmatische methoden. Deze strategisch-selectieve inkapseling is onderdeel van wat ik *transitie-ideologie* noem. *Transitie-ethiek* (ook een neologisme), daarentegen, is weliswaar ook gebaseerd op selectieve absorptie van contingentie en het transitiediscourse, maar bestrijdt hegemoniale structuren en maatschappelijke ongelijkheden. Transitie-ethiek is een belangrijk oriëntatie die hoort bij transitiepolitiek omdat het poot 'onrechtvaardig lijden' te laten spreken in plaats van permanent te 'innoveren' en te 'vernieuwen'. Ten derde, de methodologie genaamd *kritisch constructivisme* kan bestaand transitieonderzoek verder ondersteunen door epistemologie, ontologie en ethiek van duurzaamheidstransities te verknopen. Transitiebenaderingen verbinden het sociale met het materiele, bijvoorbeeld met begrippen als socio-technisch, socio-ecologisch of co-evoluerende complexe systemen. Kritisch constructivisme, alsook de meer gesitueerde ontologie *assemblage urbanisme*, kunnen op methodologisch niveau ruimtelijke en conflictueuze elementen toevoegen die vaak afwezig zijn in STIA en CORSA. Ten vierde, ruimtelijk georiënteerde genealogieën en verkenningen zijn in staat om voorbij statische systeemgrenzen, zoals sectoren, landen, technologieën of lokale contexten te denken. Een meer flexibel en paradigmatisch perspectief stelt juist de combinatie en heterogeniteiten van systeemgrenzen centraal. Ten vijfde, de toegenomen bekendheid en populariteit van transitiediscoursen en de consensus rond een 'duurzame' transitie is een wetenschappelijk-democratisch probleem. Om het streven naar eco-toekomst meer kritisch te duiden en te bediscussiëren, zou

transitieonderzoek meer gebruik kunnen maken van de rijke politieke geschiedenis van (on)duurzaamheid. Op deze wijze zou de dominantie van technologische- en managementbenaderingen rond sociaal-economische en ecologische vraagstukken kunnen worden doorbroken.

Strategische overwegingen

Ondanks het feit dat deze studie geen praktische tips of managementtools biedt, formuleert het enkele belangwekkende overwegingen ten aanzien van het streven naar stedelijke duurzaamheidstransities. Allereerst speelt duurzaamheid een cruciale discursieve rol. In veel documenten, interviews en situaties neutraliseert het label 'duurzaamheid' allerlei radicale elementen die verbonden zijn met eco-sociale conflicten. Duurzaamheid ontvouwt vaak als een hegemoniale notie die alles en iedereen met elkaar in verbinding brengt (business modellen, milieuvriendelijke burgers, overheidsprogramma's, gemeenschapszin, materiaalstromen, etc.). Hierdoor worden fundamentele onenigheden en spanningen gemystificeerd. Ik betoog dat elke discussie over huidige sociale, economische en ecologische problemen en een duurzame toekomst moet worden onderworpen aan kritische reflectie. Deze reflecties zouden post-politieke noties als duurzaamheid (maar bijv. ook 'veerkracht') moeten bevragen en meer politieke fenomenen en categorieën moeten introduceren zoals 'vervreemding', 'uitbuiting', '(on)gelijkheid', 'vrijheid', 'solidariteit' en 'rechtvaardigheid'. Twee, ik betoog dat transitieprojecten 'het gemeenschappelijke' (of 'meent', 'gemeente') verder moeten verbeelden en doordenken op een mondiale schaal, waarbij transnationale instituties een centrale rol spelen (Verenigde Naties uit de 'oude wereld' als inspiratiebron). Er zouden bijvoorbeeld nieuwe institutionele regels en informele culturen kunnen worden ontwikkeld gebaseerd op eco-politieke gemeenschapsidealen zoals voldoende schoon drinkwater, schone lucht, minimale hoeveelheid voedingsstoffen en een minimaal mobiel leven. Drie, hoewel maatschappelijk enthousiasme vaak tegenover bureaucratische details wordt gesteld, hebben we beiden nodig: eco-rebellen én eco-technocraten. Vier, ik beargumenteer dat we niet alleen meer politisering nodig hebben in 'duurzame' en 'groene' publieke discoursen, maar ook in de theorie en de academie. Er zijn structurele ongelijkheden in hoe bepaalde wetenschappelijke disciplines, kennis en methoden worden gewaardeerd en gelegitimeerd. Denk bijvoorbeeld aan het verschil in maatschappelijke waardering tussen economie en antropologie. Om reflexiviteit te ontwikkelen aangaande deze ongelijkheden kunnen er meer kritische begrippen worden geïntroduceerd in het wetenschappelijk bedrijf dat gefixeerd lijkt op 'coproductie', 'impact' en 'valorisatie'. Vijf, het lijkt erop dat 'verandering', 'innovatie', 'experimenteren' en 'fluïditeit' het nieuwe normaal zijn. Het eisen van een stabiele baan of inkomen en leven zonder internet lijkt radicaler te zijn geworden dan een versnelling richting een groene of slimme dynamische stad. In sommige gevallen kan het radicaler

en ethischer zijn om geen verandering te eisen en het imperatief ‘flexibiliteit is vrijheid’ af te wijzen.

Beperkingen en toekomstig onderzoek

Dit proefschrift heeft een aantal conceptuele en methodologische beperkingen. Ik heb bepaalde conceptuele dwarsverbanden (bijv. de relatie tussen governmentaliteit en reflexieve sturing) en empirische omstandigheden (bijv. veldonderzoek in casus Stadshavens) niet verkend. Dergelijke limitaties betekenen dat de bevindingen en conclusies van dit onderzoek zorgvuldig moeten worden geïnterpreteerd, afhankelijk van het thema of vraagstuk. Op basis van de bevindingen en beperkingen van deze studie kan een aantal toekomstige wetenschappelijke thema's en vragen worden verkend. Ik presenteer deze verkenningen tegelijk als een uitnodiging richting andere (kritische transitie)onderzoekers om gezamenlijk verder te exploreren. Ik kwam bepaalde problematieken tegen tijdens mijn onderzoekswerk, al lezend, schrijvend en discussiërend.

Deze problematieken behoeven meer aandacht maar zijn allerm minst geïsoleerd. Ze vormen onderdeel van een bredere ambitie om *kritisch transitieonderzoek* verder te agenderen en te bestendigen. Ten eerste, het wetenschappelijke transitiediscours wordt gedomineerd door STIA en CORSA, waardoor het vaak moeilijk communiceren is met (transitie)onderzoekers ‘van buiten’. De transitie-analytiek die ik heb ontwikkeld is één manier om transitiedynamieken en -praktijken inzichtelijk te maken op een manier die voorbij gaat aan de genormaliseerde transitietaal. Er kunnen nieuwe conceptuele vocabulaires worden verkend zonder daarbij telkens te hoeven passen binnen de parameters van STIA en CORSA heuristieken³⁷⁸. Dit betekent ook dat de onderzoeker een kritische houding heeft jegens dominante transitietheorieën en een deconstructieve mind-set om centrale transitieconcepten en -inzichten opnieuw te doordenken. Ten tweede, in plaats van het rusten op *mainstream* methodologieën en methoden, zouden nieuwe methodische ‘hamers en pincetten’ kunnen worden verkend en gecombineerd. Dit zou kritisch transitieonderzoek kunnen inspireren om universiteiten te beschouwen als een symbolisch medium waarvan sociale diagnostiek, publieke contestatie en ethische commitment mag worden verwacht. Kritische transitieonderzoekers zijn daarmee noch neutraal, noch objectief (lees: neutraliserend of objectiverend), maar *radicale democratiseerders* die hegemoniale kennis bevragen en concepten verkennen die het sociale (stedelijke) leven democratiseren. Ten derde, de post-politieke inborst van veel transitievertogen verdringt vaak een belangrijke discussie over de transversaliteit tussen complexiteitstheorie, socio-technisch

³⁷⁸ Zoals een collega het eens zei: “Je kunt prima transitieonderzoek doen zonder het over ‘transities’ te hebben”.

innovatie-denken en neomarxistische klassenanalyse. Kritisch transitieonderzoek zou meer sensitiviteit moeten ontwikkelen over hoe complexe klassenindelingen verknoot zijn met alledaagse ervaringen en ruimtescheppende sturingsarrangementen. Het adresseren van complexiteit in combinatie met nieuwe vormen van klassenstrijd maakt het mogelijk om de huidige productiemiddelen van de stad te ontmantelen, toe te eigenen en te democratiseren door en voor stedelijke gemeenschappen. Ten vierde, een transitiepolitiek fenomeen dat verdere verkenning behoeft is radicale democratie in relatie tot het biologische, ecologische en materiele leven. Hoewel we een taal hebben voor politieke macht, zoals democratie (volksmacht) en technocratie (techniekmacht), ontbeert het ons een vertoog om de macht van eco-politieke gemeenschappen te benoemen (en te ontwikkelen) buiten de ons bekende Westfaalse kaders ('ecocratie'). Ten vijfde, ruimtelijk denken over transitieprocessen en -praktijken betekent het eind van stabiele categorieën als 'landen', 'het Westen' en 'de stad'. Een belangrijke consequentie hiervan is niet alleen meer aandacht voor 'niet-westerse contexten' binnen transitieonderzoek, maar ook voor het traceren en analyseren van (micro) transitiedynamieken *tussen* 'westerse' en 'niet-westerse' contexten.

About the author

Shivant Jhagroe (b. 1983), allegedly, is a member of the species *Homo sapiens*. He obtained a Master's degree in Public Administration and a Master's degree in History from the Erasmus University Rotterdam. After his PhD, he started as a postdoc at the Eindhoven University of Technology. Shivant kindly invites the reader to consult 'Interlude 0' of this doctoral thesis. Here, his 'biographical information' is presented in accordance with his understanding of academic practice.

