The Politics of Healthy Policies

Redesigning health impact assessment
to integrate health in public policy

De politiek van integraal gezondheidsbeleid

Een heroriëntatie op het instrument
Gezondheidseffectschatting
om gezondheid te integreren in het overheidsbeleid

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Marleen Petra Maria Bekker
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Promotor:	Prof.dr. T.E.D. van der Grinten
Overige leden:	Prof.dr. R.A. Bal Prof.dr. J.P. Mackenbach Prof.mr.dr. J.A. de Bruijn
Copromotor:	Dr. K. Putters

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Chapter 1

The effectiveness of Health Impact Assessment

> *'In 1997, an open-air compost factory settled in our neighbourhood. This factory uses many chemicals to compensate the stench. Our son has been suffering considerably more from his asthma ever since. Whereas in the past he only used medication in the winter whenever he had a cold, now he inhales his medicines every single day, the whole year round. Our son is not the only one. Many children and adults in our neighbourhood suffer from fatigue, chronic headaches or breathing difficulties. Because the factory's establishment permit had not been published before the factory actually settled, we started an appeal against the permit. Our GP has confirmed our son's complaints, and he even wrote a letter to support our appeal. Nevertheless, when we lodged a complaint with the provincial authority, we were told that health is not a criterion for granting such permits. We then commissioned an independent research, which confirmed the relation between the factory and our health problems. In response, the province commissioned another inquiry that produced countervailing evidence. As a result, nobody knows whom or what to believe. Despite this setback, two members of the municipal council support our struggle to fight the permit. The municipality, however, lacks authority in this area. We can only appeal against the permit in court. We feel powerless and abandoned by the authorities'.* [1]

This real-life story highlights a specific type of public health problem we face today. How public health policymakers address these types of problems in policy is the subject of this thesis.

Apart from the question of whether the health problems in this story actually result from the factory's activities, the storyteller addresses a number of specific problem characteristics. First of all, the story shows how policy and decision-making may have unintended, and undesirable, side effects, such as the public expression concern for health problems. Furthermore, because the compost factory does not solve these health problems by removing the (presumed) cause, the public turns to the government, and questions the legitimacy of the procedure for granting the compost factory a business permit. This is a common phenomenon in environmental issues in the Netherlands (Devilee, 2002). Government permit policy, which is designed to guarantee quality conditions for the establishment of industrial activities, thus becomes a co-producer of public concern.

[1] Participant at the conference 'Enforcement, Reconstruction and Citizen Empowerment' from the Dutch network for local health and environmental action groups (MNGM), October 2002

Within the government, however, public health falls under the authority of a different department than the one granting business permits. Given that both the factory and the provincial authority deny responsibility for health complaints, a second characteristic is the lack of clarity with respect to which of the public and private actors involved is responsible, accountable, or authoritative to deal with these side effects. The unintended, undesirable health complaints are a collective issue, for which citizens have delegated democratic authority to the government. To address such issues adequately, the government is divided into different policy departments. This enhances quality through task specialisation. However, because health considerations are not part of formal rules and criteria for granting business permits, the sectoral government, in this case, is unresponsive to public concern and demand for action. Although citizens have several options for dealing with unresponsive public officials, in this case, citizens can hardly use the democratic exit option by electing someone else. Granting permits is an official (rather than political) activity, conducted by civil servants who are not democratically chosen.

Concerned citizens might turn to the judiciary for legal enforcement of action. However, because health is not a formal criterion for granting such permits, and assuming that the compost factory operates within the limits of (environmental) law, neither province nor factory seems to have done anything illegal. If so, the compliance with legal rules transforms the public demand for action from a legal into a moral question. Alternatively, citizens might turn to democratically chosen representatives and the media. By exposing their concerns to the general public, they might attempt to pressure both the government and the compost factory into taking protective or mitigating measures. Finally, citizens concerned for their health might request that the public health authority take action. In the Netherlands, provinces do not have authority in health matters besides the regional allocation of health care services. Local health authorities, however, have a legal obligation under the Collective Prevention and Public Health Act (WCPV), to take sector-crossing action. The Act neither specifies nor provides the tools and instruments that can be used to enforce sector-crossing action. In absence of legal enforcement, cross-sectoral action, therefore, depends on the *willingness* of actors in one sector to cooperate and coordinate policies with other sectors.

The third striking element in the story is the role of research. The actors involved turn to research in order to substantiate their respective claims that health complaints either are or are not related to the compost factory chemicals. They expect research to convince the opponent that action is (or is not) necessary. Nevertheless, in this case,

both reports fail to provide acceptable solutions to the issue. They actually complicate the situation further. The contra-expertise commissioned by the provincial authority results in a 'dialogue of the deaf' (Van Eeten and Roe 2001): both reports produce 'contradictory certainties' and neither of them are acceptable to the other party. Such communication may end up in a deadlock, which in the long run is undesirable to all parties.

Briefly summarised, the actors involved perceive the public health issue, as well as responsibility and research ambiguously. The result is a lack of consensus on both policy priorities and solutions for the health issue. In addition, the public health authority is noticeably absent in this story. Moreover, these problems result from (other) government decisions, for which no one seems to be responsible or held accountable, for which solutions depend on willingness to cooperate, and to which (scientific) research, in itself, does not seem to provide a sufficient answer. The question that arises is: *how does the public health authority act in the face of these complex public health problems?*

1.1 Health policy

Public health policy covers a broad spectrum of health promotion, protection and disease prevention, such as infectious diseases, preventive youth health care, health promotion, or crisis and disaster medicine. Underlying public health policy is a general idea that public health should not be strictly assigned to one authority or sector, but integrated in all the activities of government. That idea is called 'healthy public policy'.

1.1.1 Healthy public policy

An important source for public health policy is the 'Ottawa Charter on health promotion' of the World Health Organisation (WHO, 1986). One of the 'key action areas' of the Ottawa Charter is to build healthy public policy:

> *'Health promotion puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health. Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organisational change. It is coordinated action that leads to health, income and social policies that foster greater equity. Joint action contributes to ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments' (WHO, 1986).*

The basic idea underlying the healthy public policy is health determinants theory, which clarifies the multi-causal pathways along which health risks become manifest in health problems. It comprises combinations of individual biogenetic and lifestyle factors as well as environmental and health care factors (Lalonde, 1974)

See figure 1.1 on page 209 for a schematic overview of health conditions in the rainbow model by Dahlgren and Whitehead (1992).

Population health has many determinants that are addressed or affected by many non-health policies. All health problems, even the genetic ones, are related to the environment, with respect to the severity of symptoms and the conditions for recovery or 'learning to live with' a chronic condition. Examples of health problems that may result are a worsening of asthma and other lung diseases due to increasing traffic that raises ambient particular matter concentrations[2]; or obesity among children due to a lack of safe playgrounds and an ample supply of 'unhealthy' food and drink. Given that these determinants are influenced and 'steered' by a wide range of policies, Health Determinants theory contends that such multi-causality requires a policy response that exceeds the sectoral organisation of government and the public-private divide (Aday 2005). Many current health problems could be addressed more effectively and more efficiently by seeking cooperation with non-health policy sectors.

That would have to result in 'healthy public policy' (international label), or 'integral health policy' (Dutch label): collective, cross-sectoral action. At the EU level, healthy public policy is a focal point of attention in the Action Programme on Public Health, while the Amsterdam Treaty provides a legal basis, calling for the 'protection of health in all EU level policies and implementation' (art. 152)(European Union, 1997). Borrowing from environmental policy studies (Shannon, 2002; Nilsson, 2005), the process towards such collective, sector-crossing action in this thesis is referred to as the integration of health in public policy.

From as early as 1974, when the Canadian Minister of Health, Marc Lalonde, developed the 'Health Field Concept' underlying health determinants theory, the World Health Organization and national health authorities have promoted the integration of health in public policies. Yet, the same authorities acknowledge that the resulting level of integration does not live up to the expectations and ambitions (IGZ, 1995). A lack of

evidence to convince non-health parties is generally considered to be the problem. Following the development of policy impact assessments on other topics, such as the environment, employment, economy, ethnic groups and gender, Health Impact Assessment (HIA) was introduced both internationally and in the Netherlands in the 1990s (WHO, 1999).

1.1.2 Health Impact Assessment

HIA has been defined as 'a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential impacts on the health of a population, and the distribution of those impacts within the population' (WHO, 1998). HIA is aimed at improving knowledge about potential impacts from non-health policies[3], informing decision-makers, and facilitating non-health policy adjustments. 'HIA is a means to assess potential impacts before the policy is decided upon, in order to minimize damaging impacts and optimise beneficial impacts from the proposed policy' (Scott-Samuel, Birley et al, 2001). In legal documents for the integration of health in policies, the instrument of HIA is hardly explicitly mentioned. Table 1.1 summarises the primary institutionalised preconditions for (Health) Impact Assessment at the international level.

Table 1.1 International institutionalised preconditions for integrating health in public policy

Year	*Organisation*	*Activity or agreement*
1993	Canada British Columbia government	Mandatory analysis of health implications of provincial policies
1997	EU Amsterdam Treaty art. 152	Health protection in all EU policies
1999	EU directorate-general Health and Consumer Protection	Capacity building
1999	EU 3e Ministerial Conference Environment & Health, London	Intention to develop National Environmental & Health Action Plan (NEHAP)
1999	WHO/ECPH & Nordic School of Public Health Göteborg	Gothenburg Consensus Paper on Health Impact Assessment
2001	EU Directive 2001/42/EG: Strategic environmental assessment (Health Systems Research Institute)	Obligatory environmental impact assessment of strategic decisions
2003	SEA protocol United Nations Kiev	'high level of environmental, including health, protection and citizen participation in SEA'

[2] In Dutch: fijn stof
[3] In the interest of brevity, the term ´Policy´ is used here to refer to projects, programmes or policies.
[4] www.hiagateway.org.uk;_www.who.int/hia; www.hiadatabase.net

International practices of HIA

Internationally, the star of HIA is rising (Kemm, Parry et al, 2004). In Anglo-Saxon countries, Scandinavia, and increasingly in non-Western countries such as Thailand HIA has become part of public health and/or environmental policy. Furthermore, the World Bank uses such impact assessments as a condition for granting loans (World Bank, 1997). HIA is applied by regional and local health authorities or services, as well as occasionally by consultancy bureaus, at the local, regional, and national levels of policymaking. Multinational companies such as Shell also conduct integral impact assessments in order to prevent potentially harmful impacts from their industrial activities on public health and the environment. Impact assessment is a tool for issue management and corporate governance, as well as for protecting the corporate image (Birley 2005). In 2004, a specific HIA for EU policies and plans was developed: the European Policy Health Impact Assessment (EPHIA) (Abrahams, Den Broeder et al, 2004). Additionally, opportunities and threats were identified for the expanded EU (Lock and MacKee, 2005).

According to Kemm (2000), HIA may generally appear in one of two ways: HIA will have either a tight or a broad scope. Tight scope HIA, based on a measurable definition of health, produces a quantitative retrospective evidence base, relying on methods and techniques of the epidemiological or toxicological disciplines. Within a positivist perspective on science, it is assumed that objectively measurable health indicators make prospective analysis more valid (Parry and Stevens, 2001; Parry and Wright, 2003). HIA is aimed at reducing exposure to potentially damaging impacts (Birley, 2002). Evidence is believed to rationalise decision-making (Kornov and Thissen, 2000). Principles and values underlying HIA, other than evidence-based policymaking, are left unmentioned.

Broad scope HIA (Kemm, 2001) is based on a broad definition of health, and focuses on qualitative methods in order to incorporate general concerns or health risk perceptions into the assessment as necessary and reliable prospective evidence (Mahoney and Durham, 2002). This form of HIA is mostly practiced in the Anglo-Saxon countries. It is often local practice, based on specific principles of empowerment, participation and democratisation. HIA objectives are sometimes extended to include consciousness-raising of health aspects and health promotion within the community. Lack of knowledge in the community is seen as a threat to community interest representation. Here, policy adjustment by HIA is considered to be of minor importance (Elliott, Williams et al, 2004; Maurice, Mittelmark et al, 2004). HIA becomes a community health awareness project.

Broad scope and community HIAs are scientifically substantiated by a social constructivist epistemology, emphasising perceptions of health and risk by the affected community (Popay, 2004). Empowerment and participation are considered vehicles for protecting health as a human right (Scott-Samuel and O'Keefe, 2007). In Thailand, which stands out for its wide practice and dissemination of HIA internationally (see chapter 2), broad scope HIA is aimed at mobilising political power through citizens, public opinion, and societal organizations.

1.1.3 Health Impact Assessment in the Netherlands

Legal grounds for integrating health in public policy can be found in the Collective Prevention and Public Health Act (WCPV), which, at the *municipal* level, calls for 'the consideration of health aspects in administrative decisions' (art. 2b), 'improving environmental health care' (art 2d). The City Council/Board is required to consult with the Community Health Service whenever decisions are made that may impact on collective preventive care (art 5b). The Minister of Health will 'enhance the interdepartmental cooperation in preventive care' (art 7.5). In the Explanatory Memorandum of this Act, local health policy is to be 'coordinated with other policy topics (housing, working, traffic, social security, education, and welfare)'(Tweede Kamer der Staten Generaal 1990; Tweede Kamer der Staten-Generaal 2002). Health Impact Assessment as a means for integrating health in public policy is not specified, and therefore remains a voluntary activity within the public health system. The only legal reference to HIA is in the Explanatory Memorandum of the Interim City & Environment Act (2006), which proposes to do HIA in construction projects that are close to exceeding legal environmental standards (this is specifically described in chapter 4). HIA in the Netherlands is often conducted by local community health services that have diverse relations with their commissioning municipalities. Some Community Health Services, for example, serve one (big) city and maintain intense relations, while others serve a Board of up to 30 municipalities. This may highly complicate priority-setting and allocation of resources for preventive care. This specific point will receive special attention in the analysis.

Health Impact Assessment practice in the Netherlands

HIA belongs to a family of impact assessments that have been introduced and applied in the past thirty years. In the Netherlands, about 30 specific ex ante evaluation instruments, have been developed in the past decade to assess potential risks from policy (ICHW

werkgroep ex ante evaluatie instrumenten 1999). HIA was initiated by a Municipal Health Service director, a medical professional, who perceived a specific need to screen non-health policies for health impacts when confronted with the expansion of Rotterdam Airport in the vicinity of densely populated areas. He urged the Dutch Minister of Public Health, Welfare and Sports, Borst, to formally introduce HIA. At the same time, a longitudinal health assessment was carried out among the neighbouring residents of Schiphol Airport (Staatsen et al, 1994; Franssen et al, 1999, 2002), experimenting with different kinds of methodologies on different kinds of determinants as well as on health perceptions. The Minister formally introduced the HIA in the government White Paper 'Healthy and Sound' [5], Parliamentary document 24 126, 1-2,1995). She commissioned two exploratory studies into the development of quantitative modelling of impacts (Mooij and Gunning-Schepers, 1998) and political-administrative conditions (Putters, 1996; Putters and Van der Grinten, 1998) (elaborated in chapter 2). On the basis of those studies she initialised experimentation with HIA at a national policy level, with a newly installed Intersectoral Policy Office as a 'clearing house' [6] (at the Netherlands School of Public Health) (Parliamentary document 24 126, nr 14, 1996). A model for environmental health impact assessment 'City and environment' [7] was developed separately in cooperation with the Ministry of Housing, Spatial Development and the Environment (Fast, 2000; Van der Loo and Van Bruggen, 2000), including a judgment framework for decision-making (Van Bruggen and Fast, 2003).

In a brief evaluation of those experiments in 2000, the Ministry turned to a less ambitious application of HIA, concluding that 'influencing policies from my department based on HIA reports, however, is not yet crystallised. Positioning facet policies in addition to policies aimed at cure and care, is an important focus of attention within my department at the moment.' (Parliamentary document 'vws0000493', 31 maart 2000). In a cabinet position on the advisory report 'Healthy without Care' [8] (RVZ, 2000) from the Advisory Council for Public Health and Health Care, the Minister, without clarification, decentralised HIA to the local level (Parliamentary document 28000 XVI, 8, 2001). In 2003, the Intersectoral Policy Office was moved and integrated into the National Institute of Public Health and the Environment (TNO/RIVM), and national policy HIA is now neither commissioned nor funded. Instead, a local toolbox was developed and tested (Van

[5] In Dutch: Gezond en Wel
[6] A 'clearing house' means the contracting out of the assessment and the coordination of the results and the policy process. It would enable economies of scale in conducting HIAs so as avoid duplication. See Appendix B for a list of HIAs performed by the IPO in 1996-2003.
[7] In Dutch: Stad en Milieu, see Appendix B for a list of published City & Environment HIAs.
[8] In Dutch: Gezond zonder Zorg

Reeuwijk-Werkhorst, Van Herten, Penris and Koornstra, 2005). Employers, employees, and municipalities were assigned a co-responsibility for cross-sectoral health policies (Ministry of Public Health, Welfare & Sports, 2003).

Models and practices of HIA in the Netherlands reveal a preference for tight scope, expert-based HIA.[9] Screening and scoping are based on qualitative methods, while the experimental applications by the Intersectoral Policy Office have mostly been supplemented with literature studies and expert opinions. The HIA 'City & Environment' as well as the 'Prevent' model are based on quantitative modelling. Although local HIAs in some cases are accompanied by a reference group containing affected citizens, Dutch HIAs can hardly be called participative, since community participation is neither explicated as a substantive goal nor an explicit principle underlying HIA.

Currently, there are some national cross-sectoral policies where the Ministry of Health is represented, summarised in table 1.2 (see below).

Table 1.2 Current cross-sectoral national policies in which the Ministry of Public health, Welfare & Sports is involved (2006-7)

Cross-sectoral policies	Ministry of Public health, Welfare & Sports cooperates with:	Organization
Urban policy*	Ministries of Internal Affairs & Kingdom's relations, Economic Affairs, and Housing, Spatial Development & the Environment	2007: coordinating Minister of Housing, Neighbourhoods and Social Integration at the Ministry of Housing
National Environmental and Health Action Programme	Ministry of Housing, Spatial Development & the Environment	No separate organisation
Integral youth policy	Ministries of Education, Culture & Science, Justice, Internal Affairs, Housing, Spatial Development & the Environment and Social Affairs & Employment	2007: coordinating Minister of Youth and Family Affairs at the Ministry of Health
'The Working Perspective' reintegration at work of the handicapped or otherwise disabled	Ministry of Social Affairs & Employment	Government appointed external committee

* In Dutch: Grotestedenbeleid

Some policy issues are organised in interdepartmental administrative committees or project organisations, but within the Ministry of Public health, Welfare and Sports, there are no standard operating procedures or instruments to organise cross-sectoral

cooperation. As for HIA, there is a project 'HIA in EIA', in which the integration of methods is explored in order to increase impact assessment effectiveness and efficiency. Yet until now, HIA has not formally returned to the national health policy agenda, judging from the White Papers 'Living Longer in Good Health: also a question of healthy lifestyle'[10] (Ministry of Public Health, Welfare & Sports, 2003), and 'Choosing for a healthy lifestyle'[11] (Ministry of Public Health, Welfare & Sports, 2006).

1.1.4 The quality and effectiveness of Health Impact Assessment

HIA has been practised for approximately a decade in the Netherlands, and 15 years internationally. Current discussions in the HIA literature concern:

- The scientific quality of HIA methods and techniques (Mcintyre and Petticrew, 1999; Lock, 2000; Mindell, Morrison et al, 2001; Parry and Stevens, 2001; Varela Put, Broeder et al, 2001; Minnesota Department of Health, 2001/2; Joffe and Mindell, 2002; Taylor and Quigley, 2002; Mindell, Ison et al, 2003), Dora and Racioppi, 2002; Mindell, Boaz et al, 2004; Cole, Shimkhada et al, 2005; Veerman, Barendregt et al, 2005; Petticrew, Cummins et al, 2007).

The debate on the scientific quality of the HIA reflects a dominant assumption that research provides objective, scientifically sound, and independent evidence for rationalising decision-making, leading to evidence-based health policy. Alternatively, the broad scope HIA is focused on citizen participation and democratic empowerment.

- The effectiveness of HIA in changing policies or plans (Putters, 1997; Putters and Van der Grinten, 1998; Banken, 2001; Elliott and Francis, 2005; Finer, Tillgren et al, 2005; Kauppinen, Nelimarkka et al, 2006; Lee, Ingram et al, 2007; Mannheimer, Gulis et al, 2007).

Several stakeholders, such as public health authorities, experts and professionals recognise the difficulties of influencing policy-makers such that they actually make policies health sensitive.[12] Until recently, however, there has been little attention in the (H)IA literature for policy decisions and how HIA should link to them. Decision-making is often treated as a black box. Yet, decision-making is a necessary step in reaching the

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[9] GES Stad en Milieu
[10] In Dutch: Langer Gezond Leven: ook een kwestie van gezond gedrag
[11] In Dutch: Kiezen voor gezond leven
[12] Personal communications with experts at several meetings (UK and Ireland Conference on HIA in Birmingham, 2003/2004; Conference of the IAIA, 2003/2004; Dutch HIA knowledge exchange meetings 'GES Kenniskring', 2002/2003)

HIA goals of preventing or mitigating negative health impacts, and enhancing positive impacts. Policy decisions, therefore, must be changed, adapted, and implemented.

Thus, HIA is both perceived and defined in different ways. Is it primarily a scientific assessment to inform policymakers (Parry and Stevens, 2001; Mindell and Boltong, 2005; Veerman, Barendregt et al, 2005)? Is it a political means to have citizens and stakeholders participate and become empowered (Popay, 2004; Scott-Samuel and O'Keefe, 2007)? Or is it a management instrument that translates potential health impacts from policy into alternative policy interventions (Banken, 2001)? For now we may assume that HIA is neither purely academic activity nor purely policy practice (Saan, Ellenkamp et al, 1994).

1.2 Research questions

The previous section discusses the different options with respect to what HIA is and what it should do. In the HIA literature, the role of knowledge in policymaking in most cases is treated as a black box. The relationship between HIA and policy is the object of this thesis in an analysis of how *coordination* takes place between research and policy, and between health policy and non-health policy.

1.2.1 Health Impact Assessment as a coordination tool

Coordination is a two-layered concept. We have identified two issues concerning HIA: on the one hand, health determinants theory suggests that intractable public health problems, such as those in the introductory case, need innovative governance solutions, for which Health Impact Assessment might be a helpful tool. On the other hand, practitioners and policymakers question the use of knowledge produced in HIA for policy practices. The current debates in the HIA literature seek explanations in either the scientific criteria for knowledge production in HIA, or in policymakers' receptiveness to HIA. Both debates suggest that knowledge and policy production are separate processes. As is explained in chapter three, however, neither provides sufficient answers. Moreover, there are hardly empirical evaluations available that look into these issues specifically. What is going on in HIA practices can only be explained fully when analysing how both knowledge and policy come about in HIA practices, how these practices may

be interrelated and are coordinated, and which consequences they have for the integration of health in policies.

This thesis aims to put HIA into a governance perspective to identify the purposes HIA may have in policy practice, the suitability of HIA to fulfil these, to understand how HIA creates knowledge and (co-)produces policy, to reconceptualise Health Impact Assessment accordingly, and to incorporate the necessary strategies for fulfilling the purposes in the design of HIA. The central question in this study is thus a conceptual and an empirical one: *What is the role of Health Impact Assessment in integrating health in public policy, and how can it be improved?*

The sub-questions comprise descriptive and explanatory elements of the central research question:

1. How can the relationship between Health Impact Assessment and the integration of health in public policy be conceptualised using the literature on HIA, policy analysis and governance, and the sociology of science?

The integration of health in public policy in chapter three is conceptualised as the process of creating Healthy Public Policy. It is a specific governance approach to create collaborative action for solving intractable public health problems, for which Health Impact Assessment is an instrument. The integration of health in policy can be observed on a scale of increasing commitment and willingness to invest in collaborative action, expressed and/or enacted by the policymakers addressed in the HIA. This is expected to occur when the actors involved in interactions reframe the causal and normative underpinnings of the policy at stake. Health Impact Assessment is expected to enable, initiate or guide the reframing process, but HIA may also obstruct reframing. In HIA, arguments from research are used to either confirm or negotiate the boundaries that mark the division of tasks in solving public health problems between the health and non-health sector(s). HIA is conceptualised as an object of boundary coordination that provides both a research and an interaction design for reframing policy. Based on these conceptualisations, the following research questions are formulated for the empirical analysis:

2. To what extent, and how, is health integrated in the policies and plans in the case studies?
3. Which frames of health, HIA and policy are articulated among the different actors involved, and how do these evolve?

4. How does reframing of health, HIA and policy occur and how is it related to the research and interaction designs of Health Impact Assessment?
5. Is HIA effective as a boundary object in reframing policies to integrate health, and how can it be improved?

A prescriptive sub-question is elaborated in an additional Handbook on HIA, which is summarised in the discussion chapter.

The scientific relevance of this thesis is the conceptualisation of the relationship between Health Impact Assessment and the integration of health in public policy, deriving from different literature sources on both governance (which is non-hierarchical collective policymaking across jurisdictions) and (scientific) knowledge production. This conceptualisation enables the evaluation and improvement of HIA effectiveness in changing policies. In the dominant perception of evidence-based health policy, knowledge or evidence is considered to be the means to achieve the end of policy change (Rosenstock and Lee, 2002). Yet, in the past thirty years empirical research in different policy fields has provided ample evidence to show that this relationship is more complicated (Black, 2001; Guba and Lincoln 1981, 189; Patton, 1986; Weiss, 1977, 1991; Wildavsky, 1979). This study applies these latter sources to Health Impact Assessment practices in the Netherlands over the last six years (see chapter three).

The practical relevance of this thesis is that it follows an initial statement in the WHO Gothenburg Consensus meeting on HIA (1997), namely that 'the enablers and disablers of HIA' need to be analysed in order to improve its framework and relations to policymaking. In this thesis, HIA is analysed on how it contributes to the conditions enabling and disabling the integration of health in public policy. In this approach the HIA is not taken for granted and there is room to analyse whether HIA itself might be a disabler. If so, the question is whether a different design of HIA would lead to more integration of health in policies, or whether there are any alternatives to HIA which might produce better results.

In order to develop a suitable research design for the analysis of HIA practices and interrelations with the policy process, some epistemological points of departure must first be established.

1.2.2 Epistemological points of departure

The analysis of HIA from a governance perspective in this thesis requires an introduction in the sociological points of departure in this approach. Epidemiology and (environmental) toxicology, which are the sources of tight scope HIA, are mostly based on the views of the natural sciences. The natural sciences assume reality to exist outside the human mind. Observation of reality is limited because of imperfect human observation capabilities. Knowledge progresses by falsification of hypotheses, in which reality results from theoretical deduction. In social science, this view has been adopted by rational choice theorists, who assume that man survives by rationally weighing different survival options, resulting in rational, self-interested action. This universal principle has been transplanted into the behaviour of social systems and collective actors. Knowledge develops on the basis of deduction (and falsification) (Popper, 1959, 1963).

Since the end of the Second World War, a critical sociology has emerged that contests this conceptualisation of the relation between man and environment. Instead of accurate (though bounded) perceptions of the environment and behaviour that enable survival by rational, self-interested action, the uncertain and complex characteristics of social environment require communication and coordination of action in social encounters to be critical to human survival. Essentially, a human being is defined by its social nature, resulting in social interaction. The convergence of cognitive orientations and preferences by social norms and institutionalised rules in social interaction lead to a social construction of reality, by which (inter)action is shaped. (Inter)actions induce responsive (inter)actions, thus resulting in a continuous reconstruction of reality. Knowledge of dynamic constructions of reality therefore requires an inductive method (Kuhn, 1962; Lakatos and Musgrave, 1970).

Still, a determinist explanation has to be avoided: neither rational choice nor social constructivism can explain human action exclusively: human action is neither the result of solely 'taken for granted' beliefs and rules of behaviour, nor of solely rational exploitation of individual gain regardless of norms and rules that might be violated (Gottweis, 2003). This actor-structure dilemma is addressed by empirically describing how actors and institutions are dynamically interrelated in research-for-policy practices, such as Health Impact Assessment. This is elaborated in chapter three.

The constructivist perspective has been criticized for its alleged reduction of reality to individual accounts and points of view, thus threatening the validity, precision and generalisability of policy analysis. To prevent this, a policy argument is language

embedded in context of practice, in which an understanding of problems and policies is formed. Given that meaning can only come about in relation and demarcation to other meanings, it is the product of outside human communities rather than of an individual mental process. 'How we interpret social reality, either as a lay person or a policy analyst, is to a large extent guided by the social rules that constitute social practices; rules we have internalised in long processes of habituation and socialization' (Fay, 1975). In social practices, human communities share an implicit set of frames of reference, and ways of life. Arguments are social commodities on a provisional basis. These arguments hold until the political, financial or practical constraints that define the situation, change. Arguments need to be assessed in communities of knowledgeable people. Designing good policy arguments is a practice in itself. According to Hajer and Wagenaar (2003), the underlying theme of such analyses should be: 'what kind of knowledge is politically *relevant* to society? What *counts as* good evidence in this [network] society of flux?' The governance perspective on HIA that is presented in this thesis will depart from the sociological world view.

1.3 Method

The conclusion in the previous section is that healthy public policy requires innovative concepts and strategies such as Health Impact Assessment. As research objects, innovative and experimental governance practices have only a few available cases and often many variables: in the Netherlands, only a limited number of completed HIAs are available for analysis. These have been applied at very different policies, at different policy levels, using varying formats, and with different outcomes. The HIA practices are characterised by widely varying contexts, and the use of a wide range of models and methods. This raises the explorative question of what HIA is, how it relates to policy processes and how it could be improved or strengthened. Equally important is the normative dimension: is there consensus or controversy about its worth, what it should do, and how it should do that? Because the answers to these questions are assumed to be context-specific, this study aims to reveal complex patterns of relations between the HIA and the policy process, in which knowledge and policies are produced, rather than reduce complexity to one single relation. The aim is to understand how HIA works, under which conditions and in what circumstances, a goal that requires an empirical, inductive analysis. A multiple case study design using qualitative methods is considered the most

appropriate method of enquiry for such in-depth analysis (Miles and Huberman, 1994; Yin, 1994).

1.3.1 Interpretive method

Interpretive methods often focus on two related puzzles. Firstly, the tension between what the researcher expects to find and what he actually experiences in the policy or agency field. To decouple 'different' from 'wrong' enables the researcher to create space for understanding, rather than jumping to conclusions. Secondly, the tension between word and act; the researcher must enhance an understanding of social implementation practices, which often differ from what was intended and/or designed in advance. Analysing social objects requires data *accession* rather than data collection (a term that is borrowed from the natural sciences and the process of collecting specimens). The researcher must be allowed to enter specific social practices in order to study the inscription of meaning through interactions (Yanow, 2003).

Situated in social practice, the researcher needs to adopt a method of analysis characterised by 'reflection-in-action' (Schön, 1983; Van Heffen, 1999): 'when someone reflects-in-action, he becomes a researcher in the practice context. He is not dependent on the categories of established theory and technique, but constructs a new theory of the unique case. He does not keep means and ends separate, but defines them interactively as he frames the problematic situation. (…) Thus reflection-in-action may proceed even in situations of uncertainty and uniqueness' (Schön, 1983). Verheul (1999) continues his description: 'research-to-design may contribute to this process by building repertoires: a set of cases, perspectives and metaphors, with which the professional (policy-maker, public health expert) may interpret new problems and generate solutions. (…) The similar repertoire-building function of research can be found in the so-called 'translation model of research utilization' (Beck and Bonss, 1989; Snel, 1996). (…) This model is an alternative for the traditional contrast between instrumental and conceptual utilization of research in policy-making. Both assume the superiority of scientific knowledge above other sources of knowledge, and a passive reception of research results by the professionals. (..) The translation of science to practice is thus an active process of interpretation (Snel, 1996)'.

Interpretive methods are not impressionistic. Yet, because human interpretation is responsive to its particular research context. As a result, the steps of these methods

cannot be categorised or sequenced beforehand. That would imply the risk of missing context-specific yet highly relevant elements to the phenomenon analysed. Therefore, the researcher needs to be free to respond to unexpected turns in interviews or observed action.

1.3.2 Case selection on research and interaction process design

To closely observe how coordination takes place, cases of attempts to integrate health in public policies are selected, in which different kinds of coordination are practiced (see table 1.3). Research and governance comprise both formal design structures and informal elements. The preliminary formal structures are to select the cases: research is based on a looser or stricter research design; governance is based on a looser or stricter process design of interactions. The resulting cases represent an attempt to integrate health in policy through an elaborated research design, through a design for interactive deliberations, through both, or through informal deliberations without any preliminary design.

Table 1.3 Case selection on research design and process design of interactions in HIA

	Research design of HIA	*No research design of HIA*
Process design of interactions	HIA Covenant Obesity (chapter 6)	HIA national Housing Policy Paper (chapter 5)
No process design of interactions	HIA Dordwijk Health Park plan (chapter 4)	Game simulation of health advocacy in urban reconstruction without HIA (chapter7)

The selection includes one case in which there is no HIA practised, in order to enable observation of how informal coordination evolves without any previously defined structures. This is observed in a game simulation, the method of which is elaborated in paragraph 1.3.4. The questions of how these designs enable or restrict coordination, and whether, and how, this affects policies, require empirical analysis.

1.3.3 Maximum case variation

The HIA on an urban reconstruction plan (chapter 4) is an application of the previously developed 'City & Environment' model of HIA, which is a distinct quantitative model, used to convert exposure to environmental burdens in a specific area into Health Impact

scores in that area. The City & Environment model of HIA does not contain a procedure for interactions between the health and urban planning departments.

The HIA on national housing policy (chapter 5) consists of a previously defined stepwise interaction procedure that links the output of different stages in the HIA to decision making moments in housing policy. Additionally, an advisory committee is established for the final stage of the assessment, in which housing policy officials are represented. There is, however, no distinct previously defined method of assessment. The design is developed during the three-year process of the HIA.

The HIA of the Covenant on Obesity action plan contains both a previously defined method of quantitative modelling, and a previously defined interaction procedure offered by regular meetings of the Covenant partners. The Covenant brings together public and private actors in nutrition, sports, education and health care sectors with the intention to develop (and implement) an Obesity Action Plan. The game simulation, finally, is developed for a number of reasons explained in the next section.

The other characteristics of the selected cases, including the timing of the analysis (retrospective or concurrent) differ as well (see table 1.4). Explaining outcomes by differences in coordination structures is therefore impossible, because multiple explanations may occur at the same time. The aim, then, is to explore *how* these structures evolve and function in practice, and may be adjusted or even eliminated in relation to their specific context. The dynamic approach requires an observation of *how* the actors involved *enact* the research and interaction design and make them 'work' in their specific settings of actors, preferences and priorities, capacities and arrangements. 'If methods differ in different contexts, HIA pilots should be done in a range of contexts' (World Health Organisation 2000). In that sense, this thesis provides four pilots of integrating health in public policies, three of which are by means of HIA.

Within each case (except the game simulation), triangulation was reached by a combination of archive analysis, interviews and a literature study. In addition to the retrospective analysis of the housing and reconstruction cases, the obesity case provided a unique opportunity to observe HIA discussion meetings, as well as Covenant group meetings in an ongoing process of establishing the HIA and a joint Covenant action plan.

Table 1.4 Other case study characteristics and timing of the analysis

	HIA of urban reconstruction plan	HIA of strategic Housing Policy Paper	HIA of Dutch Covenant and Action Plan on Obesity	Game simulation of urban reconstruction planning
Year of HIA	2003	2002	2005/6	2005
Policy level	Municipal	National	Public-private	
Project / policy	Project	Policy	Policy	Project
Promotion / prevention	Prevention of environmental health problems	Promotion of safety and physical activity	Promotion of energy balance	Not predefined
Health as policy aspect / policy aim	Aspect of Urban development project	Aspect of Housing policy	Aim of Obesity policy	Aspect of Urban development project
Analysis	Retrospective	Retrospective	Concurrent	Concurrent

1.3.4 Informal coordination in game simulations

First of all, there is no suitable case available that allows observing the integration of health in policies without any design. These do occur, yet, typically concern coincidental, ad hoc undertakings that are less open to observations by a researcher from the outside. To enable the observation of informal coordination in the absence of research and process designs, a game simulation was developed. The topic of an urban renewal planning process was selected because input for a realistic simulation was available from the previously analysed case study on the Dordwijk urban renewal plan. Furthermore, the Ministry of Health specifically labelled urban renewal planning as a useful policy topic that allows local health authorities to develop cross-sectoral action.

Why a game simulation?

Responsive simulation consists of a number of participants from relevant institutions (likely the future users of the research), who play a reconstructed game of policy-making on a certain issue. Though based on empirical input, which is required to reflect the actual uncertainty and dynamics surrounding the issue, the game is fictional. 'Responsive simulation is directed at the interpretation of the input, the response, of participants who interpret and reconstruct the situation in action and interaction'.(…) 'It is particularly relevant for gaining insight in the space and institutional limitations for solutions and exploring favourable solutions' (Mastik 2002).

Game simulation is a hybrid method: it may be applied for research as well as educational aims such as developing competence. In this study the simulation game is specifically aimed at observing interactions and jointly reconstructing an evaluation with experienced participants. Game simulation as a concurrent (fictional) case study enables a direct observation of how the idea of HIA may or may not develop under the influence of the policy context. It reduces the information bias that may result from alternative research methods such as retrospective or concurrent interviews, in which respondents present their own perceptions of the object and will be less eager to talk about their strategic motives in the process. A game simulation also creates a safe setting for participants to show strategic behaviour openly and without repercussions, enabling the observation of such behaviour. Moreover, participants are asked to play a different role than their own, enabling an individual frame reflection during the game, as well as a group frame reflection in the discussion following the game. The way the process occurred may thus be linked to the participants' motives of choices made and behaviour during the game. This is especially interesting for revealing policy frames and how they enable or disable the integration of health in public policy. Finally, in a game simulation, a team of researchers may observe the process as a whole, reducing a potential selection bias when observing a real life process.

Application

In September 2003, two pilot simulations were organized with civil servants and government officials working in either different municipalities, or the Ministry of Internal Affairs. The opportunities and constraints of the simulation method were explored for this research. In December 2004, an adjusted pilot simulation took place with medical environmentalists working at different Municipal Health Services in the Netherlands. This game was a validity test of the content of the game. Finally, in December 2005, two simulations were conducted with 42 practice experts in research, civil service and administrative practices related to health policy. The provisional results of the case studies were reconfirmed and deepened.

A pre- and post measurement of the participants' perceptions of HIA and health priorities was conducted by asking them to fill out a (short) survey. Furthermore, their behaviour was observed and categorized by the researcher and four assistants filling out an observation form. An in-depth description of the game simulations is provided in chapter 8.

Validity of game simulations

Validity is a 'relational attribute that denotes the suitability of research instruments in relation to the research questions to be answered' (Vissers, Heyne et al, 2001). It is an indication of the quality of the instrument, interpretation and claim in relation to their context. It also implies a different kind of generalisability of the claims resulting from social experiment-like methods such as game simulations.

A game simulation may be assumed to be incapable of representing reality as a whole. While Vissers et al acknowledge that simulations always reduce complex reality to a certain extent; they contend that its value is not in physical and demographic representation. 'Even when the 'objective stimulus components' of an artificial setting seem to reflect elements from a real-life reference system, it is the way these components operate when used by actors (both in the artificial and the real-life situation) rather than paper resemblance that needs to be emphasised in a process of (external) validation' (Vissers, Heyne et al, 2001). The different actors involved perceive social reality differently. 'The meaning the subjects assign to the situation they are in and the behaviour they are carrying out plays a greater part in determining the generalisalibilty of an experiment's outcome than does the sample's demographic representativeness or the setting's surface realism' (Berkowitz and Donnerstein, 1982). Differences in perceptions may lead to differences in decisions concerning when, how and with whom to initiate interactions. 'Evoking a particular response is not a quality of design, but of the interplay of design and experimental subjects or players' (Vissers, Heyne et al, 2001). Precisely this interplay is the object of this study. From the game simulations we may learn how a particular, realistic setting of urban planning induces effective and ineffective strategies from health proponents and non-health actors and stakeholders to put forward their interests in the planning process.

1.4 Outline of the book

Chapter 2 and 3 provide a literature scan from different perspectives to develop a conceptual framework for the empirical analysis in chapter 3 to 8. The literature on impact assessment in general, and HIA more specifically, is analysed in chapter 2. The gaps identified in chapter 2 are addressed in chapter 3, deriving from the theoretical perspectives of the governance literature and the Science and Technology Studies to develop a framework for the integration of health in public policies and to identify

mechanisms through which HIA might be able to contribute to this process of integration. Chapters 4 through 7 present the empirical findings in the case studies, which are described as one integrated case study per chapter in order to show how the different concepts are interrelated within the specific context of one case (rather than between cases). In chapter 4, the case of 'Dordwijk: A City & Environment HIA of urban renewal' is analysed, followed by the HIA of national strategic housing policy in chapter 5; the HIA of the national 'Covenant on Obesity' Action plan in chapter 6; and the game simulations of 'informal coordination by health advocacy' in chapter 7. Finally, in chapter 8, finally, the research questions are answered, and the scientific and practical implications of the conclusions are discussed.

Chapter 2
Conceptualising the relationship between HIA and policy

In a historical perspective, the need for HIA developed from a combination of increased knowledge on deteriorating health determinants throughout the world and experiences with impact assessment as a potential solution in other policy areas, such as Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA). The Anglo-Saxon countries and the World Bank were among the first to emphasise health in other types of assessment. HIA then was developed as a separate assessment, because health was considered insufficiently integrated in EIA. The earliest scientific publication on HIA as a specific methodology dates back to 1991, which describes a Canadian practice (Davies, 1991). In the 1990s, separate initiatives followed predominantly in the UK, Finland, Sweden, Germany and the Netherlands.

Birley identifies three disciplinary sources from which HIA has developed (Birley 2002). One is the 'healthy public policy' movement, which is especially concerned about socio-economic health differences. A second source is the risk assessment and environmental epidemiology, where quantification is emphasised. The third source for HIA is the environmental impact assessment that focuses attention on physical rather than social determinants. At the end of the 1990s, the World Health Organisation attempts to bring together those sources of HIA in order to develop a 'consensus framework for HIA'.

In this chapter, the literature on Health Impact Assessment is scanned to analyse how different authors conceptualise HIA in relation to policy-making and policy influence. This chapter starts with the encompassing standard that resulted from the WHO consensus meeting. The description then moves on to some relevant theories and models that have been developed along the distinction between technical and political-administrative aspects of HIA design. Some ideas about a political-administrative HIA design provide interesting clues. To identify relevant empirical insights in the relationship between HIA and policymaking, evaluations of HIA and other impact assessments are described. At the end, the chapter provides some building blocks and identifies blind spots in the HIA literature to develop a suitable framework for the empirical analysis of whether, and how, HIA contributes to the integration of health in public policy.

2.1 World Health Organisation principle values for HIA

One of the most cited documents on HIA is the Gothenburg Consensus paper (WHO, 2000). During an international workshop, organised by WHO Europe and the Nordic School of Public Health in Göteborg in 1999, a delegation of experts defined HIA[13] as 'a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential impacts on the health of a population, and the distribution of those impacts within the population', also known as 'the Gothenburg Consensus'.[14] Since then, a bulk of HIA theories, models, tools, methodologies and data has been developed and gathered in freely accessible Internet databases.[15]

The Gothenburg paper presents an international expert consensus on underlying principles of HIA practice. They consider this necessary, because HIA practitioners have to deal with diverse, sometimes conflicting, value frames for health and evidence in the public or private policy sectors addressed, as well as within the health sector itself. 'Values evolve and change in time. It is suggested that they can also be changed by the processes of impact assessment themselves' (ECPH, 2000). These values set the conditions for health policy development, define both what is acceptable and what is not, and also frame criteria for good practice. 'It is essential that such values are taken into account, otherwise HIA runs the danger of being an artificial process, divorced from the reality of the policy environment in which it is being implemented.' (ECPH, 1999). WHO distinguishes the following basic values concerning HIA:

1. 'Democracy, emphasizing the right of people to participate in a transparent process for the formulation, implementation and evaluation of policies that affect their life, both directly and through the elected political decision-makers. The basis for decisions should be transparent.
2. Equity, emphasizing that HIA is not only interested in the aggregate impact of the assessed policy on the health of a population but also on the distribution of the impact within the population, in terms of gender, age, ethnic background and socio-economic status.
3. Sustainable development that both short term and long term as well as more and less direct impacts are taken into consideration.
4. 'Ethical use of evidence, emphasizing that the use of quantitative and qualitative evidence has to be rigorous, and based on different scientific disciplines and

[13] In Dutch: 'Gezondheidseffectschatting'; in German: 'Gesundheitsverträglichkeitsprüfung'
[14] The term ´policy´ is used for brevity to refer to projects, programmes or policies.

methodologies to get as comprehensive assessment as possible of the expected impacts.' The Gothenburg Consensus paper states that the definition of health needs to be measurable. Therefore, the WHO constitutional definition of health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' is considered unfit. Instead, health is defined as 'the reduction in mortality, morbidity and disability due to detectable disease or disorder, and an increase in the perceived level of health.' (ECPH, 2000)

5. 'A comprehensive approach to health - emphasising that physical, mental and social well-being is determined by a broad range of factors from all sectors of society' has been added to the principles in a recent consensus document of the International Association of Impact Assessment (Quigley et al, 2006).

These values are derived from Health 21, the WHO policy to which all 51 member states have subscribed. Health 21 basic values are:

1. Health as a fundamental human right;

2. Equity in health and solidarity in action between countries, between groups of people within countries, and between genders;

3. Participation by, and accountability of individuals, groups and communities, and of institutions, organizations and sectors in health development.

Furthermore, the Gothenburg paper states that values that guide the policy addressed should be analysed to understand objectives and identify possibilities for change. From claims of participants at the meeting that 'most of the government only value money, saving, competitiveness and other economic interests', the paper concludes that 'health is not made visible and conscious enough in the value systems of other sectors. Thus, one role of HIA could be to make it more visible' (Lehto and Ritsatakis, 2000).

These principles are not taken for granted in all HIA practices. To those who emphasise scientific objectivity as a primary characteristic of HIA, it is unclear how HIA could or should contribute to the principle of democracy, and participation in their view could lead to a scientifically flawed assessment. According to Wright et al (2005), participation should serve as an information-gathering method only instead of empowering communities. In that sense, the Gothenburg Consensus Paper covers up some important debates that are not yet finished and that have important consequences for the choices in HIA design. Still, its relevance for this research is in the elaborate purposes of policy as well as societal change.

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[15] http://www.publichealth.nice.org.uk/hiagateway ; www.who.int/hia; www.hiadatabase.net

2.2 Theories and models

A useful distinction in the HIA literature is between technical and political-administrative rationalities behind health impact assessment (Putters, 1997, Putters and Van der Grinten, 1998). Putters suggests distinguishing policy problems on the basis of 'the extent to which knowledge and information are available concerning policy and its effects ('technical rationality'); and the extent to which it is known how policymaking takes place in a certain field' ('administrative rationality') (Putters, 1996).[16] This distinction also helps to link the two debates mentioned in the introductory chapter: on scientific quality of the HIA and on its relation to policy-making. In the technical rational view, HIA is defined separately from its relationship with the policy and political process, while in the political-administrative view the relationship between HIA and policymaking is explored and conceptualised as an integral part of HIA.

2.2.1 Technical rationality in the HIA literature

Although policy and political issues were discussed in the Gothenburg debate, the paper returns to a technical definition and model of HIA. While the core elements of HIA distinguish between scientific evidence and opinions, experience and expectations, the Gothenburg Consensus definition of HIA focuses on the methodology of the assessment, leaving out the policy dimension. In the paper, the stages model is elaborated from a technical point of view. Interestingly, the recent IAIA paper 'Best Practice principles for HIA' add more procedural guidelines (see table 2.1).

Concerning the technical rationality, most of the HIA literature focuses on the validity and reliability of the methods and techniques to analyse causal relations between the policy and health (Lock, 2000; Parry and Stevens, 2001; Scott-Samuel, Birley et al. 2001; Birley, 2002; Joffe and Mindell, 2002; Petticrew, 2003; Veerman, Barendregt et al, 2005; Petticrew, Cummins et al, 2007; Veerman, Barendregt et al, forthcoming in 2007).

One of the main problems in assessing potential impacts, according to them, is a problematic measuring. Health impacts have a causal chain with many intermediate variables. Usually, the impact from determinants on health is fairly easy to analyse, but it is

[16] The technical and political-administrative rationality of policy problems is a classical distinction in policy analysis, rooted in philosophy (Ezrahi,1980). The line of reasoning behind this distinction, and the consequences for HIA will be described in-depth in Chapter three.

very hard to determine the impact from policy interventions on health determinants (Joffe and Mindell, 2002). The related methods are disputed as well, because impacts are often measured at the individual level. These are hard to aggregate to the population level (Parry and Stevens, 2001). This leads some academics concerned with HIA to state that 'current health impact assessment is insufficiently rigorous to make robust assumptions on the magnitude or even the direction of the health impacts of policy interventions' (Parry and Stevens, 2001).

Table 2.1 Simplified Gothenburg Consensus model of Health Impact Assessment, supplemented with the IAIA best practice principles *in italic* (Quigley et al, 2006)

	Stages	Activities
1.	Screening	Quick mapping linkages policy proposals and health aspects
2.	Scoping	Selection of methods, resources, participation, time frame for HIA
3.	Effect analysis	Rapid appraisal of existing data and knowledge, health impact analysis (In-depth examination with new data) or health impact review (summary estimation of broad policies)
4.	*Public engagement and dialogue*	
5.	*Appraisal of the HIA report*	*Compliance with the Terms of Reference, feasibility, soundness, acceptability of recommendations*
6.	Output	Public HIA report, weigh health to other interests, decision adjustment
	Establishment of a framework for intersectoral action	
7.	*Negotiation for resource allocation for health safeguard measures*	
8.	Monitoring, follow up and evaluation	Evaluate procedure, actual impacts

Another problem, they argue, is the gap in the evidence base mentioned before. 'In completed studies, the principle sources of evidence have come from literature reviews and qualitative methods'. (…) There is a need for a balance between rigorous methods that require specialist skills and high levels of resources and those that can be used more easily and cheaply' (Taylor and Quigley, 2002). This balance is to be found by developing 'a new framework to gather, interpret and prioritise evidence from different origins for evidence based policy-making (Lock, 2000).

Nevertheless, even if these technical problems were solved, it still remains to be seen whether the policy-makers would follow the recommendations from the assessment.

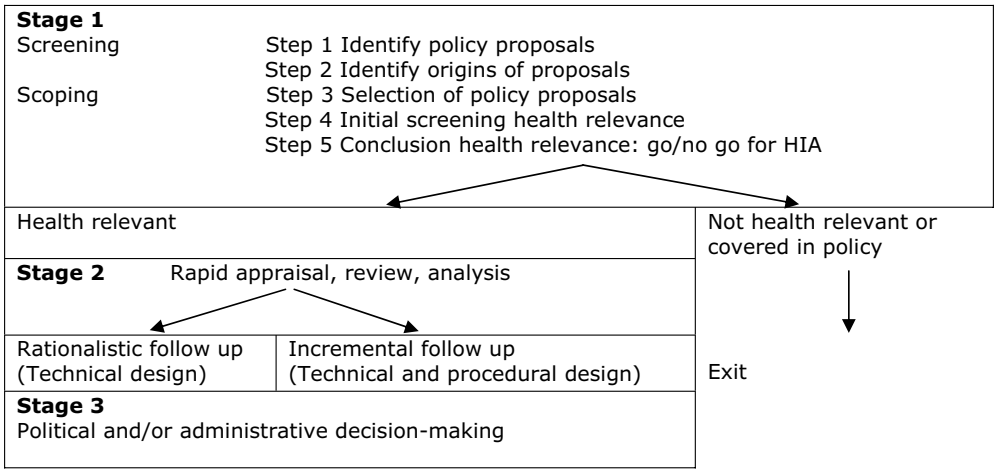
2.2.2 Political-administrative rationality in the HIA literature

Many leading authors in the field have referred to the political dimension of HIA. Scott-Samuel, one of the 'founding fathers' of HIA in the UK and EU, describes HIA as 'a political tool with an epidemiological evidence base' (Scott-Samuel, Birley et al, 2001). Kemm refers to the importance of administrative priorities and procedures: 'If an HIA does not conform to policy-making timetables, present information in a form that is policy-relevant and fit the administrative structures of policy-makers, it will be difficult to demonstrate its value to the policy-making process' (Kemm, 2001). The political-administrative dimensions of HIA comprise a conceptualisation of the relationship between the technical assessment and the purpose of integrating health in policies and plans. Several authors have attempted to link HIA to theories of policymaking.

Rational and incremental models

As one of the first, Putters (1996) elaborated the Gothenburg model of HIA in a preliminary combination of the technical perspective with the policy perspective (see figure 2.1).

Figure 2.1 Stages and steps in Health Impact Assessment (Putters 1996)



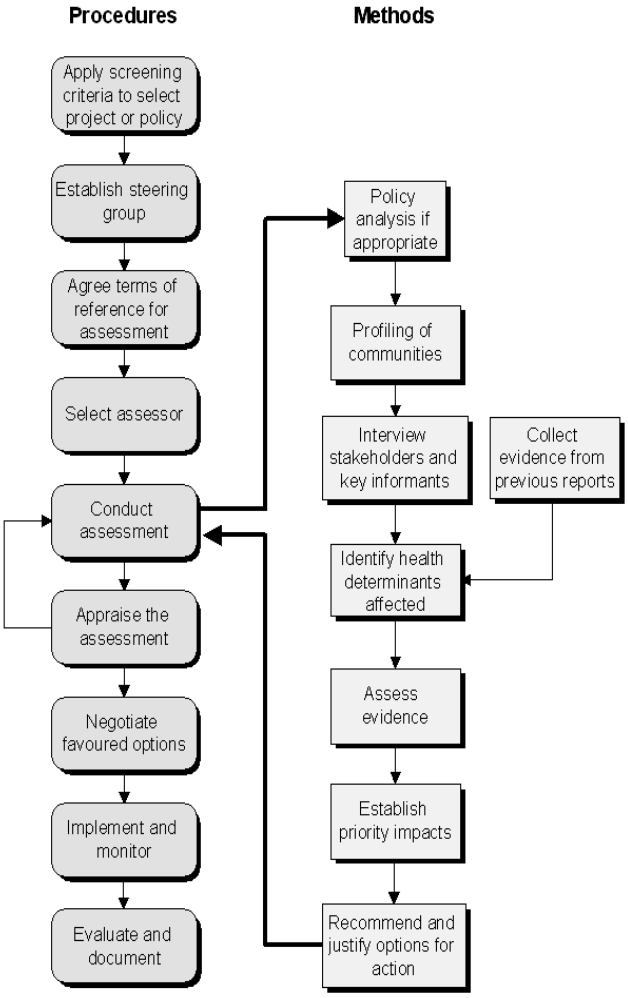
The first stage consists of screening and scoping policy proposals. Putters argues that the screening and scoping steps of HIA should determine whether an analysis is desirable and possible. If so, the second stage of assessment can be adjusted to the type of policy at stake: either a rationalistic follow-up or an incremental follow-up (Putters, 1996). The third and final stage consists of policy decision-making. The initial policy proposal may either be unchanged, revised, flanked by other policy, or withdrawn (Putters, 1996; Putters, 1997; World Health Organisation, 2000).

The importance of this model is that it provides a first attempt to make the technical design of the assessment useful, feasible and acceptable in a policy setting. Interestingly, the Dutch Ministry of Health has interpreted the incremental model of HIA, in the absence of evidence, to consist of interdepartmental deliberations without a formal assessment, which is a return to the situation before HIA was introduced. An interesting question for the empirical research in this thesis is whether a 'middle road HIA', between (or combining) a technical assessment and deliberations without a formal assessment, is feasible and helpful to integrate health in policies.

The Merseyside Guidelines

Another influential model of HIA is provided by the Merseyside Guidelines for HIA (see figure 2.2). Procedures for commissioning and implementing HIA are distinguished from methods of assessment. This provides some very interesting ideas about the relevant aspects in the interactions between the HIA and the policy process. First of all, under the Guidelines, screening of policies is intended to reveal the epidemiological and outcome dimensions as well as *economic* and *strategic* dimensions of the proposal. Secondly, the Steering Group, according to the authors, should consist of commissioners, assessors, policy proponents, affected communities, and other stakeholders, and it is to agree on the Terms of Reference. Thirdly, these terms form a quality assurance procedure the reflects the joint agreements on the division of tasks and responsibilities; feedback procedure; methods; output requirements, ownership, confidentiality and copyright; the scope in terms of inclusion and exclusion criteria, and HIA boundaries in time and space; outline of deadlines; and budget and funding.

Figure 2.2 Merseyside Guidelines for Health Impact Assessment (Scott-Samuel et al, 2001)



Finally, the authors recognise that alternative policy options will not automatically be adopted. They propose Steering Group leadership and skilful negotiation to achieve agreement on policy change for health. Additionally, they propose policy analysis to identify the key policy dimensions that HIA needs to address: content, socio-political and policy context in which it will be implemented; policy objectives, priorities, and intended outputs; and tradeoffs and critical socio-cultural impacts which may determine

implementation effectiveness (Scott-Samuel et al, 2000). Thus, the Merseyside Guidelines pay rather elaborated attention to the resources and strategies needed for influencing policy. In this research, an empirical analysis of these resources and strategies may show how HIA design could be improved to further the integration of health in policies.

HIA as information management for policy learning

Banken identifies a number of political and administrative challenges to HIA (Banken, 2001). At the core of HIA, he contends, is information management. He uses Sabatier's idea of policy learning and policies as belief systems, which may change over a time frame of many years in continuous exchange with (technical) information (Sabatier and Jenkings-Smith, 1993). Application of this model to HIA challenges the traditional concept of public health being circumscribed in local, regional and national public health agencies. In order to enable a healthy public policy learning process, it becomes necessary to have a critical level of pubic health knowledge in the policymaking body. Conversely, in order to participate in a healthy public policy learning process, the public health agencies must have 'border spanning links' with the other actors in the policy-making process (ECPH, 2000). Power struggles are anticipated between health and non-health authorities; as is the possibility that bureaucratic procedures will take over HIA without control mechanisms, instead of improving decision-making. Banken proposes dividing responsibilities analogous to EIA:

- The public, NGOs or lobbyists should contribute to screening and scooping, and also appraise the HIA report
- The policy proponent should elaborate the report
- The department of Public health should provide guidelines, appraise methods, and evaluate research
- A governmental agency should oversee the quality of the HIA process, and provide annual reports to Parliament

Banken also observes that the health determinants concept does not fit bureaucratic structures. Institutional change is necessary for accepting and sustaining the actual practice of effective HIA. HIA, Banken continues, is like walking on a tightrope: negotiating the balance between different stakeholders; between uncertainties in knowledge and expectations; between scientific knowledge and political imperatives, and between professional values and administrative behaviour (ECPH, 2000).

The importance of the ideas of Banken for the research in this thesis is the formulation of an ideal design of HIA from a policy perspective, in which the policy

proponent is the owner and carrier of the HIA, who uses the expertise of public health experts, the public and lobbyists, and who is held accountable to democratic institutions. These components of the ideal type of HIA are not present in the Netherlands, and it is questionable whether these components are attainable conditions. Nevertheless, his call for institutional change provides an interesting empirical question for this research: whether HIA has the potential for inducing policy learning and institutional change.

Model for a 'comprehensive public policy analysis for HIA'

These reflections were elaborated by the Thai Health Systems Research Institute, which has been running a 'Healthy Public Policy and Health Impact Assessment Program' since 2001. In 2005, the Institute was awarded the 'Institutional Award' of the International Association of Impact Assessment (IAIA) for their empirical and theoretical contributions to the HIA field. Sukkumnoed applied different political and policy models to HIA practice, developing a conceptual framework to describe and prescribe health impact assessment (Phoolcharoen, Sukkumnoed et al, 2003; Sukkumnoed, 2005).[17] The model for 'the comprehensive public policy analysis for HIA' is based on a combination of rationalist model of decision-making (Simon 1959), the incremental or negotiation model (Lindblom 1959) that is translated into a 'multiple streams framework' based on agenda setting theory (Kingdon 1995), as well as the advocacy coalition framework (Sabatier, 1988) and the deliberative model of policymaking (Hajer and Wagenaar, 2003).

This criticism was translated into the incremental model with a focus on interdependent multi-actor processes of consultation and negotiation in policy networks. Based on this model, Kingdon (1984) empirically analysed the agenda setting process, which resulted in the 'streams model'. Policy entrepreneurs articulate problems; others continuously articulate solutions. These problem and solution streams do not link until there is a window of opportunity for policy, created by (a change of) political actors. According to Sukkumnoed, the streams model suggests, however, that policymaking would be tactical, rather than strategic, in nature. This model easily overlooks long-term changes in policy, and the independence of the streams is questioned.

These gaps are addressed by the Advocacy Coalition framework (Sabatier 1988). Long-term policy change is analysed following the logic of policy learning as a result of interactions between advocacy coalitions. An advocacy coalition consists of actors from a variety of institutions within a policy subsystem, who share policy beliefs. Individual

policy entrepreneurs are hardly successful when policy subsystems become more complex, requiring coordination and cooperation. Network relations in the subsystem may provide opportunities for learning. Analysing relations within and between networks proves useful; yet, according to Sukkumnoed, the Advocacy Coalition framework lacks clear operational guidance.

Sukkumnoed then argues that the negotiation model, which comprises both the streams model of agenda setting and the Advocacy Coalition framework, focuses too much on the outcome, which may lead to tension, conflict and mistrust in society. In order to increase social understanding, Sukkumnoed turns to the deliberative model of policymaking (Hajer and Wagenaar, 2003). This model assumes that reality is perceived differently among actors in different social systems, sometimes resulting in conflicting policy frames. Interpretive analysis is needed to reveal and anticipate such (often hidden) frame conflicts that are communicated implicitly or explicitly in policy and public discourse.

Based on those theoretical perspectives on policymaking, Sukkumnoed then identifies six conditions that need to be analysed before HIA can be designed properly to fit the policy context: (1) understanding the decision-making process, (2) understanding the policy network, (3) understanding policy meanings and framings, (4) understanding external factors such as socio-economic context, (5) understanding power structure, (6) understanding timing and windows of opportunity, and, as outcomes of this comprehensive policy analysis, (7) defining role and strategy of HIA, and (8) a communication strategy for policy-oriented learning and deliberative decision-making.

Although it is still a rather abstract model, the added value for the research undertaken in this thesis is the focus on the political and administrative conditions on which the design of HIA depends. In the empirical research in this thesis, these conditions can be observed with a focus on the questions whether, and how, these are considered in the HIA, and with which consequences.

These models and theories of HIA provide interesting initial conceptualisations of the relationship between HIA and the policy process. These are, however, still rather abstract. Moreover, these reflect the importance of policy analysis for HIA, yet, do not specifically address the interactions with the assessment design. Besides theories and models of HIA,

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[17] Bekker and Sukkumnoed pr esented a joint paper entitled 'Healthy decisions: the development of analytical frameworks in Thailand and the Netherlands', at the Annual Conference of the International Association of Impact Assessment in Vancouver 2004.

there also have been a number of evaluations if HIAs or other impact assessments that may also provide helpful clues to the interactions.

2.3 Evaluations

In this paragraph, the evaluations and outcomes of HIA are described, followed by evaluations of other impact assessment, in order to learn how the relationship is conceptalised.

2.3.1 Evaluations of HIA

The Gothenburg Consensus distinguishes between two kinds of evaluations: an appraisal of the report before it is submitted or published and a follow up assessment to compare expected with actual impacts. The latter, however, is hardly measurable in the short run because of the incubation period of population health impacts. There have been very few formal evaluations of the impact on policy and effectiveness of HIA (Taylor and Quigley, 2002). The earlier international HIA literature mentions some evaluation criteria: the validity and reliability of the estimates and procedural commitment like consultations and community participation. Policy adjustment or other policy-related criteria are hardly addressed explicitly. The early evaluations focuse mainly on the process of carrying out an HIA and peer reviewing the HIA report (Abdel Aziz, 2001; Close, 2001; Fast, 2002; London Health Commission, 2003). Furthermore, HIA has not been used as a monitoring activity (Macintyre, 2003).

Recently, some more systematic empirical evaluations of HIA outcomes in terms of policy change have been published. Using parts of the models and conceptualisations described in the previous section, these provide some interesting conclusions: 'actors on the local level would have the capacity to work intersectorally to bring about policy change if HIA was to be more supported/institutionalised' (Mannheimer, Gulis et al, 2007), and 'from the viewpoint of preparation and decision-making, the effectiveness of a human impact assessment increases when assessment becomes a recurring process and an integral part of an organisation's activities' (Kauppinen, Nelimarkka et al. 2006). Although the influence of HIA on policy remains obscure, several evaluation studies identify factors of success and failure that belong to the context and interaction process of HIA rather than the technical assessment itself:

support, timing, and linkage to existing policy networks, procedures and priorities. Nevertheless, these studies do not provide many clues on how, exactly, to enhance support, effectiveness and organisational integration.
In the Netherlands, a limited number of evaluations have been conducted (Huurman, 2000a; Huurman, 2000b; Fast, 2002; Herten, Penris et al, 2003; Van Reeuwijk-Werkhorst, Van Herten et al, 2005) (some of these are elaborated in chapter 5). Although in three out of five reports positive conclusions are drawn, the criteria used remain implicit. These provide no useful clues to the conceptualisation of the relationship between HIA and the policy process. The evaluation studies of other impact assessments may provide more clues because those impact assessments have been practiced over much longer periods of time than HIA.

2.3.2 Evaluations of Environmental, Social, and Emancipation Impact Assessments

In the Netherlands, approximately 30 specific ex ante evaluation instruments, such as the Environmental Impact Assessment, have been developed in the past decade in order to assess potential risks from policy (ICHW werkgroep ex ante evaluatie instrumenten 1999). In this section, a selection if these is described focussing on environmental impact assessment, strategic environmental impact assessment, social impact assessment and emancipation impact assessment. Table 2.2 summarises the comparison of assessment characteristics.

Environmental Impact Assessment (EIA)
The conditions for EIA are very different from those for HIA. The aim of EIA is to take environmental concerns into full consideration when deciding on plans and projects. In the Netherlands, EIA has a regulated procedure in the Nature Conservation Act[18] that consists of a strict division of responsibilities and ten steps of action. The policy proponent is legally required to organise an EIA, which must be addressed to the legal authority, which decides whether the project may continue and under which conditions. Consultation, expert judgment and publication are legal control mechanisms. Independent evaluations of Dutch EIA practice conclude that EIA is an effective instrument in influencing single project plans. EIA affects the plans of governmental authorities more than those of private project proponents, which may be explained by

[18] In Dutch: Wet Milieubeheer

the private party developing an environmentally friendly project plan in anticipation of the EIA (Van der Woude and Van de Gronden, 1995; Ten Heuvelhof and Nauta, 1996; De Valk, 1998).

Table 2.2 Comparison characteristics of health impact assessment, environmental impact assessment and emancipation impact assessment in the Netherlands

Impact assessment characteristics	Health impact assessment	Environmental impact assessment	Emancipation impact assessment
Status	On a voluntary basis White paper *Healthy and Sound* 1995	Legal requirement in *Nature Conservation Act* (art. 7.1-7.43)	On a voluntary basis or parliamentary requirement *Cabinet Position paper Gender mainstreaming* 2001
Directed at	Initially national policies; since 2003 local projects	Local or regional project plans	National policies
Aim	Prevention of negative impacts (*EU art 152; EU SEA Protocol**), health promotion Local 'integral health policy' (Dutch *Collective Prevention & Public Health Act* - WCPV)	Full consideration of environmental concerns in project decisions	'Gender mainstreaming': prevention of structural unequal power balance between the sexes
Instrument	- Toolkit local facet policy: Checklist HIA, Quick scan facet policy, Determinant-policy screening - HIA City & Environment, Assessment Framework Health and Environment - computer simulation model 'Prevent' - 'multistate life table modelling' for HIA expected for 2007.	- EIA - Environmental Check (Milieutoets): centre for Proposed Regulation - SEA *EU directive 2001/42/EG*; and UN SEA Protocol (2004)	- Coordinating administrator emancipation policy - Interdepartmental Coordination committee Emancipation policy (ICE) - Department coordination emancipation policy (DCE) - Temporary external visitation committees
Owner	Health authority (commissioner) Health institutes (practitioner) Policy/project initiator decides	Project initiator legally required to do EIA, Legal authority decides	Ministry of Social Affairs or Parliament may be commissioners, Policy initiator/Parliament decides

* Health Impact Assessment not explicitly mentioned

In contrast, Cashmore et al (2004) conclude in an international review of EIA practices that EIA merely has minor impacts because of a passive integration in decision-making procedures. According to the authors, practice does not comply with the 'ideal type'

(positivist-rational) models of EIA. They argue that EIA functions mainly as a reactive and passive information-providing instrument, which results in 'fine tuning' of project plans, without really influencing decision-making with fundamental policy alternatives. They contend that the procedural design has limited EIA to a kind of audit, and provides a static and random picture, while policies and plans change continuously.

While international evaluations of EIA for the most part focus on process criteria, the authors suggest a broader and more substantive approach, such as stakeholder empowerment through participation, and a focus on incremental changes in public administration, business and science (Cashmore, Gwilliam et al, 2004). Such an approach reveals the underlying values and multiple interpretations of environmental issues between different actors. Besides providing more political support, EIA should focus more on interaction with decision-making, information needs of potential users, and the broad institutional and sociocultural context (Cashmore, Gwilliam et al, 2004; Schijf, 2005). Participation of stakeholders, according to them, increases the transparancy and legitimacy of policy decisions.

Besides evaluations of EIA practice, there are also several international reflections on longer-term practices of environmental policy integration (Sadler, 1996; Kornov and Thissen, 2000; Cherp and Antypas, 2003; Nilsson, 2005; Jay, Jones et al, forthcoming in 2007). These studies show how a distinction can be made between short-term impacts in terms of project plan adjustment, and long-term influence on institutional change. Without a long-term focus, active environmental integration in policies remains utopian. It implies that a technical design for HIA would only address the short-term project plan adjustment; while institutional change requires a far more elaborated interaction design of HIA with the policy context.

Strategic Environmental Impact Assessment

A common dilemma in impact assessment is the timing. An assessment can only provide detailed and well-described impacts when the policy plans are advanced, yet, an early timing improves the chances of influencing the policy process. Because of the difficulty in adjusting advance plans by EIA, the EU has adopted directive 2001/42/EG, which states that all strategic EU plans and programmes must be assessed beforehand on 'environmental, including health' impacts. Such a Strategic Environmental Impact Assessment[19] addresses higher-level policies and programmes that precede the design of projects, and is less detailed. The United Nations in 2004 adopt a Strategic

Environmental Assessment protocol, which prescribes the same type of assessment of national boundary-crossing impacts. Such a strategic assessment at higher policy levels may be one of the conditions to address long-term institutional change. Extending the ideas of Cashmore et al, here also, a technical design would need to be supplemented with a longer-term process and interaction design.

Social Impact Assessment

Social Impact Assessment has been applied for decades in the United States, while in the Netherlands, a call for SIA has only recently been organised. In his evaluation of the SIA instrument, Carley (1986) states that its political function is increasingly recognised over technical dominance. He describes its development between 1975 and 1983 'from pseudo-science' to an instrument for the 'planning process'. The former was characterised by an 'objectivist, structural/functional approach with an elitist, technical orientation of the expert researcher', while SIA as a planning instrument in the latter description relates to a 'pluralist, reformist approach with a participatory mode'.

Emancipation Impact Assessment (Netherlands)

Evalutions of emancipation IA in the Netherlands point out that IA affects policy in a moderate and indirect way, rather than directly (Hill, 2002). Differences between emancipaton IA and HIA include the development of organisational and procedural arrangements for emancipation IA, as well as formal policy priorities set for emancipation in Dutch policy. The latter is evident from the Cabinet Position paper on *Gender mainstreaming* (2001), and the emancipation terms of reference assigned to different ministries by Parliament. Van de Graaf et al (1999) conclude in an evaluation of emanicipation IA quality that *how* it affects policy depends on the quality as well as the timing, political support, actors responsible for implementation and their relationship to the policymakers (Van de Graaf, Mossink et al, 1999). An analysis of problem formation, according to them, is indispensable. Hupe et al (2002) confirm that emancipation IA should be linked to problem perceptions of its potential users. In combination with organised multiple interactions between the actors involved, these aspects are essential to policy change as aspired by emancipation IA (Hupe, Van der Meer et al, 2002).

Roggeband et al (2004) have analysed the implementation of emancipation IA and arrived at the theoretically well-known actor-structure dilemma: while the unintentional 'gender bias' results from routine proceedings of government officials and

[19] In Dutch: Strategische Milieu Beoordeling (SMB)

civil servants (the authors define routines as an institutional structure), the strategy of *gender mainstreaming* is aimed at turning it into intentional action (actor). Moreover, officials and servants have more authority and resources at their disposal than emancipation experts or other stakeholders, such that emancipation recommendations from IA cannot be enforced in any way (Roggeband and Verloo 2004). The skewed power relations as part of the institutional structure, lead them to conclude that officials and servants, because of their aversion to emancipation IA, are part of the problem and should not conduct emancipation IA themselves.

The ways that emancipation experts try to set the administrative agenda consist of strategies either to convince them that emancipation IA could optimise the quality of policy or to neutralise potentially controversial issues. Roggeband et al. argue that a technical-rational design might depoliticise the policy process, but should nevertheless be problematised in research. Officials and servants define the policy problem, write policy texts, choose interventions, establish the timing of procedures, and lobby for political support. This influential role should be supplemented by (potentially countervailing) consultations of political and societal stakeholders.

The relevance for the design of HIA is, in other words, that policymakers are important and influential resources for impact assessment and policy integration that cannot be ignored. In their reflection on the actor-structure dilemma of impact assessment, Roggeband et al in our opinion jump to conclusions, while the relevance of the debate points at the need to analyse how structural change can be brought about. An interesting question is raised: whether institutional change can be best induced from the outside or from the inside of the policy process. Both approaches require a different impact assessment design.

The evaluation of different types of impact assessment all reveal a similar debate on the purpose of IA: if it is aimed at short-term project-level plan adjustment, the design may reflect a rather bureaucratic, expert-based and technical procedure for the assessment. By contrast, if IA is aimed at long-term institutional change in terms of the integration of e.g. health in policies, the pluralism of multiple perceptions of the issue and the proposed solutions requires participatory methods.

2.4 Summary and reflections

In this chapter, the literature on Health Impact Assessment has been scanned to analyse how different authors conceptualise HIA in relation to policy-making and policy influence. The purpose of this chapter is to identify building blocks to develop a suitable framework for the empirical analysis of whether, and how, HIA contributes to the integration of health in public policy.

The international standard model of HIA that is provided by the Gothenburg Consensus Paper (WHO, 1999) is built on a number of normative principles that emphasise the purpose of policy as well as societal change (democratisation). These reveal large ambitions for a single HIA. Furthermore, the principles induce a debate among scholars who prefer the design of HIA to independently produce an objective assessment based on scientifically sound methods.

Some of the theories and models of HIA provide interesting ideas and concepts to empirically analyse the relationship between HIA and the policy process. Most of these focus on relevant implementation conditions that need to be identified before the HIA is actually designed in practice: (a) perform a policy analysis in order to understand the decision process, to establish the 'right' timing and identify a window of opportunity, to understand the policy network and the power structure among the actors, the meanings the stakeholders attach to the policy, the health issue and the instrument of HIA, and to understand the socio-economic and cultural context (Sukkumnoed and Phoolcharoon, 2003, 2005). (b) Determine the epidemiological and outcome dimensions as well as economic and strategic dimensions of the HIA proposal in order to develop different kinds of arguments for HIA and (c) set up a broad Steering Group in which all stakeholders are represented who jointly agree on the Terms of Reference for the HIA (Scott-Samuel et al, 2001). Based on such policy analysis, Putters and Van der Grinten (1996) suggest making a distinction between a rational and an incremental design of HIA. An alternative approach is to see whether a 'middle-road HIA', with a mixed design comprising a technical assessment as well as intersectoral interactions and deliberations (Sukkumnoed, 2005), would help to integrate health in policies more than either a rational-technical or an incremental HIA design on their own. Analogous to EIA, Banken (2001) develops an ideal organisational design for HIA, in which HIA would be integrated in non-health policy procedures and democratically assessed to make policies more legitimate. It reveals the need for institutional change in the long run in order to take HIA out of the public health sector.

Based on the ideas of these authors, the purposes of HIA are identified at different levels of policy change: policymakers put the health issue on their own agenda (Banken, 2001; Sukkumnoed, 2005); policymakers adjust their policy plan to HIA recommendations (Putters, 1996; WHO, 1999); policymakers engage in monitoring and preventing health problems in their own future policies or plans policymakers (resulting in a new division of labour) (Banken, 2001); and policymakers create and redistribute organisational capacity and competencies in order to enable monitoring and prevention 'on the spot' (resource integration) (Sukkumnoed, 2005; Kauppinen, Nelimarkka et al. 2006).

How should HIA be designed, then, to both aim for short-term plan adjustment and long-term institutional change? Evaluation studies of other impact assessments all reveal a similar development from a technical orientation on IA design aimed at objective and independent production of knowledge (think about the tight scope HIA from chapter one) towards a broad participatory interaction design of IA aimed at long-term policy reform (which may be the broad scope HIA described in chapter one). In the Netherlands, most of the HIA practices seem to reflect a tight scope-orientation. If Dutch proponents consider policy change a purpose of HIA, the empirical analysis in this research would have to focus on the consequences of any HIA design for policy change to reveal the practical conditions for a broad scope design of HIA in the Netherlands. If a tight scope design seems to work to the satisfaction of all parties involved, then there seems to be no need for a broad scope HIA. As described in chapter one, the debates on HIA seem to suggest otherwise.

Nevertheless, while the HIA literature discussed addresses the dimension of policy analysis for HIA, there are some blinds spots that require further exploration. The interactions between the assessment design and the policy process are still obscure. The broad and tight scope orientations on the HIA design are very abstract categories that do not specifically describe how, exactly, to create or attain the enabling conditions for the integration of health in policies: how to build support, how to establish the 'right' timing, and how to link HIA to existing policy networks, procedures and priorities. And what, exactly, is the role of research and knowledge in creating these conditions? These conditions have to be met if HIA is to become a recurring activity, which could be another condition identified for institutional change. Another important question that remains obscure is how 'policy change', 'institutional change', 'integrating health in policy' can be conceptualised? In Chapter three, these questions will be addressed in a theoretical exploration of schools of thought outside the HIA literature. The literature on

network and deliberative governance will help to define the kinds of policy change that HIA is expected to bring about, and the processes and mechanisms through which those changes usually occur (without HIA). The literature on Science and Technology Studies provides some interesting concepts for the way in which HIA could embark on those processes, and coordinate the simultaneous production of knowledge and policy.

Chapter 3
Reframing policy and knowledge boundaries

In the previous chapter, some questions have been identified that are insufficiently addressed by the HIA literature. The social aspects of knowledge creation receive limited attention as well as the question of how, exactly, support can be built for the integration of health in policy across different policy sectors.

In order to develop a suitable framework for the empirical analysis of the relationship between knowledge creation and policy production, this chapter zooms out from the HIA literature to more sociological studies of research and policy. According to Schön and Rein, the relationship between knowledge creation and policy production can be approached from two distinct perspectives: an 'instrumental' approach and a 'reflective' approach (1994). The instrumental approach is based on the assumption of objectively identifiable issues and mechanisms underlying policy production: rational choice, bargaining and exchange, and cooperation and persuasion. The Knowledge Utilisation Studies consider knowledge as a separate instrument for policy production. The reflective approach, on the other hand, departs from the observation of certain persisting policy controversies that the instrumental mechanisms cannot solve. The core of these controversies, according to Schön and Rein, is in the conflicting 'frames' of actors of the situation, which may lead to a policy stalemate. The alternative proposed is to reflect on what actors consider a 'fact' and what knowledge they deem 'relevant' in order to arrive at strategies for reframing their views on the policy issue. The Science and Technology Studies consider knowledge creation a similar and simultaneous process to policy production, offering the mechanism of 'boundary work' to conceptualise the relationship between both.

To introduce these schools of thought to the field of Health impact Assessment, and to position this research in the scientific arguments within those fields, these schools of literature are discussed rather extensively. In section 3.3, a preliminary analytical framework is presented that combines the concepts of 'reframing' from the governance literature and 'boundary work' from Science and Technology Studies, and lays out the structure for the empirical analysis of the case studies. So far, there have been few attempts to synthesise the governance and sociology of science perspectives into one approach for the interpretation of the interactions between research and policymaking.

It is argued that both perspectives provide complementary insights and adopt a similar methodology. The scientific puzzle in this thesis is then demarcated to the analysis of how the concepts of reframing policy and boundary coordination in knowledge creation are related in HIA practices. The combination of these perspectives enable a joint analysis of the interrelations between the perceived quality of HIA and its effectiveness in integrating health in policy.

3.1 The instrumental approach to knowledge creation and policy production

The instrumental approach represents static perspectives on objectively identifiable policy problems and solutions to resolve societal dispute in democratic governance. In policy analysis, a basic distinction is made between rational and incremental heuristic models of decision-making (sections 3.1.1 and 3.1.2) with specific views on knowledge and policy-making (section 3.1.3). At the end of the 1970s, policy deadlocks on environmental issues induce the trend toward cooperative governance through persuasion (section 3.1.4).

3.1.1 Policy-making through rational choice

A rational decision-making model (Simon, 1947) is based on the idea of a central policy actor in a hierarchical relationship between state and society, that rationally weighs the different policy options for resolving policy problems against one another. All information is available, and the actor has a free choice of options. Sequential stages are followed in the decision-making process: agenda setting, policy formulation, policy implementation and policy evaluation). The rational model is a normative model prescribing how policy should be made. It is applicable to uncontroversial policy problems about which knowledge is available (e.g. infectious diseases). An example is the 'phase-model' developed by Hoogerwerf (1998).

3.1.2 The politics of bargaining and exchange

The incremental model (Lindblom 1959, 1979), in contrast, is based on empirical observations of policy processes. These reflect a pluralist process of bargaining and exchange among the various interests involved. Even if there is a central actor, this actor

is still highly dependent on others to implement policy and solve collective problems. Bargaining and exchange are identified as rational strategies employed by actors who pursue their specific interest. Decision-making is observed to be a capricious, ambiguous and dynamic practice. Knowledge is only partly available, and can be interpreted, as well as mobilised, differently among actors in the policy arena. Examples are the 'garbage can-model' by Cohen, March and Olson (1972) and the 'streams-model' by Kingdon (1984). In response, a third decision-making model of 'mixed scanning' was developed by Etzioni (1967) in order to balance both models toward a realistic and appropriate prescription of decision-making. Under the influence of incremental and mixed scanning approaches, the view on role of knowledge in policy changes also, as reflected in the Knowledge Utilisation Studies.

3.2.3 The Knowledge Utilisation Studies

The dominant idea of the relationship between research and policy is illustrated by the phrase 'Speaking truth to power' (Douglas and Wildavsky, 1982). In this standard image, policy and research are considered to be separate domains, comprising separate institutions and organisations, methods, routines and quality criteria. Relations between the two domains are characterised by an information flow, which is considered to be hampered by an alleged cleavage, resulting in a lack of fit between knowledge and policy. Besides constituting a problem, this cleft has a normative dimension, as well: research should be produced independently, because facts produced by researchers should be distinguished from values reproduced by policymakers. The basic underlying assumption is: 'Improving the use of research in policy means improving quality of policy decisions.' (Weiss, 1977). The academic debate on evidence-based health policy mostly focuses on challenging and defending this basic assumption (Davis and Howden-Chapman, 1996; Cross, Henke et al, 2000; Lomas, 2000a, 2000b; Niessen, Grijseels et al, 2000; Macintyre, Chalmers et al, 2001; Sorian and Baugh, 2002; Gibson, 2003a, 2003b; Hanney, Gonzalez-Block et al, 2003; Lin and Gibson, 2003; Lomas, Fulop et al, 2003; Nutbeam, 2003; Donker, 2006). The abundance of literature cannot be discussed entirely in this section, therefore, the works of a particular influential author in this field is discussed here as representative for the field of the Knowledge Utilisation Studies.

Carol Weiss was one of the first authors to question the 'Speaking truth to power' paradigm, which she ascribes to a general belief in rationality. In this view, social science provides both the theoretical directions and the empirical observations necessary to

reaching desired goals in a complex world. Yet, Weiss argues that these directions, which are revealed in the selection of topics, variables and in theory construction, are guided by value considerations on the part of the researcher. These values become visible in the following –empirical - issues (Weiss 1977). To begin with, social science motives have moved beyond rationality, as the political beliefs of social scientists reveal a liberal left orientation in combination with the increased competition for grants, funds and dissemination beyond other researchers' footnotes. Moreover, there are 'congenital defects' in linking social science research to policy. Research is not equally available within the triad political system. Judges and members of Parliament, for instance, have much less access to research and information than policy-makers, if only because of limited funds. Secondly, policy-making is often based on 'minimal pain' (compromise) rather than 'abstract logic'. Thirdly, in some cases, research complicates policy-making rather than clarify the problem. Fourthly, as mentioned before, science is not value free. Fifthly, policy decisions are hard to identify in a process, where several actors make sub-decisions at different times and places that then accumulate into policy. Weiss suggests replacing the question 'how to influence policy-makers' by 'how do decisions come about?'

The invisibility of decisions is illustrated by a 1980 study among upper level decision-makers. They state that they 'do not decide: they propose, plan, review, draft, confer, advise, revise, criticise, write and supervise'. She concludes: 'decisions without conscious deliberation are unlikely to draw upon research in conscious and formal ways. Nonetheless, drawing upon the stock of knowledge that they have absorbed from social science research is highly compatible with the manner in which they conceptualise their jobs. What they do is conditioned by what they know. The integration of social science generalisations and concepts into their 'Weltanschauung' can have pervasive - if ultimately immeasurable - effects' (Weiss and Bucuvalas, 1980). Policy then evolves as a result of a knowledge creep, by which knowledge is confirmed and reconfirmed by accumulation of research and decision accretion, by which sub-decisions accumulate into policy (Weiss, 1980).

Empirical observations by policy-makers contradict the second assumption of the 'speaking truth to power' paradigm, that policy-makers do not use research. Weiss then moves to a reinterpretation of the concept knowledge utilisation, from 'direct, instrumental use' to 'contribution to the policy arena'. This provides room for long-term conceptual utilisation, called 'enlightenment' (Janowitz, 1970). She finally distinguishes between three models of research: as provider of facts to fill a knowledge gap, as

provider of ideas for conceptual policy development, and as provider of arguments as ammunition in the policy arena (Weiss, 1991).

In summary, explanations for knowledge utilisation are sought in the policy process and how research fits into it. By focusing on the 'effectiveness' of research for policy, or 'impact' on policy, Knowledge Utilisation studies reveal a conception of research and policy as separate worlds. Moreover, researching behaviour is often left unquestioned and part of the relationship between research and policy remains a black box. The Knowledge Utilisation Studies reflect a re-orientation on the role of knowledge toward the incremental model of politics (see table 3.1 for a summary).

Table 3.1 Heuristic policy models, assumptions and corresponding type of research (Bekker, Putters and Van der Grinten, 2004)

	Rational model	*Incremental model*	*Mixed model*
What & How	Sequential order of policy stages	Disorderly sequence	Sequence depends on strategy
	Full knowledge	Poor knowledge	Limited knowledge
	Free choice of goals and means	Limited choice	Limited choice
	Clear objectives as a starting point	Mutual adjustment Objectives	Conflicting policy objectives of fundamental and incremental decisions
Who & Context	Central actor with decisional power	Multiple actors with decisional power	Similar to incremental
	Stakeholders absent or full support Stable environment	Powerful stakeholders Little support Unstable environment	
Type of research	Speaking truth to power Research fills the *knowledge gap* in the policy *content:* ('what' and 'how' questions)	Research addresses *uncertainty* surrounding policy *process* ('who' and 'context' questions)	Both lack of knowledge and uncertainty Research offers knowledge on *interaction between policy content and process* ('what-how-who-context' questions)
	Specialised techniques Quantification Causality or risk assessment	Consultation Qualitative data Patterns of risk perceptions	Combination of both
	Research offers *evidence-base*: immediately usable knowledge	Research offers *insight* ('enlightenment'): usable in the long run	Useful when the policy process is properly understood and methods fit policy problem and dynamics

At the end of the 1970s, environmental issues induce the development of a rational-technical impact assessment to solve environmental problems. Policy analysts observed the rise of interest groups misusing the assessment in political and judicial strategies,

which effectively blocked decision-making even though the proposed policies or projects were publicly legitimate for other reasons. These perverse effects of rational problem-solving induced the emergence of cooperative governance through persuasion instead of expert-driven and hierarchical steering. The empirical observations of a growing interdependency between state and society has led to a wealth of policy studies and the literature on the network society and governance as an alternative (or addition to) hierarchical governance by laws and regulations.

3.1.4 Cooperative governance through persuasion

A broad interpretation of the concept of governance comprises three main forms of coordination of interdependent social relations: anarchy of exchange (i.e. market forces); hierarchy of command (i.e. imperative coordination by the state); the 'heterarchy' of self-organisation (i.e. networks). The latter reflects the narrow sense of governance (Jessop, 1999), which is used in this thesis.

Governance includes both institutions for, and processes of, collective action through consensual policymaking. As opposed to 'public management' or 'public administration', governance explicitly describes the pattern of interactions within a network of public and private institutions that are engaged in public activities. The conception of 'public' is no longer exclusively attributed to governmental activities. According to Kickert et al (1997), the steering of economy and society no longer requires direct government involvement. Governance is 'steering at a distance' (Kickert et al, 1997). Such distance may become problematic in other policy areas. The governance concept is useful to the interpretation of healthy public policy in this thesis because it addresses policy responsiveness as it enables the articulation and agenda setting of the problematic externalities of non-health policies (which Hemerijck (2003) has identified as the 'output legitimacy' of policy. These health risks result from 'the mismatch or disconnect between jurisdictions on the one hand, and social, technological, political, and economic (and public health, MB) problems on the other hand.'(Frederickson, 2004).

To resolve this mismatch or disconnection requires coordination. Within organisations, coordination consists of a re-allocation of tasks and power to deal with the health aspect of policies. To achieve compliance among actors in an interjurisdictional or interorganisational network, resources and accountability need to be re-allocated as well (Rico, Saltman and Boerma, 2003). As a result, new governance arrangements

come into existence. March &and Olson (1995) speak of 'loosely coupled systems' with high levels of delegation, decentralisation, and fuzzy boundaries within and between organisations. As a result, the distinction between 'the political' and 'the administrative' is blurred. Contemporary administrative work in and among both horizontal and vertical networks of organisations to achieve a public purpose becomes more 'freewheeling, more political, more inclined to take risks, and more creative and empowered; and less organisational, hierarchical, rule-bound, and managerial than is the work of traditional public administrators.'(Frederickson, 1997).

According to Shannon (2002), governance is a process of institutionalising the creative, generative capacity of collaboration by reconciling global governing principles and local place-based action, by means of the processes of intersectoral policy integration and participation of stakeholders as well as resourceful actors. Global and place-based refer to general and specific applications, respectively, rather than hierarchical levels. Collaboration is an activity that includes sharing resources, crafting joint decisions, engaging the opposition in designing creative solutions to shared problems, and building new relationships as needs and problems arise.

Policy integration for Healthy Public Policy

The concept of policy integration was first introduced in environmental policy studies (Shannon, 2002; Nilsson, 2005). The need for policy integration is clarified by the inability of single policy sectors, agencies or political actors to deal with problems adequately. The demand for policy integration requires that new relationships be built among very different policy networks, academic disciplines and administrative agencies (Landy and Plotkin, 1982). How policies are (or should be) integrated depends, according to Shannon (2002), on how tightly policies are connected to those they benefit. 'If policies are tightly held in place by beneficiaries – interests, political alignments, and agencies -, then working across policy sectors can be very difficult. If policies are more loosely related to the beneficiaries, organisations and agencies, and the shifting alignment of political interests, then it may be somewhat easier to pursue efforts to integrate policies across sectors' (Shannon 2002).

Nilsson (2005) has defined policy integration in environmental matters as a process of policy learning that occurs when sectoral actors reframe their understanding of key problems, objectives and strategies towards sustainable development. Policy (double loop) learning is focused on the adoption of ideas. Nilsson conceptualises impact assessment as an institutional procedure for enhancing policy learning.

Positions: interdepartmental facet coordination

Relevant to the integration of health in public policy is the analyis of the importance of positions and attitudes in coordinating across policy sectors. In a large-scale investigation of horizontal organizational structures for interdepartmental policy coordination in the Netherlands, Kottman defined coordination as (an attempt at a) 'mutual arrangement between different units or levels concerning (the outcome of) their activities in a certain area' (Kottman, 1976; Kottman, 1977; Kottman, 1981). This definition comprises the process as well as the product of coordination. Coordination is not value-free; Kottman contends: while it may contribute to efficiency, decisiveness, consistency and conflict resolution, it may just as well be perceived as a threat to domain demarcation and to the guarantee of structural plurality within the government. Coordination, therefore, should always be related to its political context, instead of considered an isolated, non-political efficiency problem (Kottman 1977). Kottman's research focuses on formal links between sharply separated, non-hierarchical entities, such as interdepartmental commissions. As opposed to HIA, support for cross-cutting cooperation in Kottman's research is facilitated with a formal organisational structure. Still, Kottman's research provides important insights that may also apply to HIA.

Kottman contends that the different actors involved in a cooperation effort, as a result of their various tasks and positions, reflect different attitudes. The effectiveness of a coordination structure may therefore increase as perceptions converge. In the case of HIA, the Ministry of Public health, Welfare and Sports *needs* other policy sectors to cover health determinants in policy. Kottman defines this specific situation as a 'facet attitude' of the health authority, as opposed to a 'key attitude' (of the dominant department, such as the Ministry of Finance); a 'sector attitude' (of a production department that withdraws from coordination as much as possible to avoid outside interference); a 'service attitude' (of departments providing support to coordination, such as the Prime Minister's Ministry of General Affairs); and a 'neutral attitude' (outsider departments, such as the Ministry of Justice) (see table 3.2).

Table 3.2 Interdepartmental coordination positions in the Netherlands

Coordination positions	*Attitude*	*Example policy areas*
Key	Dominant	Finance
Facet	Dependent	Public health, Environment
Sector	Withdrawing	Transport, Public Works Agriculture, Defence, Housing, Spatial Planning, Education, Health care
Service	Support	General Affairs
Neutral	Neutral	Justice

A 'facet attitude' indicates a high degree of dependence on other departments in order to reach health objectives. It often involves a political choice of whether or not to pay attention to certain facets. The Ministry of Health 'has to interfere with another policy domain, struggle to find a way in, and obtain an influential and powerful position. The Ministry will emphasise the perceived interdependency.(…) Their attitude is observed in practice to be annoyingly following, correcting or reproving developments in more production oriented policy domains' (Kottman, 1976). The sector departments may look upon coordination as a threat to their primary interests and may be inclined to resist. The weak position of facet coordination causes the coordination partners to question its utility.

The relevance of this study is in identifying the positions and attitudes of the different departments involved. The question the study raises, is how these positions and attitudes could be influenced in a positive way so as the create the conditions for integrating health in public policy.

3.1.5 Critique on the instrumental approach

The instrumental approaches have subsequently informed and enabled a next step in arriving at the core of policy production mechanisms. Nevertheless, they lack attention for three points of departure in democratic governance: solving societal controversy, creating the dynamics of policy change, and safeguarding the democratic legitimacy of public policy.

The dynamics of policy change

In the previous section, the study by Kottman reveals a static approach of interdepartmental policy coordination. Many state-society and network governance theories have developed into static models of network structures, which consist of specific explicit and implicit rules of the game that structure actors' decisions and behaviour. It raises questions about the potential and strategies for policy change. Moreover, a static approach suggests that the object of the policy problem and solution can be objectively identified, but does that assumption hold? The philosopher Derrida (1983), for example, emphasises that the meaning of, views on and significations of, structures are in flux. The instrumental approach of policy production ignores the dynamics of potentially different views underlying these structures. This becomes more obvious when considering the policy problems in more detail.

Solving societal controversy

Societal problems that cross-sectoral boundaries are nothing new, and not restricted to public health issues. To organise effective and efficient problem solving, public administration science and administrative practices have always struggled with the demarcation and division of responsibilities and tasks. Increasingly, however, governments in industrialised countries encounter difficulties in responding adequately to such problems. 'Many pressing problems no longer comport with the established systems of politics, administration and society' (Hajer and Wagenaar, 2003).

Public health problems, such as those in Health Impact Assessment, have been identified as ambiguous and dynamic problems (Hunter, 2003). In the policy literature, these are labelled 'wicked', 'unstructured', 'untamed', or 'intractable' policy issues (Koppenjan and Klijn, 2004). These are not 'simple' disagreements that can be solved by reasoning, because the reasons provided to choose either one or the other side are controversial themselves. The perception or view of the issue at hand is embedded in the values and beliefs that dominate the institutional and cultural context (for example the policy subsystem). These values and beliefs guide what is considered a 'fact' and what is deemed relevant. As a result, the technical approach of providing 'evidence' is inadequate, because the evidence provided can be rejected as 'not relevant'.

Intractable policy problems are manifestations of broader developments that may promote some values in society while threatening others: globalisation; individualisation and empowerment, which leads to an increased articulation of industrial externalities for the environment and human health. The introductory case in chapter 1 is exemplary of today's 'risk society'. As a result of scientific and technological innovation and ever growing industrialisation, the distribution of goods as a driving force in Western societies has been replaced by the distribution of 'bads' (risks), to which existing institutions are poorly equipped. 'The social, political, economic and individual risks increasingly tend to escape the institutions for monitoring and protection in industrial society' (Beck, 1992). Moreover, society is increasingly confronted with unintended and undesirable impacts from their own policies: 'institutional' risks (Van der Veen, 2000) or 'reflective' risks (Beck, 1992). These are partly the result of a governance 'intervention trap' (Noordegraaf, 2000), which is difficult to avoid: the more issues and side-effects the government tries to address with policy, the more complex and the less governable they become. Intractable problems result in substantive, strategic and institutional uncertainty about the appropriate manner for dealing with them (Kickert, Klijn et al, 1997; Koppenjan and Klijn, 2004). De Bruijn, Ten Heuvelhof and In 't Veld (2002) have developed an

alternative approach of 'process management' to address such problems adequately. To identify potential dilemmas and conflicts at an early stage, they propose to first jointly develop the terms of interactions in order to create a jointly agreed substantial solution for a policy problem.

Democratic legitimacy

The third critique on the instrumental approaches of policymaking constitutes the lack of attention for the democratic legitimacy of governance. The cooperative governance by persuasion reduces the role of government to a process manager and a mediator, while from a democratic perspective, government is supposed to create publicly legitimated collective solutions for societal problems. While governance aims to extend commitment and action beyond its jurisdictional boundaries, hierarchical governance is still the primary means. There is no governance without any governmental, jurisdictional or bureaucratic roots. Jurisdictions may provide an additional ground for legitimacy, yet, are underexposed in a governance perspective. Finally, de-emphasising the role of government raises questions about the exclusion of minorities in network management, potentially threatening equity and solidarity in the allocation of welfare, as well as risks. Moreover, governance as entrepreneurship raises serious questions concerning policymaking power and the exercise of authority by civil servants and public officials (Frederickson, 1997).

A societal trend that makes these questions more urgent, is that empowerment, democratisation and individualisation in Western societies have led to a 'relocation of politics' (Bovens, 1995), which Beck (1992) calls 'sub politicisation' in society (in the sense that people tend to be less willing to conform to social norms). Citizens and issue-related interest groups increasingly articulate undesirable policy impacts. The output from policies is thus questioned on the aspect of its legitimacy, the extent to which it is considered legal and acceptable in society. Besides the threatened output legitimacy of public policy discussed before, the articulation of issues and impacts implicitly questions the *input legitimacy* also: who is allowed to contribute to policy formation and who is not (Hemerijck, 2003)? In HIA for HPP practices, health proponents may implicitly feel unjustly excluded from policy formation. This will be elaborated in section 3.2.1.

A methodological critique comes from Hajer and Wagenaar (2003), who observe that the governance literature is often based on theoretical macro-sociological explorations rather than empirical observations of policy practices. Points of departure concerning

current policy practices are the radical uncertainty, conflicting frames of policy theories, concealed suppositions, i.e. on whose power and influence is considered legitimate (access and voice). New modes of governance are developed and experimented with in order to capture those conditions in networks. Those experiments are concrete manifestations of attempts to make policies more legitimate, which can be empirically analysed.

Briefly summarised, the critique on the instrumental approach thus comprises of the establishment that the objectivist evidence-based reasoning is no solution to intractable policy issues, in which the conflicting images of the issue also lead to conflicting facts and aspects deemed relevant. Moreover, the static approach ignores the dynamics of change and the societal relevance of conflict resolution. The Knowledge Utilisation Studies in addition ignore the knowledge creation process that is relevant when conceptualising the relationship between knowledge and policy. Those aspects are the points of departure for the authors who instead promote a reflective perspective on policy production.

3.2 The reflective approach to knowledge creation and policy production

The theories on policy production discussed all reflect either empirical (bargaining, exchange and persuasion) or normative approaches (rational choice) to the process. The reflective approach aims to combine these and clarify how policy actors jump from what a policy issue *is* to what policy *ought* to do: the normative leap from perception to prescription and policy design. This leap can be explicated by the concept of 'framing' a policy issue and 'reframing' as the pragmatic resolution of persistant controversies. In the section on deliberative governance, the sub-politization in society reveals a new purpose for Health Impact Assessment. Then the concept of policy frames and reframing is explored, followed by some methodological implications. The Science and Technology Studies provide an answer to the question of knowledge creation in HIA as a boundary object. The theoretical explorations in this section provide the building blocks for the conceptual framework of the relationship between HIA and the policy process.

3.2.1 Deliberative governance

Gottweis (2003) summarises how deliberative governance scholars address the criticism on more structuralist (static and deductive) theories of governance discussed.

> *'Poststructuralist (inductive and dynamic, MB) policy analysis pays great attention not only to the organisation of politics, but also to the politics of organisation; not only to the actors of politics, but also to the politics of actors, in other words, to the semantic struggles and discursive constructions which define who counts as an actor in a particular policy setting – and who does not; which institutions are legitimised and authorised to take part in the shaping or the implementation of policymaking – and which are not*(Gottweis, 2003).

The subpoliticisation introduced in the previous section shows how the objects of government (such as economics, health, environment) co-emerge at a number of different locations (such as hospitals or research institutes)(Gottweis, 2003). Besides the formerly hierarchical state, decentralisation and privatisation trends induce a new policy elite that consists of market institutions, research institutes, biotechnology companies, financial institutions (in other words, knowledge-producing institutes in civil society, whose practices define and structure social and economic realities, but which are usually labelled 'non-political'). These are not necessarily 'objects' of state intervention but may coexist in a relationship of 'intimate symbiosis with state strategies and tactics' (Hunt, 1992). These locations deemed 'non-political' increasingly 'house' groups, actors or ideas, which do not find political expression as do lobby or interest groups within the established policy channels. While before, political will formation preceded policymaking, nowadays policymaking induces political will formation, both in- and outside the formal political institutions (Hajer and Wagenaar, 2003). Consequently, policymaking is redefined as 'situated at the intersection between forces and institutions deemed 'political' and those constituted as 'non-political' (Gottweis, 2003).

How is this approach relevant to Health Impact Assessment? All things considered, it seems likely that unintended and undesirable health impacts from non-health policies are more than just a technical lack of fit between problem and solution. HIA can be seen as an instrument for making concerns about these impacts public through articulation, both in- and outside formal institutions, an *instrument for sub-politicisation* which calls for an improvement of the input legitimacy of public policy. It seems to suggest a lack of (guaranteed) access to the political agenda. HIA proponents thus implicitly call for a change of policymaking procedures. That makes HIA, in addition to the more static goal

of producing a knowledge base, a *dynamic instrument for institutional change* (however micro level it may be). Situated in this political context, two categories of policy criteria become relevant to HIA: administrative appropriateness, and the societal or moral acceptability of proposed policy (Hemerijck 2003).

3.2.2 Reframing

In a changing society, government is to seek a mode of governance that adequately addresses the increasing multiplicity of values that causes uncertainty and instability. As opposed to the instrumental rationality, Schon and Rein develop a 'design rationality' , in which policy design is distributed among different actors. It implies a gradual broadening of the network around an initial design. The question 'what is wrong with the design and needs fixing?' enables new actors to articulate a perceived lack of fit with the context, which can then be incorporated into the design. The reflective approach is aimed at the ability of policymakers or practitioners to foster inquiry into the perceptions, or 'frames', among influential actors and stakeholders. Policy frames are clusters of interwoven normative and causal beliefs, which foster communicative action as well as sense making and the development of identity (Hoppe, 1998). Policy frames focus attention, provide stability and (an implicit) structure for problem-centred discourse. They are characterised by a unity of fact and value, as well as a subsequent interplay between thought and act (Schön and Rein, 1994).

Framing is a way of representing knowledge within a network of relations built on a shared system of beliefs. Laws and Rein treat framing as 'a particular way of representing knowledge, and as the reliance on (and development of) interpretive schemas that *bound and order* a chaotic situation, facilitate interpretation and provide a guide for doing and acting.' A frame thus defines both policy problems and solutions. A frame is a metaphor that shows how a structure arrests our attention to context and focuses on what is inside the frame. It clarifies how decisions are made on 'what demands attention, and what can be neglected' (Laws and Rein, 2003). A frame is constituted in practice, embedded in institutions, and embodied by dispositions that allow practitioners to act in concrete situations.

Once they are embedded and embodied, frames resist reflection. Decision-making in the context of policy and governance institutions thus generates a question on how institutional arrangements and practices provide access to societal doubt, controversy and struggle. This resistance to reflection and obstructed access to the

political agenda in earlier research has been labelled as an institutional 'mobilisation of bias' (Schattschneider, 1960; Bachrach and Baratz, 1963), which represents institutions as exclusive demarcations of government and policy. Next to formal institutional procedures, implicit policy frames also make agenda setting more complex, and may also lead to non-decision-making (Bachrach and Baratz, 1963).

A synthesis of frames is required for producing legitimate policy (Gibson, 2003b). In earlier research, this synthesis has been identified as a process of *reframing,* which occurs when relations are built that cross networks of beliefs systems, based on a commitment for action on specific issues or problems (Schön and Rein, 1994; Laws and Rein, 2003). According to Laws and Rein, the process of reframing consists of an experience with a societal (in this case a health) issue, which is articulated over a longer period of time (perseverance). Through learning and diffusion, the capability to change grows as competencies develop, the network of actors is extended and common elements are identified, which may lead to a reframing of beliefs. Health Impact Assessment could be seen as one such experience, revealing the need for continuous HIA applications to develop capability.

Reframing, according to Laws and Rein (2003), is observed in two distinct processes of fixing belief, allowing only for formal oppositional politics and policy adaptation. Adaptation in the first instance addresses unwanted challenges, which in the second instance may evolve in reframing the problem or solution in policy. Reframing requires that an adjustment in practice confront the habits of thought reinforced by institutional rules and norms. It requires a translation from organisational commitment to administrative practice. Empirical observations of reframing practices show that policy adjustment is not just the end, but also the beginning, because it brings societal concerns into sharp focus. A 'moral epistemology of risk' emerges in which technical administrative procedures are confronted with experiences in society (Laws and Rein, 2003). This confrontation in the United States has led over the decades to a reframing of environmental health assessment practices, in which community health surveys supplement institutionalised quantitative assessments on the basis of indicators that are perceived to be objective. The policy response has evolved from an issue of how to redistribute externalities of, for example, industrial activities, to one of how to act in the face of uncertainty. Risk assessment ownership in some cases has shifted from the government to community organisations.

Reframing takes place in relation to institutional arrangements, procedures for policy consultations, advisory research, and decision-making. Institutional arrangements

may restrict reframing, yet, reframing may also lead to institutional adjustment or new arrangements. The arrangements, taken together, form the governance infrastructure: the, mostly invisible, framework of rules for interaction processes within a policy network.

The actor-structure debate

Conventional schools of political science privilege either actors or structures in their explanations of policy or governance. Poststructuralist modes of political analysis, however, tend to avoid such a dichotomisation. Actors cannot be viewed as the origin of social relations, because their actions result from previous individual and collective experiences. Actors do not have stable subject identities, but constantly develop their subjectivity in a discursive exchange. Intersubjectivity replaces the 'logocentric' tradition of self-conscious, rational individuals. Action may still constitute an important object of study, and agency may have an important discursive purpose. The importance of structural phenomena and contexts for the understanding of politics is acknowledged, without reducing actors to 'outcomes of structures'.

Argumentative analysis

To adequately analyse governance practices, policy analysis requires an 'argumentative turn' in explanations from structures or institutions to discourses (Fischer and Forester, 1993; Hoppe, 1998; Hoppe and Peterse, 1999). Argumentative policy analysis is based on the idea that human behaviour results from social and communicative interaction. Social reality is a dynamic dialectic of internalising and externalising symbols (symbolic interaction) (Berger and Luckermann, 1967). A discourse is an implicit structure of correlated ideas, concepts and categorisations that is communicated through language. The discursive dimension of governance is that government is not just a set of (network) institutions, but also an idea about what government is and what it is supposed to do. The discursive element is the way that government reproduces itself in discursive practice; and readjusts itself to the changing context in governance practices. Discursive action reproduces, as well as transforms, the rules and routines of governance.

Public argumentation and debate are central, as opposed to policy preparation by the state, in conventional policy analysis. Argumentative policy analysis looks upon decision-making as a process of deliberation, in which beliefs, principles and actions are weighed under conditions of multiple frames for the interpretation and evaluation of the world (Dryzek, 1993). It is focused on conflicting policy frames between different actors involved in policy development, as well as on their resource dependency.

Gottweis points out indicators for empirical research:

> *'Power is not only articulated in interactions between actors, in institutional biases or ideologies. In addition, discourses, representations, scientific statements, or 'public philosophies' are critical articulations of power which construct subjectivity and position individual or institutional actors in the socio-political field and thus deserve a prominent place in policy analysis' (Gottweis, 2003)*

As for the dynamic micro-politics of meaning, governability of policy objects should not be assumed but questioned: how do phenomena become objects of government and policymaking? Governability cannot be explained by pointing out actors, groups or other social forces. It requires an analysis of re-presentation in narratives, computations, indices, and procedures of assessment. Policy objects, such as health or the economy, consist of multiple activities that require long processes of tabulation, calculation and representation to transform them into a body of knowledge, on which political intervention is based. Policy issues or objects can be traced back to scientific or technological discourses and their underlying strategic goals. A logical derivation, then, is that policy analysis needs to extend its focus to scientific expertise and knowledge creation.

3.2.3 Science and Technology Studies

The Science and Technology studies (STS) offer interesting concepts in addition to the policy analysis of the Knowledge Utilisation studies. STS emerged in the 1960s and 1970s in response to empirical refutations of conceptions of how science is related to its context. Kuhn's distinction between normal science and scientific revolutions initiated the sociology of science.

Scientific work often consists of the multi-disciplinary and multi-organisational labours of university administrators, data collectors and institutes, research analysts, professors, funding agencies, private sponsors or patrons, curators, government officials, etcetera. One key assumption in sociology of science is that scientific work is heterogeneous, requiring cooperation among different disciplines within science and with relevant actors outside the scientific arena. An important sociological finding in the 1970s that supports this assumption is that scientific work is characterised by internal diversity (among others Hughes, Latour and Woolgar, Star in Star and Griesemer, 1989). It is neither based on consensus, nor obstructed by a lack of consensus. This diversity creates a dilemma of how to ensure integrity of scientific knowledge. The diversity of

scientific work is manifested in a blurred boundary between science and society (and policy) in its network of relations, while, at the same time, *separate* institutions, languages, cultures and perspectives have been created to distinguish between (academic) science and policy as specific domains.

Not all research, though, is purely academic. Jasanoff (1990) distinguishes between 'research science' and 'regulatory science'. Research science appeals to the requirements of the international scientific community, i.e. peer reviewed publications, as a necessary and sufficient condition for legitimacy (or, in scientific language, 'validity'). These requirements are the boundaries that distinguish science from non-science. Regulatory science, by contrast, is applied, policy relevant science, which appeals to scientific standards for its research procedure, but at the same time appeals to policy context characteristics as an additional source for output legitimacy. An explicit example is the work of scientific advisory councils to ministries or the government, such as the Dutch National Council for Public Health and Health Care (RVZ). These provide a national forum where empirical observations and normative considerations in research and policy are exchanged.

Ezrahi reflects upon the scientific perspectives on scientific advice to policy makers and distinguishes between utopian and pragmatic forms of rationality in scientific advisory practices. Both 'share a common commitment to rationalisation of public policy by increasing the incorporation of scientific knowledge in the definition and treatment of problems about which policies are sought. They differ not so much in their aims as in their conceptions of how far these aims can be realised' (Ezrahi 1980). Utopian scientists consider political considerations as irrational and unjustifiable, whereas pragmatist scientists consider them to be inherent in public policy processes. As a result, he argues 'the degree of agreement or disagreement within the respective groups of scientists and policy makers is important in determining the roles and uses of scientific knowledge in public policy' (Ezrahi ,1980). Utopian expectations of policy rationalisation by scientific knowledge are only accomplished under rare conditions of scientific and political consensus. Therefore, 'the task of scientists and politicians is neither to substitute the one for the other, nor to subordinate one to the other. It is rather to find in each case the way to *fuse* knowledge and policy within the limits set by the political and moral requirements of legitimacy and feasibility and by the standards of scientific truth and rationality' (Ezrahi, 1980). The concept of boundary work is elaborated in paragraph 3.2.4.

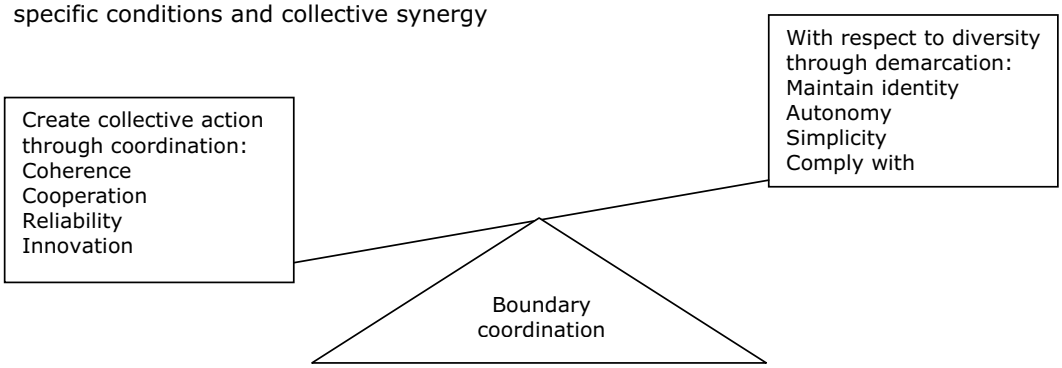
3.2.4 Boundary work

Boundary work is 'the attribution of selected characteristics to the institution of science (i.e. to its practitioners, methods, stock of knowledge, values and work organisation) for purposes of constructing a social boundary that distinguishes some intellectual activity as non-science'(Gieryn, 1983). The concept clarifies how knowledge comes to be seen as authoritative: 'the difference that this attribution of boundaries makes for the status of knowledge claims is a result of the cognitive authority of science' (Bal, 1998). Because of its claim on exclusive knowledge about reality, science has become an important source of legitimacy for policy. That makes scientific products vulnerable as well: 'boundary work occurs as people contend for, legitimate, or challenge the cognitive authority of science – and the credibility, prestige, power, and material resources that attend such a privileged position.' (Gieryn, 1995). Boundary work is a functional activity: it facilitates the multiple transactions needed to engineer agreements among multiple social worlds (Star and Griesemer, 1989). Management of conflicts, for instance, becomes easier if one can transfer the conflict to another domain in order to move towards consensus or compromise.

In order to produce science, actors translate, negotiate, articulate, debate, triangulate and simplify in order to make cooperation possible. Following Latour, Callon and Law (1985, 1987), entrepreneurs create a network by translating the concerns of allies into their work to gain or improve its perceived status. According to Star and Griesemer (1989), such translations simultaneously take place in different social worlds, requiring an ecological approach of multiple viewpoints to translation practices.

Their observations of such practices reveal important process dilemmas: how can objects of research as well as policy, which incorporate different meanings, become coherent (Star and Griesemer, 1989)? Because cooperation cannot be enforced, it is built on voluntary agreement. Voluntary agreement only comes about under conditions of synergy, which indicates a win-win situations, while maintaining the autonomy of the participants. Coordination is needed to make a scientific practice responsive to local needs and routines while creating a common heading. Another dilemma is how to create new knowledge when authority is derived from conventional understandings in networked frames and routines? In summary, coherence and cooperation, which are needed to produce new and authoritative knowledge, require a balance between individual, or actor-specific conditions and collective synergy, (see Figure 3.1).

Figure 3.1 Boundary dilemmas: coordinate a balance between individual or actor-specific conditions and collective synergy



In this figure, the left box represents aims and objectives, while the right box represents preconditions, which are paradoxical at first sight, to achieving those aims. Balancing these preconditions and ends may be done by creating a virtual 'boundary zone' (Löwy, 1992), in which researchers and policy makers can work together while maintaining their own identities. 'Boundary objects' may help to create such a zone (Star and Griesemer, 1989). These objects have different meanings in different social worlds, but their structure has enough in common with more than one world that they are recognisable across social worlds. Boundary objects are a means of translation. As such, they maximise autonomy as well as communication between different social worlds (Star and Griesemer, 1989). They can adapt to local needs and satisfy the informational requirements of these worlds. At the same time, they are robust enough to maintain a common identity across social worlds. 'Since the local viewpoints ('interests', requirements, desires, languages, methods) of different groups are usually not identical, rigid or strongly structured entities are less likely to be able to absorb divergent instances and still maintain internal coherence or robustness' (Fujimura, 1992).

Examples of boundary objects not only the selection of research themes, of data, of research institutes, of uncertainty limits, overlap of staff in different committees, a public draft report on which stakeholders may comment, visiting the project initiator and discussing feasibility of interventions instead of interests, but also the many possible roles of the public authority in dealing with the research. Involved officials may be policy makers, support staff, experts, employers or inspector/supervisors. The more roles involved in the research, the more commitment or even a sense of ownership can be created. Problems posed by conflicting views can be managed through:

- Identifying a lowest common denominator (e.g. the 'precautionary principle' as an argument for policy choice, which cannot be scientifically validated. It is useful '…when scientific uncertainty precludes a full assessment of the risk and when policy-makers consider that the chosen level of environmental protection of human, animal and plant health may be in jeopardy' (Harremoës, Gee et al, 2001).
- Starting from a relatively low-risk claim for collective action
- Reconfigurable or programmable objects that each world can locally mould to its purposes, such as standardised forms (checklists for HIA)
- Storing for ready-made use (HIA websites and databases)
- Articulating ideal types, which are vague and abstracted from all domains, yet adaptable to local applications (ideal norms for healthy behaviour)
- Work in different worlds can for the most part proceed parallel and/or staging of the work in relatively autonomous steps to avoid potential conflicts

Bal (1998) describes boundary work in the field of maximum acceptable exposure levels in environmental health policy as the translation of contingency (context) into a rationalist research 'package' (a stable pattern of research objects and methods). In other words, boundary work is negotiating a pragmatic research mandate that allows the researcher to incorporate policy dynamics. This package enables the research report, the advisory report and the policy decision to be based on up-to-date considerations and normative assumptions known to all parties. According to Bal, we may distinguish between a *discretionary* strategy, in which the mandate is broad, and a *regulative* strategy, in which the mandate is very detailed and limited.

At the substantial level, there are also boundary dilemmas identifiable. One of most prominent issues is the perceived uncertainty of research conclusions, especially when these consist of predictions. Shackley and Wynne (1996) show that advisory scientists (who produce regulatory science in a hybrid science-policy community) must 'negotiate their credibility not only among the policymakers but also within their own research communities whose work they are representing and translating'. As the previous chapter showed, this is also observed in the HIA literature. In regulatory research, uncertainty levels are widely believed to dictate the level of policy commitment. The communications about uncertainty can thus be seen as a boundary strategy for anticipating controversy and negotiating authority within the scientific network of peers, as well as with policy actors. Shackley and Wynne identify boundary-ordering devices in uncertainty discourses that create certainty over, and manageability of, uncertainty;

reduction of uncertainty; transformation of uncertainty; condensation of uncertainty in an undifferentiated category; scheduling into the future or displacement of uncertainty.

Boundary work is aimed at ordering and structuring a complex or chaotic situation towards the construction of a '*doable problem*' (Fujimura, 1992). Boundary objects enable representations that 'do not challenge the notion, dominant in much of the policy world, that the risks are tractable and manageable by practices and institutions that are similar to those currently in existence', while, at the same time, they are 'also flexible and/or ambiguous enough to satisfy peer groups scientists demand for accuracy' (Shackley and Wynne, 1996). Implicitly, policy notions of 'tractability' and 'manageability' are imported and translated in scientific ways of representing uncertainty.

Boundary work entails a management of resources through crafting, diplomacy, and the choice of clientele and personnel. Once a translation has been completed, and a 'point of passage' is created for the ally to participate, it needs to be defended against other translations threatening to displace it (Star and Griesemer, 1989). Fujimura (1992) contends, rather, that boundary objects or boundary-ordering devices emerge when works of different social worlds coincide instead of being mobilised or managed by entrepreneurs. According to Fujimura, the ambiguity of boundary objects leads to the transformation of the claim it supports, because divergent interpretations are possible. 'Although boundary objects promote collective action and coherence (…), they are equally disadvantageous for establishing the kind of stabilisation of allies behind facts, which Latour (1987) discusses' (Fujimura, 1992).

3.2.5 Standardisation

A specific way to improve the coherence of knowledge products among the different actors involved is to standardise methods (Star and Griesemer, 1989). Such standardisation both enables the participation of different stakeholders, allowing them to provide information from different sources and actively engaging them in the HIA, and 'disciplines' the information obtained from those different sources. A coherent set of guidelines or protocols shapes the procedures, as well as the content of the claims. There is a potential tension between theorists and collectors, which can partly be addressed by categorisation. Checklists, forms and models are devices for enabling such translations. A model, for example, enables the extrapolation of current or past exposures into future exposures. Translation of data collection requires these devices to be amenable to

analysis by researchers as well as easy-to-handle for collectors. The protocols or guidelines are a record of the kinds of information needed, as well as of the conflicts between various participating worlds, a record of the process of reconciliation (Star and Griesemer, 1989).

Standardisation of methods is different from standardising theory in emphasising 'how' instead of 'what' or 'why'. It allows for a division of labour, by which (for example) collectors do not need to learn theoretical backgrounds in order to contribute to Health Impact Assessment. Potential differences in beliefs remain implicit. The division of labour also allows for the preservation of autonomous routines and priorities, while creating autonomous space for theoretical elaboration. Thus, standardised methods are not imposed but rather negotiated in mixed economies of information with different values, which only partially overlap. They act as temporary anchors or bridges, which enable the development of a common enterprise.

Standardised packages

Fujimura has elaborated on the combination of boundary objects and standardised methods (Star and Griesemer, 1989). While boundary objects, as ambiguous concepts, are suitable to coordinate collective work across divergent social worlds, standardisation contributes to fact stabilisation. The standardised package combines both of these in such a way that further restricts and defines each, and also narrows the range of possible actions and practices. Fujmura illustrates how oncogene theory is crafted in different biological sub-disciplines by re-representing cancer combined with recombinant DNA technology.

A standardised package in HIA practices can be recognised: health determinants theory may act as a boundary object that leaves much room for interpretation of relations between health and more distant health determinants. It may be combined with a standardised technical methodology of quantitative modelling. However, most of the boundary work described in the empirical literature covers an extended period of focused interactions over decades. In that sense, Health Impact Assessment, at least in its ten-year practice in the Netherlands, is still in its infancy.

3.3 HIA as a boundary object for reframing public policy

The existing literature on the relation between knowledge, science, and research on the one hand, and governance, policymaking, and politics on the other, reveal a predominant emphasis on either one or the other component. Knowledge utilisation studies focus on policy analysis to 'explain the impact of research on policy', while they seem to take knowledge production for granted. Science and Technology Studies, by contrast, recognise the role of politics in knowledge production, yet, seem to ignore the politics in policymaking. Very few authors have made an effort to synthesise theories of policy development and knowledge creation. Nevertheless, a striking similarity in (more recent) theories in knowledge creation and policy production is the recognition of the ambiguity and dynamics of both of these processes.

Similarities are also observed in the theoretical and methodological approaches to knowledge and policy production. Knowledge creation and policy production (or governance) are both seen as *heterogeneous* processes based on *voluntary collective action*, as *social constructions* in multiple frames rather than facts or given structures; the *network approach* is used to explain both processes. The concepts of reframing (from studies on policy analysis and governance) and boundary work (from Science and Technology Studies) therefore seem to be applicable to both knowledge coordination in generating validity, integrity and coherence, as well as to policy coordination in generating legitimacy. These concepts are elaborated and operationalised in an analytical framework.

3.3.1 Specified research questions

The conceptualisation of the relationship between Health Impact Assessment and the willingness of policymakers to integrate health in public policies provides the three remaining research questions for empirical analysis:

1. How is health integrated in the public policy plans of the case studies?
2. Which frames of health, HIA and policy are articulated among the different actors involved, and how do these evolve?
3. How are the research and interaction designs of Health Impact Assessment related to the reframing of the public policy plans in the case studies?
4. Is HIA effective as a boundary object in reframing policies to integrate health?

3.3.2 The integration of health in policy

The integration of health in public policy can be observed at the individual policy level (on one specific issue) and at the institutional level (structurally integrated in procedures for future policies). It will be described by means of a proxy: the commitment the policymakers addressed express in word or act to consider health in policy and the willingness to invest in it (table 3.3). This 'proxy' will be derived from documents analysis and interviews. As HIA is considered as an instrument for building support for the integration of health in public policy, commitment is treated not as input, but as an outcome. At the individual policy level, non-health policy actors can express no commitment, or commitment in a shared definition of the health impact from policy (frames have converged); by putting an issue on their agendas for discussion and exploration, by deciding upon how to act on the issue; and by adjusting policy so as to prevent negative health impacts or promote positive ones. At the institutional level (Banken, 2001), non-health policymakers express commitment over a longer term, by mainstreaming health considerations (either by HIA or other means) into a new division of labour in monitoring and prevention of health impacts in future plans or policies, as well as by re-allocating resources to expand the capacity and competencies in order to enable monitoring and prevention 'on the spot'.

Table 3.3 : Increasing willingness of non-health policymakers addressed to invest in health, expressed in word and act

Commitment	Indicator	Observation
Individual policy level	0. No commitment	Policymakers deny the call for collaboration or policy adjustment in the HIA, or refrain from any reponse
	1. Frame convergence	Policymakers explicitly recognise the relationship between a potential health problem and non-health policy ('Enlightenment')
	2. Agenda status	Policy makers place potential health problems on their agendas to a) discuss and explore, and b) make decisions on whether and how to act on them
	3. Policy adjustment	Policymakers adjust their plans to HIA recommendations
Institutional level	4. New division of labour	Policymakers engage in monitoring and preventing health problems in their own future policies or plans
	5. Resource integration	Policymakers create and redistribute organisational capacity and competencies in order to enable monitoring and prevention 'on the spot'

The commitment to integrate health in public policy is expected to grow as health proponents explicate and exchange the frames of health, knowledge and policy behind the HIA in a particular policy setting. Commitment is further strengthened when frames are linked to artefacts, symbols and signs of meaningful issues to the different actors involved.

3.3.3 Frames of the role of health in policy and the instrument of HIA

The characteristics of the frames on health, policy and the HIA are summarised in table 3.4. These will be analysed from the interviews.

Table 3.4 Frame characteristics

Indicator	Observation
Order and stability	Articulated selection and prioritisation of problems and solutions
Fact and value	Articulated interwoven beliefs about what 'ought' to be and what is constituted as a 'fact' in perceptions of problems and solutions
Embedded in institutions	Access and exit in procedures, informal rules of engagement, language, routines
Embodied in dispositions	Articulated ideas about the division of tasks and responsibilities, capacity and resources needed, which allow practitioners to act
Fixation	Articulated resistance or non-response: Once embedded and embodied, frames resist reflection and may become fixations, disregarding any challenge of the dominant frame from outside the belief system, potentially causing deadlock

3.3.4 Reframing, boundary work and standardisation

Health Impact Assessment in this research is conceptualised as a boundary coordination object, which provides reason and opportunity for reframing public policy to include health considerations. As such, HIA is aimed at creating 'usable knowledge' (Lindblom and Cohen, 1979) for 'doable problems' (Fujimura, 1996). Different stages of reframing can be distinguished: *experience* of a health issue, *perseverance* (the continued articulation of the issue), *learning and diffusion* of strategies in articulation and anticipation of responses, and *capacity building* through the extension of the network, the identification of common grounds, and growing competence in mobilising support to deal with the issue.

The interaction process between HIA and policy actors can be observed as a sequence of *challenges* and *responses,* in which different actors may set different

'obligatory points of passage' for the HIA. The extent to which actors are responsive to challenges gives an indication of the degree of convergence. Boundary coordination can be enhanced through boundary-ordering devices and methods standardisation.

Boundary-ordering devices

The functioning of HIA as a boundary object may be supported by boundary ordering devices that emerge during the interaction process. These are analysed according to the different *social worlds* they address (research, health policy, non-health policy), the *informational needs* that each requires to be met in HIA, the *identity* the object or device reflects, and the *structure* it provides in general and in specific applications. The prior design of the assessment and the interaction design are considered to be boundary-ordering devices. These designs are not treated as given designs, but rather are analysed on how they develop and how they are adapted during the process. Thus, the question is whether, and how, these designs develop into a boundary-ordering device.

The research design in HIA results from the interaction arrangements through which the Terms of Reference are established (Scott-Samuel et al, 2001) with respect to the topics for scrutiny (*objects* of HIA research), *methods* of data collection and analysis, *team* of researchers and advisors, *mandate* of policy recommendations, and *ending* (what, how, who, and when of assessment). The interaction arrangements also enable agreements on which aspects of health are deemed timely in the policy addressed (object of integration), about the instruments for monitoring and management and the division of tasks and responsibilities (what, how, who, and when of integrating health in policies). It includes an analysis of the knowledge network of the HIA and the policy network around the policy addressed. Following Sukkumnoed (2005) the interaction arrangements should enable a 'communication strategy for policy-oriented learning and deliberative decision-making'.

Standardisation

Reframing of the role of health in public policy can also be enhanced through the standardisation of methods of data collection for HIA. *Protocols, guidelines and models* help to *divide the labour* of data collection, policy interpretation, or theoretical elaboration among diffferent actors involved in knowledge creation. Standardisation should lead to '*fact stabilisation'* within the knowledge network.

3.3.5 Conceptual framework for empirical analysis

These concepts ofwill be analysed in the next four chapters with case studies of , three of them through HIA, and one without HIA (game simulations). After an introduction of the object of the HIA in the case (urban renewal plan, Housing Policy Paper, Covenant on Obesity), the production and content of the HIA are briefly described. The events and timing of the HIA in the policy process are then presented in chronological order, ending with the events that occurred after (yet not necessarily resulted from) the HIA.

The analysis, then, departs from the assumption that both knowledge and policy are dynamic concepts that result from resolving controversies. Firstly, the extent to which health was integrated in the policy or project plan is analyed through the willingness to cooperate and invest that is expressed or enacted by the policymakers addressed. In each case, the HIA presupposes a common interest. The meaning or relevance of this common interest may differ among the actors and stakeholders of the HIA: human interest, environmental (health) concerns, obesity, safety. These frames, and the extent to which they are institutionalised in the network and rules, are analysed.

How reframing takes place is analysed in a selection of interaction moments that are described in detail to show how the policymakers and stakeholders respond to the challenge the HIA poses, and how the HIA practitioner(s), in turn, respond to the conditions set by the policymakers addressed by the HIA. The interactions should reveal multiple translations of the common interests by different actors involved, negotiating and setting multiple 'obligatory points of passage' for the design, production, the report and the public dissemination of the HIA. The boundary ordering devices are identified, among the emergence of the research and interaction designs of HIA. The research design may provide protocols, guidelines or models for data collection and interpretation. The extent to which fact stabilisation occurs is a result of these is analsyed also to account for the way HIA contributes to a reframing of the role of health in public policy.

The extent to which HIA practitioners succeed in creating autonomy to conduct the HIA and maximise communication at the same time is crucial to confirm whether HIA really functions as a boundary object itself. The extent to which boundary ordering devices and methods standardisation may have been helpful during the interaction process is analysed.

Chapter 4
Dordwijk: A City & Environment HIA of urban renewal

The first case study of the role of Health Impact Assessment in integrating health in public policy plans is a HIA of a local urban renewal plan, consisting of a 'Health Park' with combined health care and sports facilities. This case has been selected because of the elaborate research design of the City & Environment model, which served as input when the HIA was applied to the Health Park project. The design consists of a qualitative checklist and a standardised quantitative model. These can be used to assess environmental conditions in a certain area, including the potential impact of renewal plans on these conditions, and subsequently the potentially detrimental consequences for the health of the people residing, working or recreating in the area. This specified application of the HIA is referred to as 'HIA City & Environment'.

The analysis in this case seeks to answer the question: *what is the role of the HIA City & Environment model in reframing health in the Dordwijk renewal planning process?* Because the HIA on the renewal plan of Dordwijk was the first application in the locality and many relevant activities have taken place afterwards, the analysis briefly includes those activities up to 2006. First, the Dordwijk Plan is described, followed by the design and content of the HIA. Then the timing and interactions between the HIA and the policy process are reconstructed. The description ends with the events that followed (but not necessarily resulted directly from) the HIA. The analysis starts with a confrontation of the frames the actors involved hold of the role of health in the Dordwijk process, and the role of the HIA instrument. Then specific moments in the interaction process are discussed in detail to analyse the arguments used to resolve any conflict that may have arisen. The analysis ends with an elaboration of how the HIA design relates to this reframing process as a boundary object. The conclusions focus on the way conflicts in the interaction between the HIA and the policy process have been resolved to enable the integration of health in the project plan, and the role of the HIA design.

4.1 HIA object: The Dordwijk 'Health Park' plan

From a historical perspective, the Municipal Health Service and the Urban Renewal Department of the municipality do not have structural relations. They have cooperated

on occasions of immediate health threats in incidents concerning individual citizens. The project of Dordwijk is the first case of cooperation at a planning level. The triangle-shaped area of Dordwijk is located in the middle of an urbanised region in the west of the Netherlands. It is surrounded by a park to the north, a residential area to the south, and a railway and secondary road to the west. Between the 1960s and 1980s, the central location and its regional connections render the area suitable to the development of care facilities and public amenities. Inbetween two scenic areas, it also has an important urban ecological function.

After a merger at the end of the 1990s, the local hospital proposes a renewal plan. In order to expansd and re-allocate the hospital services and locations in the region, the hospital needs municipal grounds. These plans are linked to municipal considerations about renovating the existing sports facilities in the area. The municipality decides to support the hospital plans, because it is a basic facility with an optimal accessibility in the middle of the populated area, as well as along main roads and junctions. Furthermore, the project provides the opportunity to replace and develop new sports facilities, which can be functionally integrated with the health services. The urban development department preconditions the plans to fit with a big road renewal nearby, as well as a nearby integration of educational and social facilities.

The ecological function of the area is, however, increasingly jeopardized. Due to the transportation of hazardous substances by railway and road during the past few decades, risks for 'external safety' have increased. It is the most dangerous railway transport route in the Netherlands. Moreover, LPG transport is diverted to the provincial road that borders the renewal area, as the Department of Public Water Works[20] has forbidden to use of the highway tunnel nearby. As a result, the environmental quality of the area has degenerated. Moreover, increased traffic in the past decades has led to air pollution and noise nuisance. Although transportation by railway has recently decreased somewhat as part of the substances are now shipped, there are hardly any alternative routes for the transportation of LPG by road.

Content of the plan

At the time of the HIA, the project plan 'Dordwijk Health park' consists of (Akkersdijk, 2003):

- Extension of hospital facilities towards a hightech Hospital Intervention Centre (less beds, higher service levels, more efficient use of medical equipment)

- Integration of existing and new sports facilities, including a new professional and recreational swimming pool; a professional sports hall; a new ice rink; a sauna, fitness room and manifestation facilities
- First aid services: policy office, ambulance, fire-brigade
- Commercial and primary care facilities: general practitioners' office, home care, Community health services
- Shops, offices and 200 houses
- 2500 Parking places

See figure 4.1 at page 209 for a coloured map of the area including the planned functions.

Who is involved in the Dordwijk planning process?
Urban planning projects generate different kinds of interests. Such projects adopt an open planning process, in which citizens and stakeholders are consulted several times in the years of project preparation. In the Dordwijk case, the hospital and the municipal departments of Urban Development and Sports Affairs are represented in a project group and a steering group. Several local interest groups are consulted to obtain their support, and legal regulations require the advice of environmental and safety experts. Private project developers are addressed to exploit the commercial part of the project to balance the costs of sports and care facilities. Health expertise is not part of the standardised advosiry procedures in urban planning, and thus is not consulted until the Community Health Service contacts the project manager.

4.2 HIA method and application

Why and how does the idea of a Health Impact Assessment come up in the Dordwijk Plan? His section elaborates on how an environmental health specialist introduces the nationally developed City & Environment model of HIA to the local planning process. The technical elements of the model are discussed, as well as the specific content of the Dordwijk HIA report. Then the processes of the HIA and the planning process are reconstructed, followed by the events after the HIA.

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[20] In Dutch: Rijkswaterstaat

4.2.1 The HIA City & Environment model

The initiator of the HIA in the Dordwijk process is one of the professionals of the Community Health Service (CHS). As a doctor in social medicine and an environmental health specialist, she becomes acquainted with the nationally developed quantitative HIA 'City & Environment' model.

Approximately five years before she introduces the HIA City & Environment to the Dordwijk project, the Ministries of Public Health, Welfare and Sports (VWS); and Housing, Spatial Planning and the Environment (VROM) express the need for a Health Impact Assessment instrument in relation to the national Experiment Act City and Environment (1997-2003).[21] This act allows 24 municipalities in complex local renewal projects to experimentally exceed legal environmental standards for soil pollution, noise, odor and ammonia under specific conditions: the spatial planning process must continue in an efficient mode while the quality of the living environment is 'optimised'. [22] In the explanatory memorandum of the Experiment Act City & Environment the intention is expressed to develop a methodology for assessing health impacts from (re)construction plans (Tweede Kamer der Staten Generaal, 2004). The quality of the living environment is, among other instruments, addressed in the 'City & Environment' HIA. This model guarantees the input from environmental health expertise in regional and national support desks. It is developed by the National Institute for Public Health and the Environment (TNO/RIVM) in cooperation with the branch organisation of the Community Health Services (GGD Nederland) and freelance consultants (Fast, 2000, 2002; Van der Loo and Van Bruggen, 2000).

This development is part of an increasing attention for the relationship between health and the environment. In the international literature there is a call for the integration of health and environmental impact assessment. Examples of integrated environmental and health perspectives on construction projects are the 'healthy places' construct (Frumkin, 2003), and the development of integrated methodologies (Kwiatkowski and Ooi, 2003; McCarthy, Biddulph, Utley, Ferguson, and Gallivan, 2002; Northridge & Sclar, 2003; Thriene, 2003). The Dutch Health Council also calls for integrated research of

[21] Experiment Law on City & Environment, enacted from 1997 to 2003 (Tweede Kamer der Staten Generaal, 26 november 1998). Recently changed into the Interim City & Environment Act, enacted from 2006 to 2011 (Tweede Kamer der Staten Generaal, 25 november 2004), awaiting a structural adjustment of the Spatial Planning Act.

[22] The Dordwijk project plan is, strictly spoken, not a 'City and Environment' experiment as it does not exceed any legal standard.

physical and socio-economic aspects as well as individual lifestyles in environmental health problems (Gezondheidsraad, 2003, , 2004). In the case of Dordwijk, the City & Environment HIA is a Dutch example of integrating environmental and health concerns.

Apart from the City & Environment Act, another formal resource is the National Environmental Health Action Programme (2002), an example of interdepartmental cooperation between the Ministry of Public Health and the Ministry of Housing, Spatial Planning and the Environment . The Action plan results from an EU agreement. One of its activities that provides a resource to the HIA City & Environment is the national project, 'Strengthening the Environmental Health discipline' (2003-2006) at Community Health Services level, which aims to strengthen capacity by training expert competence, an expertise support structure, permanent job positions, etcetera.

The model

The 'City & Environment' consists of a qualitative checklist for analysing which environmental sources might provide potential health problems, and a quantitative method for assessing the gravity of the potential health impacts (Fast, 2000; Van der Loo and Van Bruggen, 2000). With respect to the quantitative method, environmental exposure data are compared to legal and scientific standards for acceptable environmental risk. The results are presented as 'HIA scores' on the present rates of air pollution, noise nuisance and 'external safety'.[23] In Table 4.1 the HIA scores and labels are summarised.

Table 4.1 HIA City & Environment scores and labels

HIA scores	Labels	Boundaries defined by
0-1	Good (green zone)	
		Boudary between 1 and 2: desirable exposure level[1]
2-5	Moderate (orange)	
		Boundary between 5 and 6: Legally defined Maximum Acceptable Risk (air pollution) Group risk and Location risk for external safety Non-legal, scientific nuisance level for noise and odor[2]
6-8	Unacceptable (red)	

[1] In Dutch: 'Streefwaarden'

[2] In Dutch: 'Maximum Toelaatbaar Risico' (MTR); 'Groepsrisico' = orientation score for number of deaths given population density (established by the City Council) and 'Plaatsgebonden risico' = boundary score for acceptable risk of death (not legally required, except for ambient particulate matter (= in Dutch: 'fijn stof')

* Additionally, a 'residential score' ('woningsrisico') is calculated in order to indicate the density of people living or working in the area.

[23] External safety indicates the risk of explosion of hazardous substances

The purpose of these scores is to compare different kinds of environmental health risks within and between areas of exposure. Additionally, different environmental health determinants are aggregated to indicate the total environmental burden of locations within the area. The scores are visualised in maps of the planned area (Figure 4.4 at page 212 shows an example of such a map with environmental health contours, which was used in the game simulations).

4.2.2 The Dordwijk HIA report

In the HIA report, the nationally developed format is followed, in which the goals are stated as: providing insight in the environmental health quality of urban plan Dordwijk; providing opportunity to account for the environmental helh aspects in the finetuning of the plan, and to be used in the communication with future residents and other stakeholders.

The HIA practitioner requests data from the municipal environmental officials and the regional Environmental Service. Given the existing database, the municipality and the Environmental Service as well as provincial officers have to collect new data, especially calculations of noise exposure, in order for the HIA practitioner to apply the City & Environment model appropriately. They lack, however, budgetary incentives to provide such extra services. To interpret the data and put the report together, she consults the HIA City and Environment help desk at the National Association for Community Health Services,[24] as well as the experts at the specialized CHS Rotterdam. These are national and regional expert support structures that are formally assigned by the Ministry of Health.[25]

The most important conclusions are an insufficient environmental health score 6 for the external safety of the secondary road; the external safety of the ice-skate track, the noise nuisance along the railway and the secondary road, and the air pollution by traffic, which is presumed to decrease in the future. The residential score is the same in the area, while the external safety only becomes a problem when an incident happens. That would affect both the people living and working in the area as well as the emergency units, which are planned as a cluster in the area.

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[24] In Dutch: GGD Nederland

[25] The Environmental Health Support Desk has recently been centralised at the RIVM.

The HIA report presents the following recommendations (Akkersdijk, 2003):

- No housing construction in the proximity of the railway and highway
- Noise nuisance prevention measures
- No outdoor sports facilities
- Indoor air ventilation inlets opposite to the highway

4.2.3 A reconstruction of the HIA and planning processes

The environmental health specialist from the CHS introduces the HIA by presenting the model to the local Environmental Platform, a forum for local regional environmental officers and other municipal officers. She proposes to experiment with it locally. The environmental officers welcome the idea by inserting this proposal into their annual Environmental Policy Paper. The Municipal Council approves this paper, turning the proposal into a requirement that the municipality cannot ignore. The environmental officers contact a local project manager in urban renewal, who selects one their projects to become the subject of the experiment HIA. The arguments for this decision are elaborated in section 4.3.1.

The HIA enters the Dordwijk renewal planning process in what the project manager labels the 'project preparation phase'. Exploratory reports and feasibility studies have been written, the environmental and safety conditions have already been established in an 'Environmental preconditions study', and the project plan is being prepared for the 'go/no go' decision in the City Council. The project manager sets deadline for the HIA after three months for the report to provide input to the planned go-no go decision in the City Council. The HIA practitioner then conducts the HIA as described in the previous section. The fragmented data collection, however, causes the HIA to miss the deadline set by the project manager. Important decision moments concerning the HIA and/or the renewal plan are summarised in table 4.2.

When the draft HIA report becomes available, the maps display many red zones of environmental health quality and few green ones startle the project manager. He consults a municipal environmental officer and the hospital delegate in the project team, and asks the alderman of Housing, Health care and Neighbourhood development to join him in discussing the preliminary report with the author. In response to the draft HIA report, they question the health and policy interpretations as well as the model and methods used. In two or three meetings, the HIA practitioner allows the project manager to insert a few texts into the final HIA report that puts the conclusions and

recommendations into the urban renewal perspective. The debate that led to plan adjustment is elaborated in section 4.3.1.

Table 4.2 HIA and Dordwijk planning process

Project development	*Date*	HIA development
Project 'exploration phase', CHS* intention to move to project area, and request for participation in planning	*1999 - 2001*	
Approval Feasibility studies by City Council; start project 'preparation phase' of urban project plan and project organisation	*2001 – 2002*	July 2002 preparation HIA
Approval Urban development plan by City Council: 'go' for project 'definition phase'	*Nov 2002*	
Provincial planning committee advice: integral development of traffic junction and project area; priority for external safety	*Jan 2003*	First meeting draft results HIA
	May 2003	Second meeting, final report
Intermediary project report with proposals relocation housing and advice on HIA report to City Board and Council; Press release	*June 2003*	See left
Intermediary project report (including advice on HIA) approved by Municipal Council	*Sept 2003*	
Project construction approval by City Council	*May 2004*	
Specific legal development plan, construction licenses		
Hospital and care facilities renewal, sports centre	*2005-2006*	
Last construction phase	*2008-2015*	

*CHS = Community health service

4.2.4 Events following the HIA

After the HIA report is adjusted, the Dordwijk project manager writes an intermediary project report to the Municipal Council (Bekkers, 2003). In it, he advises the Council to go along with the recommendations of the HIA report. He proposes to adjust the project plan by replacing the planned housing location with a less burdened one in the area. He presents two alternative housing locations within the plan: outside the renewal triangle across the north road between the hospital and the park (which means that the houses are built in the park), or a relocation of the same road into the park to enlarge the renewal triangle to include those houses (see coulor figure 4.1 at page 209). Both options cause considerable political distress. In this highly urbanised area, no party wants to be responsible for handing in preciously conserved 'green' for even more 'grey'. Finally, the majority of the City Council accepts the road relocation option in order to preserve the character of the park, even though it is reduced in size.

From the public health sector's perspective, the decision to relocate housing in the Dordwijk Plan is the reason for the national knowledge network of HIA practitioners ('Kenniskring') to label that case as successful, and the network invites the researcher to present it to other HIA practitioners. One of the participants of the Broad Environmental Platform publishes the report on a local environmental website. Additionally it is made available through the national website of the Community Health Service Knowledge base.[26] In the years that follow the Dordwijk HIA the medical environmentalist acquires six new assignments in neighbouring municipalities. [27]

The Dordwijk HIA practitioner is asked to participate in the national committee that consists of public health and spatial planning experts and updates the general HIA City & Environment Handbook. The 2004 and 2006 revisions of the City & Environment model of HIA offer updates on quantitative methods; and refer to many new instruments that have especially been developed to support decision-making.[28] A process guideline is inserted, which emphasises the exchange of priorities and expectations with project planners, knowledge about the planning procedures and process, and stakeholder spheres of influence.

Now that we have learned that the Dordwijk Plan is adjusted after the HIA is finished, the questions is whether plan adjustment results directly from the HIA, and this case can be labeled a real success story. How is the policy adjustment linked to the HIA? Did the report simply convince the project manager, or were there other circumstances? We now move on from the description of the case to the analysis of the frames that the actors involved have of the role of health in the urban plan of Dordwijk, and of the role of the HIA as an instrument. The dynamics of these frames are then analysed in the interactions and underlying motives of choices made in designing the HIA and adjusting the policy plan.

[26] www.ggd.kennisnet.nl (in Dutch)
[27] 'Smitsweg' (2004), on a housing construction plan in an area with power transmission lines; 'Schelluinen' (2004), on a planned establishment of a freight transport centre; Zwijndrecht (2004), requesting a basic document on the environmental health quality of the entire municipality; Hardinxveld-Giessendam (2004, no public report); Leerdam (2006); and Sliedrecht (2006).
[28] For example: Judgment Framework Health and the Environment (RIVM, Fast Consultancy), Guideline Quality of the Living Environment (MILO), Traffic performance on location (VPL) and the Location Sustainability Profile (DPL).

4.3 Frames of health in policy and the HIA as an instrument

In this section, an analysis is presented of how the frames of the actors involved provide opportunities or obstructions to the HIA.

4.3.1 The role of health in urban renewal

Initially, the frames of the actors involved do not seem to diverge that much. The orientations of the people involved in the renewal project reflect affinity with health issues. As the project manager puts it:

> *'The plan comprises a health park with a functional synergy of health and sports facilities that provides many opportunities to organise health risk prevention activities, as well as rehabilitation programmes. Furthermore, the park is located in the middle of the city, enabling all visitors from town to come by bicycle instead of by car.'*

The idea of a Health Impact Assessment of a 'Health Park' sounds promosing to them. After the draft report is presented, however, the report is brought down to the environmental health aspects of the area instead of the positive health effects from the planned services. The Dordwijk HIA is aimed at the prevention or limitation of exposure to health risk factors. The policy frame presented in the report takes a critical viewpoint of policy. According to the designers, the City & Environment model has added value, 'because health impacts from spatial (re)construction projects are hardly traceable in first instance, often invisible because of a delay on impact from measures, and *'the market' does not, or insufficiently, undertake corrective action*. HIA offers an opportunity to better weigh intended impacts against unintended impacts' (Fast, Hazel and Weerdt, 2004) (italics MB). They claim that the HIA model makes health impacts traceable and visible. Moreover, the HIA frame prescribes *who should undertake action: the plan proponent(s)*.

The project manager and the Aldermen afterwards question the feasibility of the planning choices as proposed by the HIA. They argue that there are only limited possibilities for the municipality to manage the local environmental conditions. According to them, the highly urbanised and industrialised surroundings hardly offer any alternative locations for the project. The rarity of natural and open grounds induces citizen initiative, and thus community pressure on the municipality, to preserve them. Furthermore, the Department of Public Water Works, a national authority, formally assigns the transport of hazardous substances to this particular road and railway, which a

municipality can hardly challenge. From the limited manageability of this issue, the Alderman of Urban planning draws meta-level conclusions about government responsibility and accountability:

> *'We cannot create a risk-free society. So which risks do we accept and which not? (...) Citizens who decide to live at a risky location implicitly accept that risk. Is the government responsible for taking away that risk?* (…) *And, if we are, do we deal with it in a sufficiently cost-effective way? I ask myself, where can I create utility? I cannot act upon the idea that human life cannot be economically assessed, because I have limited resources.'*

4.3.2 HIA frames

The frames of the HIA as an instrument to improve the visibility of health impacts and decision-making also become contested after the draft report is presented. The positive health impacts that the Dordwijk proponents hope will emerge from the HIA is clearly excluded in the City & Environment frame of HIA. The environmental health specialists in the public health sector do not consider other, non-environmental kinds of health assessment to be a 'Health Impact Assessment'. City & Environment HIA practitioners are especially trained in environmental health, and state they do not know how to perform non-environmental health assessments.[29] The non-environmental HIAs performed at the national level are considered of insufficient scientific quality. In the Netherlands, there is no known case, as of yet, in which environmental and non-environmental health aspects are combined in HIA. Here, a task specialisation in public health science and professional practice is manifested that becomes counterproductive in policy practice.

This HIA is a first, experimental application of the model in this region. As a result, not even the HIA practitioner knows exactly what to expect and only limited prior agreements to clarify and manage expectations, or about how to produce, communicate and act upon the results are made. The lack of exchanging expectations thus obstructs the translation of specific local needs into the HIA design to make the HIA acceptable to other stakeholders. The demarcation to environmental health causes the Dordwijk project team to be very disappointed about the negligence of (positive) health impacts of the improved and combined sports and medical care facilities, and the central location allowing visitors to come by bicycle instead of by car. As a result, the Dordwijk manager initially is not prepared to accept the HIA results.

[29] These come up in interviews as well as the gaming simulation evaluation surveys.

As opposed to the support the HIA practitioner initially receives from the Envrionmental Platform, the municipal environmental officers are much more critical afterwards. They argue that the added value of HIA would be limited in comparison with environmental and safety assessments, if HIA scores are based on environmental standards. Another problem that was described earlier is that the environmental officers, on whom the City & Environment model depends for data collection, fail to deliver the necessary environmental exposure data in time (before the City Council will decide on a 'go/no go' for the renewal plan). This problem reoccurs in almost every HIA following Dordwijk, suggesting that the coordination between environmental and health services, officials is more difficult than just the timing of the data collection.

The municipal environmental officer questions the interpretation of environmental norms in HIA:

> *'I would like to see a more fundamental health argumentation in the HIA. What is the health impact from an environmental standard? Health and environmental argumentations are not the same. For noise, we have agreed that 40 dBa provides a 'healthy acoustic atmosphere'. A so-called 'Quiet area' has to comply with a 30dBa maximum. Between 30 and 40 dBa, what is healthy? (…)*
> *There is a difference in standard setting. In HIA, exposure between minimal and desirable standards is labelled as 'moderate' (…) yet, complying with desirable exposure levels would have huge spatial consequences.[30] (…)*
> *What exactly are you doing when you aggregate red and green scores (to establish total environmental burden, MB)? There is a value judgment attached: is air quality more important than noise? Those two sources lead to very different health complaints.'*

The HIA practitioner in an interview confirms that environmental and health concerns are not always mutually reinforcing; in fact, they might even be competitive in decision-making:

> *'If the issue is noise, the response is that now we can technologically fix that. Then I think, sure, they will close every hole in the house. For noise, that may be a solution but it causes new problems of indoor air quality. And ventilation equipment produces indoor noise, which people dislike even more'*

Other Dordwijk stakeholders in interviews question the quality of the assessment as well. The hospital delegate, for instance, states:

> *'I'm not enough of an expert to judge whether the underlying assumptions justify the results. Yet, if the actual traffic comprises a thousand cars less than assumed,*

[30] This is reflected in the recent debate about the EU directive 96/62/EG and 1999/30/EG on ambient particular matter (PM). Insufficient compliance caused the Administrative Law Department of the Dutch Council of State to shut down many small and large-scale construction projects in the Netherlands in 2004, because the Council considered local research on air quality insufficient, incomplete or incorrect.

> *it may make a difference, so to speak, of a million euros (to change the project plan, MB).*

The criticism on the quantitative model may have been induced by the specific constellation of influential project group members, who are, or have been working with quantitative methods themselves (one Alderman worked in the past as a maths teacher and the other as head of the Methods Department of the Ministry of Finance, while the hospital delegate is a business economist).

Even the Alderman of Health Care states:

> *'The HIA has been applied once. No one is very anxious to do that more often, because the output was not considered spectacular, and it still leaves decision-makers with freedom of choice. After all, the HIA does not produce data other than what has already been discovered in compulsory environmental or safety assessments.'*

From the Alderman's point of view HIA will be taken more seriously if health impacts are 'objectively' analysed. As a former maths teacher, his attention is triggered by the quantification of preconditions in the HIA report:

> *'At a certain point of time in decision-making, objective figures are most helpful. (…) If you hear the numbers, then you can create an image of the issue. Then it is withdrawn from ideology.'*

Finally, the HIA practitioner and the Alderman of Health Care express conflicting role frames of the parties involved. The HIA practitioner, for example, describes her image of urban construction planners:

> *'At presentations from urban construction planners I learned that they reason from how residents will experience the spatial plan in a positive way. I think it colours their view of health aspects. They literally call the environment and health 'obstructions' to spatial planning. So they invest in the experience of the living environment and in potential for physical activity, but if the air people breathe is polluted, they merely check whether the plan complies with legal, minimal standards.'*

In contrast, the Alderman of Health Care explicates how similar images of the environmental and health activists are built. According to him, a general precondition for HIA initiators to improve considerations of policy health impacts is to communicate them in a realistic, rather than idealistic or activist, way (here, he is not referring to the HIA Dordwijk specifically):

> *'With all due respect, there are a lot of people, who look upon the environment and health as the only things that matter, they cannot put them into perspective*

> *anymore. Such people do not succeed in successfully communicating their message. The so-called activist, you take notice and then think it is his hobby*.'

This statement by the Alderman of Health Care reflects his, rather surprising, lack of support for the HIA in the Dordwijk project. This is explained by the policy interests in his portfolio (Housing, Health Care and Neighbourhood Development) that become conflicting in the Dordwijk HIA. The Alderman of Housing, Health care and Neighbourhood development is also a member of the Dordwijk renewal steering group, with the specific task for coordinating the planned health care facilities in the Dordwijk area. His role in the steering group is limited though, because both health care providers and insurers are private organisations in the Netherlands. Nevertheless, when the HIA is introduced, the potential conflicting responsibilities become manifest. When the HIA request arrives at the steering group, not through the Alderman, but through the Environmental Platform and the Dordwijk project manager, the Alderman in his response, argues from the Dordwijk perspective rather than from the HIA:

> *'We cannot move the railway, especially those environmental aspects cannot be influenced at the municipal level. For other factors like physical activity and lifestyle, the influence of the government is always limited. Health in first instance is an individual responsibility*.'

As a result, the HIA is left without an important formal resource of authority, as well as a resource of access to, and communication with, the Dordwijk actors.

Reflecting on the conflicting frames presented in this section, there are some institutionalised obstructions to the HIA. A formal obstruction is the position and portfolio of the Alderman of Health Care in the Dordwijk project, whose conflicting interests prevent him from explicitly expressing support. An informal obstruction are the implicit role perceptions that complicate the cross-frame reflection necessary for identifying the common interest in the HIA on the Dordwijk Plan. The fixed way of 'copying' the nationally developed model and report format obscures the need for exchanging expectations and ambitions with the HIA beforehand. As soon as the HIA in the draft report turns out a risk assessment, the temporary order and stability in urban planning, created by the legal requirements for environmental and safety impact assessments, are threatened by the HIA. As a result, the Dordwijk team questions the 'facts' presented in the HIA, and considers the claims for plan adjustment infeasible. Still, the plan is adjusted after the HIA is finished, as we have seen before. How and why this adjustment is made is

analysed in the interactions between the HIA practitioner and the Dordwijk project team in the next section.

4.4 Reframing the environmental health issue

How do the practitioner and Dordwijk manager deal with the emergent conflict of frames? How does the HIA report in the end become acceptable to the Dordwijk team? Section 4.4 analyses the role of the HIA, including the research design of a quantitative model with a standardised method, in solving a controversy it has helped creating.

4.4.1 Frame challenges and responses

In this section, specific moments in the interaction process are highlighted to show in detail how interactions took place. The moments are the introduction of the idea of a HIA in the Dordwijk planning process, the presentation of the draft HIA report, the deliberations on the framing of the issue, and the HIA report adjustments.

HIA challenges the Dordwijk project plan

The reason why the project manager selects the Dordwijk project as a subject for the HIA are the potential benefits a Health Impact Assessment may come up with to support the Dordwijk Plan. The project manager asks both the aldermen of Urban Development and of Housing, Health care and Neighbourhood development to approve the Dordwijk HIA experiment. Separately from the request for a HIA, the Community Health Service (CHS) Board has requested participation in the Dordwijk planning process, because it intends to move to that location in the future. The aldermen do not want to deny a future resident the opportunity to look into the area and the renewal plan. Moreover, the project could benefit from health research as the plan consists of many different health facilities.

By labelling the HIA 'experimental', the medical environmentalist manages to mobilise cooperation for this HIA on the part of all parties involved. The experimental status, with a connotation of 'nothing to loose', initially allows the participants to await the output before committing to act upon it.

Dordwijk proponents challenge the knowledge presented in draft HIA

In a first response to the preliminary report, they ask why expected positive health aspects of the Health Park are not included in the report, and question the data and assessment model used.

The HIA researcher responds that the reason why the HIA does not pay attention to broader health impacts is that the City & Environment model of assessment does not address other aspects than environmental health. She then convinces them of the scientific validity of the City & Environment model, referring to the authoritative reputation of the designers (the National Institute of Public Health and the Environment (RIVM), the Dutch confederation of Community Health Services, and private environmental consultants. Especially the RIVM is a formal knowledge institute with a strong scientific reputation.

Designing a formal response to the HIA

The project manager struggles to find a way of how to deal with the HIA, and prevent damage to the Dordwijk planning process. As the exposure data in the HIA do not exceed legal environmental standards, there is no regulation that forces him to adjust the plans. The main reason to adopt the recommendations, according to the project manager, is that the HIA confirms statements from potential private project developers, who are consulted to invest in, and execute profitable parts of the renewal plan. As they consider the old housing location to be insufficiently attractive to potential buyers, they are not very eager to invest. Yet, these houses are considered indispensable, because their future sales will help finance the project as a whole. Thus, the arguments of health, environment and profit become mutually supportive to the decision to act on the issue: the planned houses are relocated. As the renewal manager reframes the health issue into a budgetary one, the HIA in the Dordwijk case is ascribed an instrumental purpose in plan realisation in addition to health protection, which provides the renewal manager with legitimacy to act.

At the same time, the project group argues that environmental conditions cannot be easily improved without interference of higher authorities dealing with road and railway transport of hazardous substances, air quality and noise. In addition, the HIA report poses a potential risk in that it may provoke resistance or a negative image of the project plan in public. These objections to the housing location may escalate to a disapproval of the plans in the City Council. The only remaining option to keep the plan

financially robust and prevent disapproval is to relocate those houses. According to the HIA practitioner, the HIA thus has succeeded in building pressure to adjust the plan:

> *'Even before it was made public, the project manager indicated they had cancelled (the location of, MB) those 40 houses. He states it was partly due to the HIA, but I think financial and economic aspects were also involved. Such a plan often starts ambitiously; later on parts turn out to be unfeasible. It is too much an honour to ascribe that to the HIA. What we can ascribe to the HIA, is the decision to move the houses indicated in the HIA towards a more favourable area.*'

In order to understand the difficulty of the project manager's decision to go along with the HIA, its political implications are described, which follow the rules and frames in the political game. Initially, some parties in the City Council express their appreciation of the HIA report as it clarifies potential risks. As the causes of environmental burden are hard to manage at the local level, the question 'Should we do it at all?' arises to the HIA practitioner and to the Municipal Council as a derivative of the precautionary principle:

> *'To me, the question occurred whether one should want to build houses at that location at all?'*(HIA researcher)
> *'The City Council (…) did question why one should want to construct in such an environmentally burdened area.'* (Alderman Health care)

HIA report adjustment

In a number of meetings with the HIA researcher, the project manager requests, first of all, the HIA qualifications to be relabeled into less sensitive terms ('insufficient' instead of 'bad'). Secondly, he wants the report to emphasise the limited purpose of the study (environmental health quality) and the limited manageability of background concentrations in urban industrialised areas:

> *'Because it is the first time that the HIA is applied in the Dordrecht municipality, the impression may occur that the Dordwijk renewal project is an exceptional case. Nevertheless, urban areas have an environmental burden everywhere, among other things by traffic flows and human and industrial activity. If it leads to problems in a pre-existing situation, it is not always possible to take the necessary spatial measures. The (re)construction of a planned area offers the opportunity to prevent potential health impacts given the urban environmental burden. That can only be done when these impacts are clearly mapped. That is the role of the HIA.'* (Akkersdijk, 2003)

On those conditions, the project manager accepts the HIA report and adjusts the renewal plan in an intermediary report to the City Council. Then the Dordwijk manager writes and disseminates the intermediairy project report to the City Council, in which he inserts a positive advice on the HIA recommendations and proposes two alternative locations for housing. The HIA report thus is not presented to the City Council as a separate point on the agenda:

> *'For the debate we have to choose whether we clarify the content of the report or clarify how we have dealt with it. (…) If such a report is made public, you have to respond immediately to images.(...) Thus we did not clarify one aspect, but we told them (The City Council, MB) how we had dealt with the different impact assessments and how they were translated into the decision document.'* (Alderman urban planning).

Finally, the project manager writes a press release (Gemeente Dordrecht, 2003):

> *'Municipality takes on recommendations environmental health quality Health Park Dordwijk. Health Impact Assessment new research instrument Community Health Service.'*

These texts support the legitimacy of both the renewal project as well as the HIA. As the HIA author accepts it as a compromise, the project manager becomes a co-producer of the HIA, and the boundary between HIA and project has temporarily been reconstructed to produce one voice in external communication towards the City Council and the media/public. Nevertheless, the participants in the Dordwijk project group afterwards, in the interviews for this research, state that HIA has no added value and that future cooperation on HIAs of other projects seems unlikely.

By contrast, we have seen that the HIA praticioner after the experimental Dordwijk HIA succeeds in acquiring six new assignments for HIAs. She actively pursues administrative meetings and meetings of the City Council public health committees to present the HIA model, such as a City and Environment Conference of the Ministry of Housing, Spatial Development, and the Environment; and a supramunicipal 'Drechtsteden' meeting of Aldermen. The Dordwijk example provides her with an illustration of the method, and enables her to communicate more realistic expectations about the HIA model and its output. Although formal assignments are always issued by the City Boards, among the HIA proponents are project managers, private project developers and City Council members who request the City Board commissioning an HIA. HIA resources are generally broadened to include administrators, public health officers, and public health committee members from several Municipal Councils.

Nevertheless, obtaining environmental data still remains difficult in most of the cases. The commissioners generally consider the HIA report to have an advisory status;, and are not compelled to comply with the HIA recommendations. They do not feel the need to provide feedback on their appreciation of, or action upon the HIA output. The HIA practitioner simply does not know how the HIA reports are received. Although the HIA is mentioned in local Environmental and Public Health Policy Papers, the HIA practitioner remains the sole initiator to enact those paper commitments to HIA.

Briefly summarised, the risk assessment becomes a strategic issue to the progress in the Dordwijk planning process, and the project manager tries to solve that issue by rejecting the methods of the HIA. . The HIA practitioner effectively passes this point of passage by referring to the authority of the RIVM and other specialists who developed the City & Environment model. Then the Dordwijk team reconsiders the issue and discovers that the planning housing needs to be relocated anyway because of the private project developers demand to make housing profitable. The team sets new points of passage: they negotiate a few text lines into the HIA report that clarify the limited feasibility of guaranteeing good quality of the living environment, and they take over the public presentation of the report to the City Council and the media. The controversy is solved by negotiation. Does this mean that the HIA has not been helpful at all in promoting plan adjustment? On which resources is the research design based? Which helpful elements for conflict resolution have emerged during the interaction process?

4.4.2 Boundary ordering devices

The research design of the Dordwijk HIA, as we have seen, is for the most part based on the standardised model, and has not so much emerged in interaction with the local stakeholders. The sources of this model do not directly involve spatial or urban planning officials although there are some officials from the Ministry of Spatial Planning, Housing and the Environment involved. Also, the model is based on the capacity available in local and regional Community Health Services.

Yet, within the CHS, the personal and material capacity for the environmental health discipline is very limited. Environmental health services are only a minor element in the legal tasks prescribed by the Collective Prevention Act on Public Health (Tweede Kamer der Staten-Generaal, 2002).[31] Because CHS are municipal services, they additionally have to comply with municipal priorities, which – especially in larger cities - include the prevention of public inconvenience by mentally disturbed or illegal persons, and the provision of a 'social safety net' of social care facilities. Environmental health, especially in smaller CHS, thus only comprises a minor, sometimes even marginal, proportion of total CHS services.

Additionally, the City & Environment HIA is highly focused on the mobilisation of scientific knowledge institutions. Formal knowledge institutions develop knowledge

databases (www.ggdkennisnet.nl; www.rivm.nl/vtv) and standardised tools to support local or regional competence at the CHS. The explicit and expert knowledge resources in the City & Environment HIA are mobilised to create recognition, comparability, and scientific authority: in other words coherence of knowledge produced in HIA among all sites where HIA is applied. Nevertheless, these sources do cross the boundary of the environmental and environmental health disciplines. The knowledge presented still needs cross-sectoral coordination in the local setting to become coherent.

The research design of the HIA only re-orders the boundaries of the environmental and environmental health disciplines, through the use and elaboration of environmental standards. Legal and scientific environmental standards are used to communicate 'hard' criteria that provide boundaries between acceptable and unacceptable health impacts. Yet, the HIA designers claim that HIA can also reveal which health impacts may still occur when environmental standards are met. Such claims enable the HIA practitioner to reconstruct those environmental standards into health standards.

The metaphor of traffic light colour coding, that is part of the standard HIA model, is used to communicate a state (instead of a 'sense') of urgency to act on potential health impacts: colour maps of (health and) environmentally burdened zones in the area for aggregated environmental risks, and health risks even when exposure is below standard. The colour coding is a metaphor for intuitive, emergency action. It has had the intended impact on the project team.

Additionally, the language of quantitative science also emerges as a boundary-ordering device in interaction with the Dordwijk project team. The hospital delegate, a business economist, for instance, states:

> *A sensitivity analysis should be part of such studies, distinguishing between different assumptions, like a scenario study.'* (hospital manager)

The designers of the City & Environment model recognise such a suggestion as helpful.

Finally, the formal knowledge institutions develop knowledge databases (www.ggdkennisnet.nl; www.rivm.nl/vtv) that could be used by different scientific disciplines and policy sectors. In this case, nevertheless, other disciplines have not used these provisions.

In an interview, the municipal environmental officer introduces another potentially helpful element in coordinating the boundaries with urban planners as an alternative

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[31] Major tasks include collective prevention, youth health care, and prevention of infectious diseases.

way of presenting knowledge. He uses the metaphor of a grid to visualise planning options in zones with an environmental burden. Scientific exposure risks in spatial planning:

> *'One has to imagine oneself in the role of a designer. To a designer, graphs of group risk with different levels and standards means nothing. They often think from a fully developed architectural and urban development view. I encourage them to think about spatial functions in a spatial and population density grid'* (local environmental officer).

Such a grid translates risks into a specific distance to the source and links those distances with spatial functions that harbour specific numbers and groups of people (labouring people, schools, houses, hospitals). As such, it is an example of a boundary-ordering device of the renewal project between environmental, spatial planning and public health considerations. The grid of population density in a specific area translates the communicative experience of environmental officers with urban planners and decision-makers into the HIA. The visualisation of the grid enables the attribution of feasible spatial functions to an area. As such, the grid provides conditions during exploration rather than a test of an advanced urban plan.

In other words, the informational needs of the Dordwijk planners concern the potential benefits of the plan to public health, which are not covered in the HIA. The City & Environment model only re-orders the boundaries between environmental and environmental health disciplines. The Dordwijk planners associate the risk assessment in the HIA to the environmental impact assessment. This EIA does not have a good reputation, and the HIA is received accordingly.

4.4.3 Standardisation

Although the model enables the data collection and delivery by environmental officers, it insufficiently takes into account the occasions where environmental and health interests are not reinforcing but conflicting, or where there are insufficient incentives for environmental officers to take on tasks that are not part of their package. The technical division of data collecting labour does not fit the institutional setting. Moreover, the model in itself lacks guidelines for incorporating policy actors and their knowledge of policy processes and implementation in order to interpretate the data in appropriate policy terms. As a result, the 'facts' are not 'stabilised' but questioned.

By contrast, the HIA practitioner adjusts her strategies to bring the HIA instrument under the attention of policymakers. She takes part in the revision of the handbook on HIA City & Environment. The revised model contains a process guideline for interactions with the policymakers addressed. Besides explicit and expert knowledge on the relationship between health and the environment, the HIA City & Environment designers thus increasingly (yet implicitly) recognise the importance of tacit, non-expert and experiential knowledge and skills.

The resources are gradually expanded: in the new Interim City & Environment Act (2006), the HIA is specifically assigned to environmental health specialists, preferably working for Community Health Services. Even though the Act does not make HIA obligatory as a directive, the explanatory memorandum does qualify the HIA as a guideline to improve the quality of local (re)construction plans in general. Nevertheless, the different knowledge resources are not (yet) combined in databases, or in the expert support structure and other arrangements to build integrative capacity.

4.5 Summary and reflections

What is the role of the HIA City & Environment model in reframing health in the Dordwijk urban planning process?

The HIA recommendations are integrated in the Dordwijk plan, yet, for different reasons than expected beforehand. The conflicting policy frames that surface when the draft report of the HIA is presented to the Dordwijk manager are managed through negotiation. By strategically reframing the environmental health issue into a budgetary issue, the project manager identifies a common ground for the HIA and the team decides to adopt the HIA recommendations. Several obligatory points of passage have been identified for the HIA in the cooperation of environmental officers on data collection, the scientific quality of the methods, the textual adjustments and public presentation by the Dordwijk team, and subsequently passing the adjusted Dordwijk Plans through the Municipal Council for approval. The financial motives behind the decision to adjust the Dordwijk Plan reveal an unexpected allie of the HIA in the private project developers, even though they have never met in person.

The technical design of the City & Environment model merely coordinates the environmental and environmental health disciplines. It insufficiently addresses the

informational needs in the particular urban planning setting. The Dordwijk Plan has been adapted already in an earlier stage to comply with legal environmental and safety standards (although some locations are still on the verge of exceeding them). The risk focus of the HIA makes the urban project team therefore feel unduly criticised. Among the urban planners, the HIA becomes associated with the negative bureaucratic experiences of the environmental impact assessment. The boundary ordering devices of traffic light colour coding and the language of quantitative science only partly, and temporarily, provide bridges to the urban planning world. At the end of the interaction process, the Dordwijk manager has become a co-producer of the HIA and the HIA a co-producer of the Dordwijk Plan. Nevertheless, the negotiations to resolve this frame conflict do not lay the foundation for future cooperation with the Dordwijk team.

The HIA practitioner has learned from this experimental application. She shows perseverance by presenting it in other circles of policymakers and politicians. The additional process guideline in the Handbook revision shows how, step by step, competence is built based on these experiences. The subsequent HIAs that take place after the Dordwijk HIA nevertheless are still suffering from a problematic environmental data collection and a disregard of following up on the intended policy adjustment on the part of both the policymakers and the HIA practitioner.

Policy adjustment thus occurs without frame convergence between the actors involved. Institutional change is ruled out: there is no new division of monitoring and prevention tasks and no resource integration for future projects. The existing division of tasks and resources, with the Community Health Service monitoring and articulating potential health impacts from urban planning projects, is reproduced in follow-up requests for HIAs in other municipalities. Although the commissioners invest in these HIAs, there is no fundamental change in responsibilities and capacities.

The perception in the public health sector of this 'success' story of plan adjustment has therefore required much coordination on the part of the HIA practitioner, the Dordwijk project manager and the other stakeholders. Such coordination efforts remain invisible in formal reports. The empirical course (or absence) of interaction shows that scientific authority is not self-evident, yet needs to be mobilised. Only when linked to an authoritative designer institution, and reconfirmed in a direct dialogue with relevant stakeholders, scientific authority can be created. Moreover, controversy on health issues exists within the public health sector as well as between different policy sectors, requiring both cross-sectoral and internal frame reflection.

Chapter 5
Healthy housing: HIA of national housing policy

In the last chapter the analysis focussed on an application of a fixed HIA model for risk assessment on a municipal project plan. In this chapter a very different case is described: a process-oriented Health Impact Assessment aimed at health promotion in national housing policy as written down in the national Housing Policy Paper 'What people want, where people live' (2001). In this HIA, the potential for cooperation on health promotion is explored as an aspect of national housing policy, by scrutinising the relationship between health and housing policy measures on physical exercise and safety. As there is little knowledge available on these topics, the assessment cannot be designed beforehand. The HIA is initiated with a three-step interaction procedure linked to decision-making moments in housing policy. This case is to provide an answer to the question: *what is the role of the process design of HIA in reframing health in the national Housing Policy Paper 'What people want, where people live'?*

The analysis is based on a study of the HIA archive kept by the Intersectoral Policy Office, and interviews with HIA and housing actors and stakeholders. The outline of this chapter follows that of the previous chapter: first, the case description comprises the Dordwijk Plan, the design and content of the HIA, a reconstruction of the timing and interactions between both, ending with the events that followed the HIA. The analysis comprises a confrontation of the frames, the arguments used to resolve any conflict that may have arisen, and the role of the HIA design as a boundary object. The conclusions focus on the way conflicts in the interaction between the HIA and the policy process have been resolved to enable the integration of health in the project plan, and the role of the HIA design.

5.1 HIA object: Housing Policy Paper 'What people want, where people live'

The historical relations between the Ministries of Housing and Health[32] date from the end of the 19th century with government interventions in housing to promote hygiene and protect the population against infectious diseases. Public housing thus originates from the

[32] For brevity the ministries are referred to as 'Ministry of Housing' and 'Ministry of Health' respectively.

public health policy sector. A period of welfare state expansion followed, in which both sectors developed in diverging directions and the relationship between health and housing was focussed on hygiene and safety in house construction. The Ministry of Housing is therefore not unfamiliar with health when the HIA is requested. From the 1990s onwards, a new interest emerges in the conditions the housing environment creates for public health. The main reason underlying this interest is the societal trend towards individualisation with citizens demanding more quality of the living environment, and the confrontation with interconnected social and physical housing problems in deprived neighbourhoods in the big cities.

The attention for these societal trends is furthermore triggered by political developments in housing policy. To understand the meaning of the Housing Policy Paper 'What people want, where people live', a brief historical overview is given of macrohousing policy in the past 20 years. The Ministry of Housing is undergoing a fundamental change in policy as well as policymaking orientations (Brandsen, 1999, 2001; Godfroij, 2000; Ministry of Spatial Planning, Housing, and the Environment, 2001; Parliament, 2001). In 1985, a Parliamentary Inquiry into construction subsidies by the Ministry of Housing reveals a lack of transparency and legality in subsidy provision. These subsidies mark the post-war priority to address the enormous housing demand adequately. Moreover, to encourge postwar economic growth, the public housing sector has kept rents artificially low to restrict the rise of wages. During the 1980s, retrenchment policies no longer accept subsidy as a means to raise house production. As a result, the housing sector is reformed.

The Housing Policy Paper 'Housing in the 1990s' (by secretary of state Heerma) promotes deregulation of housing policy and decentralisation of policy implementation (Parliamentary document, 1989). The housing department within the Ministry is re-organized into a process organization with sub departments hosting horizontilised tasks. Financial risks are transferred to housing corporations; loans and subsidies are cleared; letters and tenants have more freedom to negotiate directly. The sales market is included in housing policy to spread the financial risks of the social rent sector. Moreover, the economic growth of the 1990s brings about important shifts in the housing market (rise of sales and prices; growing inequality and deprived neighbourhoods), urging housing policy towards an integral and long-term governance reorientation. In 1997 'liveability' is added to the list of performance indicators for the activities of corporations.

The government Policy Paper 'What people want, where people live' (2001) is a strategic policy document that monitors relevant societal developments and suggests broad directions for housing policy in the next ten years. To address the deprived neighbourhoods in the long run, the Ministry of Housing wants to build a 'social pillar' for the housing policy, which addresses well-being, demand-driven housing, and (although this was not explicitly mentioned) health. The main question is: what do citizens wish, what do they need, concerning their housing situation. Secondly demographic trends are taken into account, and thirdly social trends such as changes in family life and individualisation. The policy document provides a national framework for local housing policies.

The policy paper 'What people want, where people live' reflects a transition from: quantitative to qualitative demand, an orientation from supply by corporations to citizen demand, from house to housing environment, from social rent sector to governance of the whole housing market, from physical to social aspects of housing , and from fragmented regulation to a new 'Housing Act'. For the first time a housing policy document reflects vision rather than quantitative construction targets (Van der Schaar, 2000). The Policy paper puts 'the citizen central' and arrives at three basic principles (Ministry of Housing, Spatial Planning and the Environment, 2001): (1) freedom of choice, (2) attention for societal values, (3) a committed government and managed competition. Summarised, housing policy in the Policy paper is aimed at five core challenges (see box 5.1).

Box 5.1 Core challenges 'What people want, where people live' (2001)

1. To develop citizen say in housing and living environment by promoting home-ownership, sale of rented houses, private commissioning of construction, deregulation of building directives.
2. To create opportunities for people in vulnerable positions by target group policy, housing benefits, rent policy and a legal proposal to promote home-ownership.
3. To promote housing and care by homecare vouchers, neighbourhood oriented service combinations, homecare regulation, and homecare real estate management.
4. To promote urban housing quality by Urban Innovation programs and 'urbanisation conversations' (open dialogue between Ministry of Housing and local actors to develop more flexible housing policy).
5. To facilitate green elements by regional development visions and 'room-for-space' regulation (keep rural areas 'empty' by replacing farms and companies by housing or concentrating housing in villages).

Who is involved in the Housing Paper preparations?

The Policy paper is prepared in a three-year process of preparatory studies ('Housing Explorations 2030' and advisory reports) and diverse consultations at the national, regional and local level. Among the extensively consulted stakeholders are local and provincial governments (responsible for housing and spatial planning respectively), housing corporations, private project developers and builders, tenants and home-owner organisations, homecare and patient organisations. The Welfare Department of the Ministry of Health is consulted several times for the development of 'housing and care' policy. The idea for a HIA is introduced when the Agenda for the new Policy paper is being set (see table 5.2).

5.2 HIA method and application

The questions of how, and why, is a HIA proposed of this policy paper, by whom, how is the HIA designed, and the conclusions and recommendations are addressed in the following sections.

5.2.1 The HIA design

The idea for a Health Impact Assessment fits the renewed interest since the 1990s that the public health sector, in the slipstream of environmental policy development, has showed in healthy and sustainable house construction (Bogaard, 1994, 2000). In the context of the housing policy and the HIA, a lot of workshops and symposia are organised on the subject of social and health aspects of house construction and the living environment (see table 5.1).

Table 5.1 Contextual sector-crossing activities relevant to the HIA on housing policy

Date	Relevant contextual activity
Nov 1998	Nethur (graduate research school spatial planning) symposium 'Construction and well-being'
Feb 2 2000	Ministry of Health Workshop 'Citizen and Living Environment' concerning 5th Policy paper on Spatial Development
March 2000	Government Committee Albeda work conference: 'socio-economic health disparities, housing and spatial development'
June 28 2000	Ministry of Health Workshop 'Health in the City' (following the HIA on ICES policy package Vital City)
Sept 2000	NIROV (spatial planning think tank) Debate days on Construction and living
Sept 29 2000	Dutch Congress on public health care (NCOG) 'Housing and health'
Nov 23 2000	RIVM Public health monitor work conference 'Health in big cities'

The idea for the HIA comes up at the Intersectoral Policy Office[33] after multiple screenings of Coalition Agreements and the annual National Budgets of 1997, 1998, 1999 (Boom, 1999; Jansen and Varela Put, 1997; Schippers, 1999). In relation to HIA, housing policy is for the first time called relevant to health in the first exploratory report on the instrument of Health Impact Assessment in 1995 (Roscam Abbing, Smits, and Tax, 1995). Moreover, in 1999 an HIA had already been conducted on cities and their environment and in 2001 both the Ministers of Health and Housing signed an intention to cooperate in the field of health and environment (Actieprogramma Gezondheid en Milieu). The Intersectoral Policy Office (IPO) and the Ministry of Health consider the Housing Policy Paper as an opportunity to further explore the relationship between housing and health in HIA in a basic document to build an integrated health and housing policy.

As there is a lack of data and a lot of uncertainty about that relationship, the IPO proposes to undertake a three-step HIA in order to prepare the HIA thoroughly. The three-step procedure broadly follows the international 'Gothenburg Consensus' design for HIA (WHO,1998). Step one is a health impact screening (Deelstra, 1999) of the Ministry of Housing report on 'Housing Explorations 2030', which is a preparatory report for the Housing Policy Paper (Ministry of Housing, Spatial Planning and the Environment, 1997). Step one is followed by a broad discussion meeting on the screening report (Netherlands School of Public Health, 1999). To prepare that meeting, the Intersectoral Policy Office then develops a matrix of the life course on the one hand, and catorgories of the living environment on the other, to explore potential relations between housing and health. At the meeting, the matrix is considered unsuitable, because problem definitions and definitions of health differ among the participants. Step one and two prepare the actual Health Impact Review on proposed housing policy directions in the Policy Paper (step 3).

5.2.2 Content of the Health Impact Review

The object of the HIA is derived from the content of the Policy paper. During the preparation phase of the Health Impact Review (between step 2 and 3), the Ministries of Health and Housing and the Intersectoral Policy Office (IPO) select two health determinants: physical activity and safety (social, traffic, and home). On the assumption of relevance to physical activity and safety, three directions for housing policy are selected for scrutiny (Broeder, 2002):

[33] At the time established at the Netherlands School of Public Health.

1. Compression and/or dilution of the built environment in different living environments (city centre, suburban, rural).
2. Freedom of choice under conditions of social justice and responsibility, leading to product diversification and opportunities for expressing identity in housing.
3. Domotica (informatics applications to home care), which facilitates care at a distance and independent housing of the elderly and disabled. 'The intelligent home' has a teleshopping device, and disconnects electricity when residents leave the house; has an alarm system, video security system and visual contact with care institutions. (…) Experiments with domotica will be initiated and it will be a performance indicator in the national housing policy framework.

The selected health determinants and housing policy directions together form the format for the end report. The IPO selects four research consultants to prepare four separate sections of the Health Impact Review (the selection and scrutiny processes are analysed in paragraph 5.3.1):

1. The National Institute of Public Health and the Environment (RIVM); physical activity
2. Van Dijk, Van Someren and Partners (DSP) Consultancy: social safety
3. RIGO Consultancy: safety in and around the house (residential safety)
4. The National Road Safety Research Institute (SWOV): traffic safety

The four institutes adopt different techniques for data collection and analysis. The RIVM conducts a secondary analysis of an existing database because there is little reliable literature on the relationship between housing environment and physical activity. SWOV explores the relationship between spatial development and traffic safety because of their specific expertise. RIGO mainly looks at what the Policy paper stated on the relationship between health and housing, and adds some expert interviews because of a lack of time (RIGO starts two months later). DSP finally organises a 'group decision room'[34] to prioritise among relevant health impacts of social safety, and adds the policy relevant criteria of irreversibility and preventability of impacts to its analysis.

They relatively independently produce their section assessments, although drafts are discussed jointly at meetings of an advisory committee. This committee consists of housing policy officials of the Strategic Policy Department of the Ministry of Housing, and indpendent experts on the four topics of the HIR (see table 5.2).

Table 5.2 Members of the Advisory Committee

Organization	Contribution
Ministry of Health department of Sports	Policy questions
Ministry of Housing sub department Strategy	Policy questions
Consumer and Safety Institute	Consumer safety
Delft University of Technology	Traffic safety
University of Groningen	Physical activity
Delft University of Technology	Social safety

Table 5.3 summarises how the research consultants conduct their HIA section assessment, and what is the output. The outcomes suggest that the policy directions aimed at improving the freedom of choice will have negative impacts on physical activity and traffic safety, especially for the deprived citizen groups in society. Domotica will have positive impacts on social safety and residential safety. Compression of the built environment will have positive impacts on social safety and traffic safety. Dilution will have positive impacts on physical activity, residential safety, while it will negatively impact on traffic safety. DSP adds the policy direction of neighbourhood investment as a broader intervention that will have very positive impacts on social safety.

Table 5.3 Summary of the four HIA section reports
(Damen, 2002; Hummel, 2002; Korthals Altes & Molenaar, 2001; Wendel-Vos, Schuit, & Seidel, 2002)

Institute	Health Determinant (outcome)	Data collection method	Output from directions: Potential health impacts (+ = positive; - = negative)	
RIVM	Physical activity	- Literature study - 12 expert interviews - Secundary analysis - Quantitative case study	Freedom of choice: Domotica: Compression: Dilution:	- (-) +- ++-
DSP	Social and fire safety	- Literature study - Expert brainstorm DSP - Group Decision Room	Freedom of choice: Domotica: Compression: Dilution: Neighbourhood investment:	+- + + +- ++
RIGO	Residential safety	- Literature study - 4 expert interviews	Freedom of choice: Domotica: Compression Dilution:	+- + n/a +
SWOV	Traffic safety	- Literature study	Freedom of choice: Domotica: Compression: Dilution:	- -+ + -

[34] A computerized interaction between participants, in which information is added stepwise to a decisional process.

Some of these outcomes are contested within the meetings of the advisory committee, which is elaborated in section 5.3.1. The IPO project leader of the HIA then writes a summary report with recommendations for national and local implementation, which are summarized in Box 5.2. These recommendations for the most part are directed at the Ministry of Health, and after a few years, most of them are followed.

Box 5.2 HIA recommendations

- Developing guidelines for neighbourhood reconstruction
- Do a HIA of the 5th government Policy paper on Spatial Development
- Do a HIA of the interdepartmental Urban policy
- Make HIA results available at local level by writing a research proposal to develop a manual for the promotion of physical activity and safety in (re)construction projects, as well as experimenting with local intersectoral cooperation.
- Experiment with participative HIA at the local level
- Monitor the impacts of participation
- Monitor the impacts of freedom of choice in lower socio-economic classes
- Expand health elements in environmental impact assessment
- Monitor developments and impacts of domotica
- Create intersectoral relations between the Ministries of Health and Housing as well as the branch of the local Municipal Health Services (GGD Nederland), the branch of the Dutch municipalities (VNG), and the Ministry of Urban policy[1]

5.2.3 A reconstruction of the Housing Policy Paper and HIA processes

Table 5.4 relates the timing of the HIA to developments concerning the Housing Policy Paper. The following process of the HIA on the housing policy proposals in the Policy paper takes about three years. This process is interrupted several times because of changes in staff in the Ministry of Health and the IPO.

Table 5.4 Timing of HIA to development of the Housing Policy Paper

Relevant housing policy developments	*Date*	Health Impact Assessment
	Oct 1995	1st generic exploratory report on the potential of the HIA instrument (Roscam Abbing et al.)
Report 'Housing explorations, housing in 2030'	*July 1997*	
	Feb 1999	HIA Screening of the Coalition Agreement 1998 and National Budget 1999
Report 'Discussion agenda Housing policy in the 21st century'	*April 1999*	**Step 1**: NSPH plan of action, screening of 'Housing explorations 2030' report
	Aug 1999	Presentation Health Impact Screening report on 'Housing explorations 2030'
	Oct 1999	**Step 2**: Ministry of Health meeting

		Screening report 'Housing explorations'
	Feb 2000	**Step 3**: NSPH **plan of action** Health Impact Review (HIR)
'Housing Green paper' for consultations and advice	*May 2000*	
	April – Sept 2000	Monthly meetings Ministries of Health and Housing to select topics for Health Impact Review on Housing policy
Final Policy Paper 'What people want, where people live'	*Dec 2000*	
Parliamentary proceedings Housing Policy Paper	*March-Apr 2001*	
	April 2001	Ministry of health **commissions** NSPH with Health Impact Review on Housing policy
	Feb 2002	HIA section reports finished
	May 2002	**Presentation Health Impact Review report** 'People, wishes, healthy housing. A report about opportunities for health in the national policy on housing' to Ministry of Health, embargo
Interdepartmental* Workshop on 'Safety and social cohesion' followed the HIA section report on social safety by DSP Consultancy	*May 2002*	
Essay 'Living healthy in healthy neighbourhoods' based on HIA report	*Oct 2002*	HIA knowledge network 'GES Kenniskring' discussion of headlines HIR report
	Nov 2002	Ministry of Health **lifts embargo** on HIR report
	2003-2004	HIA implementation: Project municipality Voorhout 'Moved to move': pilot Guidelines 'Promotion of physical activity and safety in housing construction'
	Summer 2003	HIA implementation: GES (screening) interdepartmental Urban policy
DHV assignment to write a book on 'Examples of physical activity promotion in construction'	*Spring 2004*	Ministry involved in reconstruction policy of 56 neighbourhoods
	2005	HIA implementation: Project 'Integration of HIA in environmental impact assessment and strategic environmental assessment'

* Participants: DSP, Ministries of Housing, Spatial Development and the Environment; of Public Health, Welfare and Sports; Justice; Internal Affairs and some experts from different organisations

It takes three years to execute the three-step HIA. At first, the HIA is initiated to influence the content of the policy paper, but during the process this turns out not to be feasible. Long negotiations about the topics to be addressed and the Terms of Reference cause the Policy paper to be already approved of by Parliament before the HIA is even started. HIA goals are then reformulated to assess how *local implementation* might take place in such a way that health damage is prevented, and health benefit maximised, e.g. by

outlining scenarios. The Ministry of Health then formally commissions the Intersectoral Policy Office to coordinate the Health Impact Review (step three), which is performed as described in the previous section.

5.2.4 Events following the HIA

After the NSPH finishes the HIA summary report, the Ministry of Health subjects it to an embargo (prohibition of publication and dissemination) of six months in order to be 'the first to respond'. After the HIA is released from the embargo, momentum has passed although the NSPH project leader remains on top of realising the HIA recommendations. She enacts the HIA recommendations (see box 5.1), by initiating, among other things, a pilot to develop and test a manual for the promotion of physical activity and safety in (re)construction projects ('Moved to move' in the municipality of Voorhout[35]), which is finished in 2004 (Alleman, Storm, and Penris, 2005). Currently, it is disseminated among municipalities and Community Health Services.

Moreover, the IPO conducts a HIA of national urban policy in 2003, providing input to the Ministry of Health in interdepartmental contacts (Penris, 2003). In addition, the housing HIA project leader promotes the integration of HIA in environmental impact assessment, which is currently in development under commission of the Ministry of Health (Den Broeder et al., 2005).

As for the Housing Department, the Housing Policy Paper has already passed Parliament when the HIA is conducted. As a result, the paper itself is not adjusted. The directly involved housing officials, however, do keep up the discussion within the Ministry of Housing even before the Ministry of Health lifts the embargo, by producing an essay in a sequence of 'Social physical explorations of housing' based on the HIA (Ministry of Housing, Spatial Planning and the Environment, 2003; Vos, 2002). In cooperation with DSP, they organise an interdepartmental workshop and an additional essay based on the HIA section report on social safety (Korthals Altes, 2002). Moreover, two years after the HIA, the Ministry of Housing commissions DHV Consultancy to write a book on the promotion of physical activity in urban construction. Four years after completing the HIA, the Ministry of Housing explicitly mentions health in the '56 neighbourhoods approach', in which the national government together with municipalities and housing corporations invest in 56 deprived neighbourhoods in 30 Dutch cities, to speed up the process of urban renewal;

[35] In Dutch: 'Tot bwegen bewogen'

and the Action plan 'Youth, environment and health' (June 2005). Yet, *how,* exactly, to deal with health is not specified.

As for the HIA as a general instrument, the Ministry of Health in response to the policy advice 'Healthy without care' (RVZ, 2000) in 2001 has recommended the HIA to the local level. The Community Health Services, however, experience difficulty in applying HIA in a pilot project on 'Instruments for Integral Health policy', in which Handbooks are developed for three different instruments. Although the Ministry of Health has developed a legal requirement for municipalities to work together on health and housing (Collective Prevention and Public Health Act (WCPV), 2003), there are no specifications of goals, objectives and incentives. Cooperation with Community Health Services in construction projects until now remains limited to a few pilots (mainly City & Environment HIAs, see chapter 4). In 2006, the Ministry of Health assigns the RIVM again to write a book on how to do HIA (Van Zoest et al, 2007).

A confusing picture arises of the consequences of the HIA for the Housing Policy Paper and the intentions of the Ministry of Health with HIA in general. Can we conclude that, because housing policy has not been adjusted, the HIA on housing policy has not been successful? Or were there other consequences of HIA that did contribute to cooperation between both Ministries?

5.3 Frames of the role of health in policy and the HIA as an instrument

In this section, an analysis is presented of how the frames of the actors involved provide opportunities or obstructions to the HIA.

5.3.1 The role of health in housing policy

Initially, there is a clear conflict of interest in the HIA. In response to the introduction of the idea for a HIA of housing policy, the housing officials involved state that health is already incorporated in housing policy, and that the Housing Ministry is not interested in a HIA on the quality of house construction. The only innovative element in the discussion, according to them, is the relationship between housing environment and lifestyle, such as physical activity. They consider the national-level governance opportunities on such

issues to be restricted. Referring to another health report, one of the officials clarifies when reported impacts become politically urgent:

> *'In that report (Health in Big Cities, MB) quantitative figures were presented of how people in deprived neighbourhoods live 12 years in less health than in other places, and people die three years earlier. These are pretty hard figures. If they would have been able to report the exact causes, Members of Parliament would have responded more, including the Minister. (..) Nevertheless, the report only identified the statistical correlation with those neighbourhoods*. (Housing official)

The housing officials point out the limitations of governmental interventions:

> *We cannot tell the Minister that 50% is caused by eating unhealthy foods, and 50% comes from the living environment. All one could say then is to create more green, more sporting facilities, but we are already working on that. Moreover, the implementation is in the hands of municipalities.'* (Housing official)

He observes some cultural differences between both Ministries and policy sectors: the Housing sector is traditonally oriented at the production of tangible houses, 'counting bricks', and the financing issues. He perceives the health sector as a 'soft sector', less countable, less tangible and more diffuse. At the end of the HIA, however, they do consider physical activity a relevant aspect of housing policy:

> *'It is very important to know about the population and what can be done to improve the situation. From one study we learned that children are not physically active enough.It may be caused by watching tv, but the neighbourhoods are not safe for children to play outside anymore. These are very important indications for developing neighbourhoods to provide opportunities and challenges in play grounds, and also for social policy to create services that pull children out of their homes.'*(Housing official)

Another conflict of frames about the role of health in policy occurs during the HIA. Among the research consultants and members of the advisory committee there are debates about the extent to which social safety, physical activity and traffic safety may reinforce or obstruct each other, and about social inequalities in relation to freedom of choice. Some argue that measures to improve the freedom of choice of citizens in housing increase the inequalities. They argue that citizens at the low end do not experience any freedom of choice because they involuntarily live in rented houses, are involuntarily unemployed and involuntarily keep their children at home because they do not have money to pay for sports or other activities. Others argue that the HIA should concern itself with idealistic aims but focus on more manageable aspects of housing policy.

About the interrelations between social safety, physical activity and traffic safety they conclude that some of the conclusions are very difficult to relate and weigh to each other. For instance, dilution of the built environment may create opportunities for children to play outside and be physical active, while at the same time it may cause higher risks of traffic accidents. More generally, the housing officials wonder whether the quality of housing and environment should be prioritised in policy or the supply of affordable homes to socially deprived groups? These questions are generated by the HIA, yet, not answered or solved.

5.3.2 HIA frames

The instrument of HIA is also contested. First of all the housing officials clarify how the HIA is looked upon by the higher officials and the Minister:

> *'From a political perspective the HIA is not a priority for the Minister nor the top officials. They think it is fine for the Ministry of Health to conduct such as assessment, but they focus on whether the HIA will not become harmful to the progress of the policy process.'* (Housing official)

The housing officials do not think the HIA is a very appropriate instrument to urge housing actors for action. The report, they argue, will end up in a desk drawer, and workshops and conferences will be more effective to exchnage and disseminate these ideas. It would be much better if the housing implementation actors would integrate health in their activities themselves. They consider the HIA too diffuse, it remains unclear who should do what.

An important stakeholder of the HIA report, who is involved in expert meetings, also considers some elements in the HIA problematic. It is an environmental health specialist from the Community Health Service Rotterdam, who is very experienced in communicating and cooperating with municipal departments of urban renewal and spatial planning. She indicates that the HIA should have involved more stakeholders:

> *'the HIA trajectory has taken so long that the policy was already approved. I don't think it had any effects locally. I do think that it is supported from the top down, the attention for the softer aspects of health. I feel supported, but the people I work with on very specific projects are very different from those writing a policy paper at the Ministry of Housing.'*

Also, the idea of handing over a HIA to a department in another policy field, according to her, is a naive way of seeking interaction. She points at an alternative marketing approach oriented at the private project developers who actually build:

> *'If, at a certan point of time, it becomes clear for the market that there is demand for allergene-free houses, then they will start to build them, just like the highly accessable houses for the elderly. So it is up to us to sell health, to show that there are benefits and there is demand, to use health as a selling point.'*

Even within the public health sector there is controversy about the HIA as an instrument in general. The Ministry of Health has interpreted the instrument of HIA in general as a risk to internal requirements, because it would negatively challenge political accountability, efficient decision-making, interdepartmental relations, and internal policy management if other departments respond to HIA by requesting their own impact assessment on health (care) policy. The embargo is the most prominent manifestation of the Ministry's uncertainty in dealing with the HIA, along with ranking responsibility for the portfolio of 'integral health policy' at the lowest end of the Ministry hierarchy, and protracted job vacancies within the portfolio.

Concluding, the presented frames on health in housing policy, and on the HIA, indicate very different institutional backgrounds of the people involved. Just like in the previous chapter, the policymakers involved initially look at the HIA from a strategic point of view to preserve the order and stability in the policy process. The link between fact and values becomes clear from the debate about the policy measures aimed at freedom of choice in housing. Whether the 'fact' that deprived citizens have less freedom of choice is considered relevant differs among the participants. The long process of interactions towards support to initiate the Health Impact Review has fixed its scope strictly to the Ministries of Housing and Health, disregarding important stakeholders and implementation actors. The Ministry of Health requires a span of control over the HIA that obstructs the public health sector to speak with one voice, as we will see in the next section.

5.4 Reframing the health issue

How did the actors involved succeed in solving the controversy over initiating the HIA? In this section the role of the process design for HIA is analysed in creating support and other conditions for the HIA.

5.4.1 Frame challenges and responses

There are specific moments in the interaction process between the HIA and the Housing Paper process that reveal which arguments became decisive for the actions and reactions of the actors involved. The initial call for cooperation on a HIA is described, followed by the positions taken on citizen participation in the HIA, identifying the right audience for step three, coordinating the products of the four research consultants, the internal frictions on HIA within the Ministry of Health, and the continued exploration of health in the Housing Ministry.

Argumentative challenge to cooperate on the HIA

The first challenge is the request to the Ministry of Housing to cooperate on the HIA. The National School of Public Health acts as an entrepreneur to advise the Ministry of Health to perform an HIA of the Housing Policy Paper. The Ministry of Health approves and contacts the Ministry of Housing. The screening of the 'Housing Explorations 2030' report (step 1) and the subsequent discussion meeting (step 2), focus on the 'potential risks to which a HIA might be feasible (given the availability of knowledge) and desirable (given the political and administrative context)'. The authors conclude that there is political as well as scientific support to develop a knowledge system concerning the health impacts of housing. They develop a matrix of different lifestyles and housing environments on the one hand, and the human lifecycle on the other. According to them, relevant health aspects are the quality of housing and housing environment, vulnerable groups, home care, and social well-being (Deelstra et al, 1999). The formal response of the Housing Ministry to this report is unknown.

Citizen participation

The Deelstra report also states that participation of stakeholders is promoting health in itself as people come to grips with their living situation (Deelstra, Kooi, and Kramer, 1999). Participation by itself is said to have health promoting effects as people 'come to grips with their own living situation.' Yet, this source of tacit, experiential knowledge is not admitted to the step 3 HIA. A proposal to include representatives of consumer organisations in the advisory committee is denied by one of the Ministry of Health officials. The dilemma that could be traced back is:

> *'The involvement of consumer organisations (…) fits the theme of freedom of choice in the Housing Policy Paper. On the other hand it implies a very subjective interpretation of the HIA. (…) On physical exercise for example, we know that citizens think they exercise sufficiently, while two thirds of them do not. Problem awareness therefore is not very prominent (…)'* (minutes of the January 2001 meeting).

At the discussion meeting, a broad range of participants from both health and housing sectors establishes the potential for policy implementation through available policy instruments as an additional necessary condition for HIA. The matrix is considered to be premature as the definitions of health, housing environment and other concepts differ among the participants and should be discussed first. One of the participants in the evaluation of the meeting stresses a sensible and flexible use of HIA instead of a strict interpretation of the housing paper text. The housing agenda is already labelled as 'outdated'; implementation partners do not strictly follow the housing policy agenda; and moreover 'we should use a less academic argumentation and sketch broader policy prospects rather than dry facts' (minutes discussion meeting). Although participants notice the absence of consumer groups, they all find this meeting very useful (Netherlands School of Public Health, 1999).

After the meeting the NSPH proposes to use the matrix to describe matrix-crossing themes (like 'lifecycle-durable housing'). Within the Ministry of Health, however, alternative proposals circulate, like applying the HIA to legal implications of the Housing Policy Paper in the existing Building Construction Directive, or the proposed Housing Act.[36] The rejection of the matrix is an obligatory point of passage, paving the path for new proposals before a jointly agreed selection is made.

Identifying the right audience for step three

Six months after the meeting the Ministries of Health and Housing come together monthly to continue the discussion on the need and topics for HIA. The housing officials at first are not very eager to go along with the HIA. They argue that 'these risks for the most part have a social-cultural background. Construction directives cannot regulate such issues. We are done talking.' [37] The health officials counter argue that 'the environment can promote healthy choices in lifestyle. Moreover, the Community Health Services already conduct HIAs of construction projects, which contain social-cultural elements.' The housing officials respond that human behaviour cannot be controlled: 'Residents keep

[36] In Dutch: 'Bouwbesluit' and 'Woonwet' respectively, the latter of which never came into existence
[37] Meeting report March 22, 2000

the ventilation window shut.'[38] They see no role for the housing ministry: physical activity should be part of the national sectoral health policy, and incorporated in local integral neighbourhood development plans. Furthermore, they state that within the housing department, the environment is everyone's concern at the moment: 'we still do not know in which policy document it should be regulated: the Housing Policy Paper, the 5th Policy paper on Spatial Development, or the Environmental Policy papers?' They express the need for a local instrument to reveal health impacts from the direct living surroundings. The health officials, however, strive for a basic document to build integral health policy. The participants agree to write a memo to clarify their own ideas about a useful content of the HIA.

Both memos reveal different frames of reference. The housing memo deals with existing priorities of user safety, noise, indoor air material pollution, and in- and outdoor infectious diseases. The health memo confirms those priorities but adds new ones, such as physical exercise and participation as attention points. The housing memo refers to existing policy instruments and the acceptability of risk, whereas the health memo substantiates its claim with housing quality marks, and the Dutch norm for physical exercise.

At the next meeting, only one housing official from the strategic sub department is present. Despite the different housing memo (which was written by an official from a different housing department than present at this meeting), all participants agree to select the relationship between living environment and promotion of physical activity and safety as obligatory points of passage for the HIA. The aim of the HIA is adjusted from influencing the Housing Policy Paper to influencing local housing implementation. According to one of the Housing strategy officials, the RIVM report 'Health in big cities' is one of the reasons for him to go along with the HIA. It is published before the HIA starts off, and reveals that higher income groups live 3 years longer and 12 years longer in good health than low income groups in deprived neighbourhoods. It has raised awareness about the relationship between deprived neighbourhoods and health. Moreover, the housing official is involved in the project 'Social Axis' of housing policy, which includes emancipation, health, well-being, greying, and participation. Because of the decentralisation of housing policy, the Ministry is particularly interested in implications for (re)construction projects.

The IPO then selects three policy directions in the Housing Policy Paper that at first sight are related to physical activity and safety. In addition, the recent report on socio-

[38] Meeting report July 5, 2000

economic health disparities by the Albeda government committee is the reason to decide that equity is a cross-cutting theme. All the selected themes together are called 'the Terms of Reference' for the HIA.

Coordinating the products of the four research consultants

The four research institutes are selceted for their specific expertise in the field. DSP and RIGO moreover have good relations with the Ministry of Housing. The project leader of the HIA at the IPO indicates that the coordination of the four products is not an easy task despite the format of the health determinants and the housing policy directives. Some of them interpret the assignment slightly differently than the others, resulting in very different methods for the assessment. Because of a lack of data, the RIVM and SWOV perform secundary quantitative analyses on databases of individual transportation. DSP builds on an internal expert meeting and a Group Decision Room with experts. RIGO performs a literature study with a few interviews. The project leader turns to the Advisory Committee to look for back up in demanding more scientific strength for the claims of one report specifically, which is discussed in the meetings without much effect. When the four products are ready, the project leader assembles all the findings and writes a general HIA report that addresses the policy implications. This report then is put under embargo by the Ministry of Health, who sets the approval within the different hierarchical layers of the Ministry as an obligatory point of passage.

Internal friction on HIA within the Ministry of Health

One important challenge takes place in the time of the Housing HIA, concerns an internal debate at the Ministry of Health about the instrument of HIA and the organisation of the IPO in general. In 2000, the National Council of Health Care and Public Health (RVZ) publishes an advisory report 'Healthy without care', which recommends to invest more in intersectoral cooperation and Health Impact Assessment. The Ministry of Health commissions an independent evaluation of the IPO and its HIA activities (see box 5.3). Additionally, the Lower House of Parliament requests all HIA reports for perusal in 2001.

These developments accelerate the internal debate on whether HIA is a suitable instrument to create intersectoral health policy. The top official of the Ministry of Health blocks the cabinet position on the advisory RVZ report, written by a new servant at the low end of the hierarchy. HIA lacks support from the top civil servants: they argue that HIA makes protecting and supporting their minister in Parliament on interdepartmental

issues more difficult. They consider HIA a 'negative, bureaucratic instrument' (Ministry of Health top official) that blocks policy development by postponing decision-making.

Box 5.3 Conclusions of the evaluations of the IPO and HIA practices (Huurman, 2000a, , 2000b)

In the period 1996-2000, HIA applications have developed:
- From a superficial towards a more substantial analysis of health impacts
- From a health policy towards a non-health policy orientation
- From analysing very concrete policy proposals towards considerations in the earlier stages of policy development.

Nevertheless, the first report also highlights the apparent difficulty in most HIA reports to meet the quality standards of substantiated claims, applicability, societal relevance and, most importantly, timing.

A second report highlights the inadequate organisation of intersectoral policy development due to:
- The limited capacity within the Ministry (a part-time task of one policy officer) to initiate and design intersectoral policies, and support the practice of HIA by the IPO.
- The clearing house structure of the IPO, which may hinder an efficient coordination of the HIA in the policy development process, while allowing for the consultation of very different knowledge sources and disseminating the instrument of HIA (a trade off).

The conflicting HIA frames within the Ministry provide an explanation for the six-month embargo on the final report: the ministry has to formally respond and take position on the end report, while at the same time it supports the instrument of HIA no longer. Nevertheless, the Ministry cannot communicate that message to the Ministry of Housing without loosing credibility and reliability. During the embargo, the report has to 'travel' the hierarchy for approval. Finally, the embargo is lifted without clarification of what the Ministry intends to do with the conclusions and recommendations in the HIA. In response to the RVZ advice, the Ministry recommends HIA to be conducted at the municipal level by Community Health Services. After the Housing HIA and the subsequent screening of national urban policy, assessments and screenings at the national level are no longer commissioned. The IPO is removed from the NSPH and integrated in the Centre for Public Health Forecasts at the RIVM.

Continued exploration in the Housing Ministry

When the HIA report is under embargo, the housing strategy official involved organises a follow up meeting and writes another exploratory essay. This official, however, works for the Strategic housing sub-department that encounters difficulty in internally implementing the Housing Policy Paper. The Housing department has recently been re-

organised towards a process organisation, in which the strategic subdepartment prepares long term policy such as the Policy paper; the Policy Development subdepartment writes implementation programmes for the housing sector; and the City and Region subdepartment maintains relations with the policy field during implementation. Other subdepartments disagree with some the Housing paper priorities. The 'conceptual enlightenment' the strategic official experienced with the HIA is therefore not necessarily shared by the other housing subdepartments, restricting follow up activities to agenda setting activities from the strategic subdepartment.

Briefly summarised, the selection of safety and physical activity acts as an obligatory point of passage for the HIA after the officials of the strategic sub department of the Minsitry of Housing become the sole participants in the HIA. This format guides the four research consultants in their section assessments. The Advisory Committee is a source for seeking legitimacy of the findings. When the Ministry of Health sets the embargo as a point of passage, the Ministry of Housing becomes an allie in continuing its explorations of the relevance of health. Which elements in the design and interactions of HIA emerged as helpful boundary-ordering devices in passing those points of passage?

5.4.2 Boundary ordering devices

The most important boundary-ordering device in this case is the three-step interaction design of the HIA. Other additional boundary-ordering devices are observed in the clearing-house role for the IPO, the format of selected health determinants and housing directives, the Advisory Committee, and the embargo (!).

Concerning the interaction rules for HIA in general, the Ministry of Health has made specific arrangements for HIA conducted under her commission in order to safeguard interdepartmental relations. First of all, the Ministry creates capacity through an Intersectoral Policy Office at the Netherlands School of Public Health, which is to act as an entrepreneur for HIA and as a knowledge broker. At the time of its establishment in 1996, the Ministry of Health assigns the IPO with a so-called 'clearing house' role, which means the contracting out to third parties and management of the assessments. In the Housing HIA, the clearing-house role of the IPO is considered helpful and necessary to coordinate the four section reports for the Review. Also, it provides a bridge between the health ambitions and the lack of knowledge of other policy sectors by engaging knowledgeable institutes to perform the actual assessments.

Explicit knowledge on the relationship between health and housing is made available by the health impact screening consultant from the International Institute for the Urban Environment and the four health impact review consultants. They all reflect on the limited knowledge base of this relationship, adopting different kinds of research techniques to say something meaningful about it. The four research consultants do not have structural relations among themselves. The RIVM is the only institute that (indirectly) relates to both policy sectors through the RIVM sub departments of public health and the Environmental Planning Bureau. The latter is not involved in the HIA though. DSP, SWOV and RIGO have specific expertise in different kinds of safety rather than health; DSP and RIGO are familiar with housing policy and are part of the housing policy network. These consultants are commissioned to analyse separate sections of the HIA, for which cooperation, other than producing a similar report outline, is not required. Integration of their problem frames, methods en techniques, and their roles in the HIA and in housing policy therefore remains limited, although the RIVM, SWOV and DSP do establish links between physical activity, traffic safety and social safety. This relative freedom to perform the assessment wihin the framework set enables the progress of the Review.

The Advisory Committee also has a boundary-ordering function. As opposed to the Ministry of Housing, the Ministry of Health chooses not to be part of the Advisory Committee to avoid a conflict of commissioning and advisory roles as well as interests: to remain outside the assessment enables the Ministry to keep policy options (including non-decision making) open.

In addition, the Ministry orders each HIA to be reported to her firstly before any other party, and to have a three-month embargo for the Ministry to develop a formal position and strategy in response to the HIA. This embargo is considered a genuine obstruction to the success of HIA, releasing the report when momentum has gone. The embargo does provide a boundary ordering device to coordinate the mandate of the HIA in formulating policy recommendations. Nevertheless, even though the Ministry is heavily involved in initiating the HIA and negotiating the Terms of Reference,the embargo is built on 'damage control' rather than co-design as a strategy to resolve conflicts between research and policy.

Other boundary-ordering devices that emerge during the process are the preparatory memos by both Ministries, the selection of the safety issue, and the additional criteria for the assessment provided by the selected housing-reated consultants.

The preparatory memos on HIA, prepared by the housing and health officials, acted as a boundary device, clarifying the boundaries between the frames of reference of the housing and health ministries, as well as clarifying the boundaries of the frames of reference between the strategic and implementation sub departments. While the latter produced a memo reffering to existing directives and norms, the strategic officials opened the process to the exploration of how living environments can enhance or hinder social safety and physical activity.

The selection of the 'safety' issue also acted as a boundary object: though it may be defined differently, it is relevant to both housing as well as health policy. In addition, it bridges the gap between the presumed ungovernability of physical activity as an individual behavioural aspect, and the presumed governability of the built environment. The access to knowledge resources is selected as well as discussed before in the selection of research consultants.

The selection of research institutes from different policy domains, together with a relatively flexible use of the Terms of Reference enabled the housing consultants to add criteria to the assessment that had not been discussed before (see table 5.5).

Table 5.5 Assessment criteria used by the four HIA section consultants

Institute	Health determinant	Assessment criteria
RIVM	Physical activity	- Dutch Norm Healthy Physical Activity 1998 - Guidelines outdoor playing space Recreation Foundation
DSP	Social and fire safety	- *Irreversability* of negative impacts - *Preventability* of negative impact
RIGO	Accidents in and around the house	- Residential density - House quality - Risk sensitivity of the handicapped and children - *Public space management* - *Potential for quality improvements and for governance*
SWOV	Traffic safety	- Density built area - No. of physical movements

DSP added the policy relevant criteria of irreversibility and preventability of negative impacts, while RIGO looked at the potential instruments for public space management and housing quality improvements. Those provided the Ministry of Housing with more thoroughly demarcated health impacts.

Briefly summarised, this case suggests how a lot of invisible coordination takes place internally, between the IPO and the Ministry of Health, before and after the HIA is conducted. Much of these interactions have remained invisible even in this account, because there have been no respondents available for interviews within the Ministry of Health. The continuing interactions with the Ministry of Housing allow for the development and specification of its informational needs. The policy officials directly involved by the end of the HIA recognise the relevance of the living environment to physical activity and social safety, even though they reject the instrument of HIA as a messenger.

5.4.3 Standardisation

The extent, to which both Terms of Reference and the international consensus model of HIA is used, creates room for individual specific methods used by the four research consultants. At the same time, the Terms of Reference for the section reports have a standardising effect: they keep the four reports from becoming too distinct from each other. The labour of data collection and interpretation is carefully divided with the IPO taking responsibility for the policy recommendations in the final summary report. This standardising effect, however, has not led to 'fact stabilisation', because the Ministry of Housing continues the explorations rather than acts directly upon recognised facts. The Housing Policy Paper has produced too broad directives to produce very specific health impacts that reveal which measures could be taken to avoid them. Most of the HIA recommendations are followed up by the Ministry of Health, which suggests that, despite all the controversy and conditions set, it does recognise the relevance of the relationship between health and housing.

The HIA process in this case is characterised by identifying a common ground for HIA between the Health and Housing Ministries, and maintaining the position of the IPO and its HIA practices within the Health Ministry. The IPO shows enormous effort and perseverance to keep the HIA on the housing agenda. The interaction design enables the reframing process, as the Housing officials directly involved learn from the interactions that health is relevant to housing policy. Yet, these officials are are insufficiently capable of disseminating this perspective to other relevant parts of the organisation. After the HIA is finished, capacity is developed in the manual 'Healthy and Safe Construction' for municipalities. Nevertheless, support throughout the process remains unstable and limited.

5.5 Summary and reflections

What is the role of the process design of HIA in reframing health in the national Housing Policy Paper 'What people want, where people live'?

The HIA on Housing policy is characterised by a long process of interactions to resolve controversies over the need for HIA. The consequences show how the directly involved housing officials during the three-year process become interested to explore health in housing policy and put it on their agenda. The Housing Policy Paper nevertheless is not adjusted because the Health Impact Review that results from two years of interactions only takes place after the paper is already approved in Parliament. The Ministry of Housing has inserted the topic of health into the action plans of the '56 neighbourhoods project', which is an indication that the Ministry of Housing does recognise the need to pay attention to the health aspects of housing. The HIA project team plays an entrepreneurial role after the HIA report is finished, by executing a number of the HIA recommendations. None of these activities have evoked a clear articulation of commitment and follow up from other parties involved in housing policy. The integration of health in housing policy thus remains limited to agendasetting and further exploration.

The Ministry of Health plays a peculiar role. It emphasises the independence of the HIA, while it is, at the same time, highly involved in interactions before and after the Review. The Ministry even puts an embargo on the end report. The resistance against, or uncertainty about, a HIA of Housing policy causes the process to be interrupted several times by protracted job vacancies, and periods of non-decision-making such as the six-month embargo on the report. It shows how uncertainty rules in the coordination of the HIA between the parties involved.

Despite the conflicting frames over the instrument within the public health sector, the HIA does act as a boundary object to reframe the perceptions of the role of health in housing policy in the directly involved housing officials. To resolve the initial controversy over the need for HIA and the lack of available knowledge, the IPO develops a three-step interaction design for the HIA, which opens opportunities for co-designing the actual assessment. The Ministries of Health and Housing are both highly involved in selecting the Terms of Reference for the format. Boundary-ordering devices in the design of the HIA, which have been helpful in resolving the conflicts, are the clearing-house role for the IPO, the format of selected health determinants and housing directives, the Advisory Committee, and also the embargo. Boundary ordering devices that emerge during the process are the preparatory memos by both Ministries, the selection of the safety issue,

and the additional criteria for the assessment provided by the selected housing-related consultants.

Enabling conditions for the reframing of housing policy are that the housing officials involved are less concerned with specific policy development and implementation than with long-term housing strategies, which makes the consequences of HIA less threatening because there is less need for direct policy action. Nevertheless, this also leads to health impact predictions that are considered vague and uncertain. The dynamics of the housing policy field, with a reorientation on housing demand and the social aspects of the living environment, provide opportunities to influence the housing agenda. This case shows how the Gothenburg framework for HIA here is used as a hybrid structure, enabling a governance approach to jointly develop a framewotk for this specific HIA. It allows for identifying the 'right', amenable officials and building trust through an alternative argumentation for HIA that fits organisational routines (such as the explorative task of the strategy department).

A general conclusion from this case is that the interaction design proves very helpful in creating common grounds for sector-crossing explorations and in defining the Terms of Reference for the actual assessment. Nevertheless, the HIA could be more consequential when a more specific policy object is chosen with concrete policy measures, involving directly all relevant stakeholders at the implementation level rather than remaining 'stuck' at the strategic policy level.

Chapter 6

HIA of the national 'Covenant on Obesity' Action plan

In the previous two cases we have seen that the HIA has not succeeded in solving the controversies to develop a structural cooperation between policy sectors. Because of the technical orientation of the Dordwijk HIA design, the urban planners could do nothing but negotiate about the presentation of the HIA report to prevent any damaging aspects for the Dordwijk Plan. The interaction design of the Housing HIA allowed for a co-design of a jointly agreed technical assessment procedure with housing officials, yet, the abstract policy paper led to uncertain impact predictions, and the ambiguous attitude of the Ministry of Health towards HIA in general led to delay and uncertainty on how to follow up. In this chapter, the HIA is aimed at combining a technical assessment design with an interaction design.

The third case study concerns a HIA we have undertaken together with a researcher from the Erasmus MC Department of Public Health, of the national Covenant on Obesity (2005).[39] The combined approach is aimed at improving the fit between the assessment design and the Covenant needs. The Covenant on Obesity is selected because obesity has received a lot of public attention in the past few years, while, at the same time; it lacks a clear knowledge base of causes and effective interventions. Furthermore, the Covenant is a clear example of an interaction design to bring non-health and health parties together to jointly develop a policy to tackle Obesity. In the Covenant, the Ministry of Health and a number of branch organisations in the private food and sports sector, employers, care insurers and the Ministry of Education[40] intend to prevent and reduce Obesity and obesity by self-regulation through for example advertisement restrictions and food labelling ('signposting').

Despite the initial approval of the combined approach in our HIA proposal, the Ministry of Health declares it will only cooperate on the HIA if the health assessment and policy analysis of the interaction design in the Covenant are separated. As a result, I could not evaluate the consequences of this combination for the integration of obesity in the policies of the Covenant participants. Instead, the analysis in this chapter focuses on two distinct processes: the interaction between the assessment and obesity policymakers

[39] For this reason, this case report is written in the first person.

of the Ministry of Health; and the Covenant Action plan development. The analysis in this case seeks to answer the question: *whatare the roles of the quantitative assessment design and the Covenant design in reframing obesity in the Covenant action plan?*

The analysis is based on the Covenant archive kept by the Ministry of Health; interviews with HIA, Ministry, and Covenant actors and stakeholders; and direct observations of the communications between Covenant partners in formal project group meetings. To begin with, the history of obesity policy and the Covenant on Obesity is described, followed by a reconstruction of the HIA and Covenant processes. The analysis consists of the frame conflicts that occur in the Covenant and the HIA processes, and the reframing process to resolve these conflicts.

6.1 HIA object: Covenant on Obesity

A brief history of obesity agenda setting[41]

While previous scientific calls for governmental action remain without response (the Public Health Forecasts (VTV) of 1993 and 1997, for instance, already mention obesity as a growing problem), societal and international pressure on the national government to take action on Obesity in recent years has increased, resulting in the Covenant on Obesity in 2005.

Internationally, obesity has long been an issue in scientific circles and WHO, for instance within the International Institute for Life Sciences (ILSI), an NGO which promotes the interaction between science, business and society. WHO in 2000 publishes a report of an expert consultation on obesity that took place in 1997 (World Health Organisation, 2000a). The publication is highly contested as it explicates the link between the issue and the food industry. Moreover, around 2000, investment banks (such as JP Morgan) start to discourage investments in food companies that develop a negative reputation in relation to Obesity and obesity, and a limited product range. As such, the need for action also becomes prominent among (the avant-garde of) the food industry, albeit on motives of preventing a negative reputation and sustaining future demand. The idea of a covenant then is proposed at the EU Conference on Obesity in 2002. Under the influence of international developments, the Dutch Council for Health Care and Public Health (RVZ), and the Health Council (ICHW werkgroep ex ante evaluatie instrumenten)

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[40] The Ministry of Education, Culture and Science (OCW)

[41] Italics in this paragraph by MB

publish advisory reports that put Obesity and obesity on the public and political agenda (Gezondheidsraad, 2003; Raad voor de Volksgezondheid en Zorg, 2002).

In May 2004, the World Health Assembly accepts resolution WHA57.17 'Strategy on Diet, physical activity and Health', in which member states are urged to 'develop, implement and evaluate actions recommended in the Strategy, as appropriate to national circumstances and as part of their overall policies and programmes, that promote individual and community health through healthy diet and physical activity and reduce the risks and incidence of noncommunicable diseases'. A trade-restrictive or trade-distorting impact of proposed policies should be avoided, though. The Strategy specifies that 'health ministries have an essential responsibility for *coordinating and facilitating the contributions of other ministries and government agencies*', such as policies on food, agriculture, youth, recreation, sports, education, commerce and industry, finance, transportation, media and communication, social affairs and environmental and urban planning.[42]

In December 2005, the European Commission publishes a Green paper 'Promoting healthy diets and physical activity: a European dimension for the prevention of Obesity, obesity and chronic diseases' to consult member states and their civil societies on the potential contribution of the European Commission to tackle obesity. A European Platform for Action on Diet, Physical Activity and Health is established in March 2005 to '*promote a cross-sectoral dialogue, multi-policy and multi-strategy actions*'. The objective of the Platform is 'to catalyse *voluntary* action across the EU by business, civil society and the public sector by *binding and verifiable commitments* aimed at halting and reversing current obesity trends. Members of the Platform include the key EU-level representatives of the food, retail, catering, and advertising industries, consumer organisations and health NGOs.' The most controversial issue in response to the Green Paper is regulation of advertising and marketing, which in the HIA process is disputed as well (elaborated in paragraph 6.4.1).

An important reason why obesity is such a controversial issue, is because it is perceived as associated with many social ills caused by the economic system, discrimination, a moral decline in an age of comfort etc. (Schlesinger, 2005). Saguy and Riley (2005) in the US found that 'what one might assume to be strictly arguments over scientific method and empirical facts are actually heated struggles over framing and morality'. As a result, the discourse develops in a symbolic rather than instrumental way:

[42] Since 2005, the 53 member states of the WHO Europe work on a 'Charter on counteracting obesity', which is to be signed at the EU Ministerial Conference in Istanbul, November 2006.

increasing controversy rather than providing solutions. According to Kersh and Morone (2005), obesity is framed in society along the lines of the allocation of responsibilities within political institutions. They encounter a legislative stalemate, which is also observed in other sensitive public health issues. The conservatives in the US, they argue, have effectively blocked regulation, causing the liberals to turn to the judicial to solve inequalities in health. The Netherlands is also a prominent country in which the government, or more specifically Parliament, is reluctant to regulate tobacco, alcohol, drugs and food in relation to health problems. One effect of the whole debate, however, is that it 'educates the public' (Kersh and Morone, 2005).

Saguy and Riley additionally analyse the public debate and find that 'fat acceptance activists', although they are loosely organised with few allies, have been quite influential in the US in rejecting the medical labels of obesity as a 'disease' and an 'epidemic'. They explain that from the absence of any prospect on (medical) solutions to the condition. Instead, they successfully promote notions of 'health at every size'. The social impact of framing obesity is therefore a significant feature of the discourse (Saguy and Riley, 2005). A striking observation of the US public by Oliver and Lee (2005) seems to be applicable to the Dutch public as well: 'the current public tendency to place blame on individuals for their obesity is strikingly at odds with discussions in the public health community, where obesity is attributed to mostly environmental and genetic factors.' (Oliver and Lee, 2005). Yet, as more research filters down to the public, they are becoming more concerned.

Obesity policy in the Netherlands

In the Netherlands, scientific calls for governmental action on obesity have been articulated publicly since the 1990s. After two influential Dutch Advisory Council reports in 2002/2003, the government sets itself the task of halting the increase in the number of obese adults and to reverse the trend among children (Policy paper *Living longer in good health,* 2003). The government promotes sports and healthy physical activity, with the interim target of 50% of the population getting sufficient weekly physical activity and less than 8% getting no physical activity at all (Policy paper *Sport, Physical Activity and Health* (2001).

In May 2003 a first discussion meeting is organised between the Ministry and 25 societal and business organisations, out of the existing Regular Meeting on the Food and Drugs Act. Several respondents state that in subsequent meetings, fixed frames and

mutual distrust between different participants impede the process towards consensus and cooperative action to tackle the issue. From 2003 onwards, the media call upon the food industry to account for obesity. It urges the Dutch Federation of Food and Drink Industries to develop and present to the Minister of Health a policy document 'Tackling Obesity', which includes a Code of Conduct on advertising. Its point of departure is consumer responsibility for lifestyle and consumption patterns. That is unacceptable to the Netherlands Nutrition Centre (a knowledge institute) and the Dutch Consumers Association, who state that huge industrial investments in marketing promote overconsumption, thus influencing consumer choices to a large extent. The debate at that point does not take account of (a lack of) physical activity in obesity.

The conflict over responsibilities is one of the reasons for Unilever, one of the leading businesses in the participating Dutch Federation of Food and Drink Industries, to make a public call for action. On April 20 2004, the Unilever chair of the Board Burgmans in the Dutch newspaper NRC Handelsblad calls for the governmental coordination of societal initiatives to promote healthy lifestyles, including those of the food industry, insurers, politics and media. The Minister is interested and during a visit of the Minister to a Unilever factory, the research Institute director presents a proposal for a Covenant on Obesity.

The Covenant as a policy instrument

A covenant is a communicative governance instrument, in which the government commits non-governmental actors to a shared goal by mutual investment of resources on a voluntary basis. A covenant is often perceived as an alternative to legislation or other hierarchical forms of governance, yet, it may also precede them in order to build support first and design appropriate regulations. There is no judicial obligation to live up to a covenant. Transparency, however, may prevent participants from withdrawal, as it will harm their public credibility and trustworthiness. A successful Covenant depends on internal commitment and capacity, and external mobilisation of the public and political debate (Burgh, 1992; Peppel, 1992; Pröpper and Herwijer, 1992).

The Covenant on Obesity

Ten parties, including the Ministry of Health (see table 6.1), on January 27, 2005 sign the Dutch 'Covenant on Obesity - A balance between nutrition and physical activity' (Ministry of Public Health, Welfare and Sports, 2005b). Their motivations to participate are

described in section 6.3, and the selection of the participants is described in section 6.4.1.

Box 6.1 Covenant partners January 2005 (Dutch abbr.)

1.	Ministry of Public Health, Welfare, and Sports (VWS)
2.	Ministry of Education, Culture and Science (OCW)
3.	Care Insurers Netherlands (ZN)
4.	Dutch Federation of Food and Drink Industries (FNLI)
5.	Dutch Federation of Catering Organisations (Veneca)
6.	Royal Dutch Association of hotels, restaurants and cafes (KHN)
7.	Central Office Food Retail (CBL)
8.	Netherlands Olympic Committee * Netherlands Sport Confederation (NOC-NSF)
9.	Confederation of Netherlands Industry and Employers (VNO-NCW)
10.	Royal Association of regional and local business (MKB Nederland)

The parties consider that the problem of obesity is growing at an alarming rate; is 'primarily a matter for the individual, but also a social problem'. Because of the social nature of the problem and lacking knowledge about effective strategies, however, efforts 'will be based on common sense and will encompass a wide range of different fields, involving a host of social actors'. The Minister of Health has taken the first step by drawing up this covenant, which emphasises a strategy to encourage people to choose a healthy diet and lifestyle by offering healthy options and making those convenient and attractive. It also seeks synergy in the partnership between the parties to the covenant, with a view to making activities mutually reinforcing.

To facilitate the implementation of the Covenant, the Ministry sets up a project office (Covenant Office) in the first half of 2005. In August 2005, the Minister of Health appoints Paul Rosenmöller, a well-known former politician with a high profile, to promote and act as covenant ambassador and chair of the Steering group (directors and administrators from the Covenant parties). In October 2005, the partners sign a joint Action Plan 'Energy in Balance' 2005-2010 (Ministry of Public Health, Welfare and Sports, 2005a), in which different activities (proposed or already in practice by the covenant partners) are listed in categorisations of behavioural settings (home, school, work, recreation), a life course approach and specific target groups. The Action Plan is to promote action among individuals and organisations; to disseminate knowledge; and 'make the healthy choice the easy choice' for individuals. It lists several specific initiatives by different covenant partners as examples.

6.2 HIA method and application

We initiate this HIA in order to fulfil agreements in our research plan to research-granting institute ZonMw. The HIA proposal has multiple purposes. First of all, it serves academic purposes to evaluate whether the combined epidemiological and policy approach to HIA makes it more effective in enhancing policy change. The Covenant on Obesity provides a useful case to this approach, because societal, media and political attention to obesity is growing, including a critique on the emphasis on individual responsibility in recent health policy, which provides the HIA with social relevance. Moreover, the obesity issue enables a quantitative analysis of the proximal determinants to test the model developed. Finally, the Covenant is the first manifestation of a cross-sectoral governance arrangement in public health policy, which provides an interesting case to observe how the Covenant comes about and functions as an instrument to integrate health in public and private commercial or organisational policies. Therefore, a second, more practical, purpose of the HIA is to improve the feasibility, usability and usefulness of the Covenant policy measures to tackle obesity and promote healthier lifestyles.

6.2.1 HIA design

After a period of discussing proposals with different officials within the Ministry, the assessment is separated from the policy analysis according to the Ministry's requests (elaborated in paragraph 6.4.1). The Ministry as well as the Covenant partners then approve of the policy analysis proposal, allowing the author to observe project group meetings from May - December 2005. The health assessment is carried out on different potential obesity measures proposed by the Ministry from May 2005 - October 2006. The assessor selects three topics for scrutiny in HIA (see paragraph 6.6.1 for a description of the selection process): (1) Restrictions on children's exposure to food and drink advertising (relevant because of the self-regulatory document of the food and drink industry branch FNLI (Nederlandse Voedingsmiddelen Industrie (VAI), 2004), (2) The provision of greens and fruit at school (relevant to a pilot project in Dutch called 'Schoolgruiten'), (3) A scenario study on the consumption of soft drinks, snacks, sweets and physical activity. He uses data from several expert and scientific sources, such as the RIVM, CBS, TNO, KCO and international publications. In box 6.2, parts of the methodological account in the HIA report are cited to describe the quantitative model developed for this HIA especially.

Box 6.2 Quantitative research design HIA (Veerman, 2006)

In the analysis two populations are compared: an unexposed population reflecting the actual one, and a 'counterfactual' one that is exposed to an intervention under similar conditions. Interventions are aimed at influencing mean weight by calorie intake and/or physical activity. Both are expressed in daily kcal or kJ. The impacts of interventions are converted into obesity percentages in a specially developed mathematical model.

Model
Following the British epidemiologist Geoffrey Rose (Rose, 1991), we base the model on the distribution of the body mass index (BMI: weight divided by square length) over the Dutch population by age and sex. We have 'fitted' 2002-2004 prevalence estimates by TNO* on a mathematical distribution. Although the prevalence of extreme obesity is underestimated, a lognormal distribution reflects BMI reality at best (Flegal and Troiano, 2000). The underestimation is no problem when the model is applied to children. Children's BMI cut offs for obesity differ by sex and age and from adult ones. Figure 2 illustrates the distribution for 11-year-old girls.

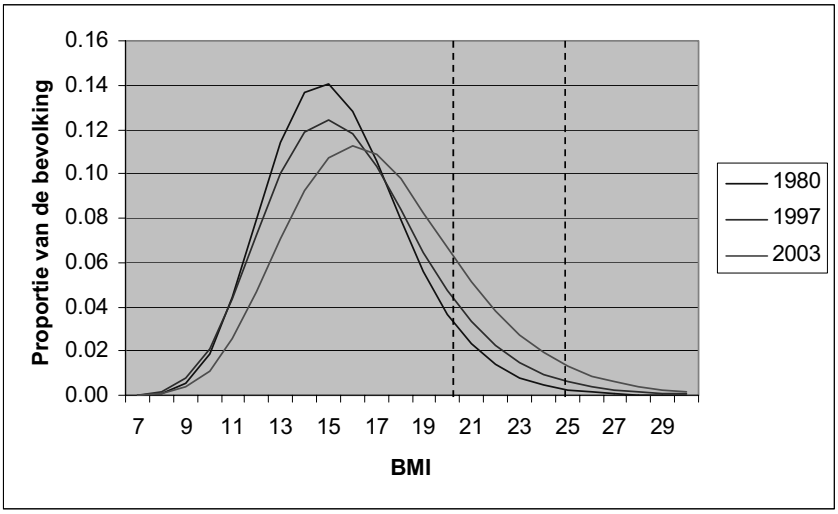

Figure 2: modelled distribution of 11-year-old girls' body mass index (BMI) in 1980, 1997 and 2003. While they all come together in BMI 8, the 2003 and 1997 curves are extended to the right relative to the 1980 one. The vertical dotted lines are cut offs for obesity. The graph shows that when the mean BMI increases at a similar rate, the percentage of obese girls increases at a faster rate as the mean BMI is higher. Small changes in mean weight influence prevalence more than 20 years ago.

Estimates of the effects of interventions on mean weight or BMI are often available. Differentiating on mean BMI in the model thus predicts changes in prevalence. If estimates of intervention effects on weight or mean BMI are not available, effects on total daily consumption are converted to effects on weight. Obese people have to consume more energy to not loose weight, as maintaining and carrying extra weight costs energy. The model is based on the assumption of an energy balance, and converts the effects of energy interventions (in daily kcal) to weight that can be maintained or lost. The current situation then is compared to a hypothetical balance situation. The effect of an intervention thus is translated into a theoretical weight change, and similarly, risk exposure is converted to extra weight gained or lost.

** TNO: Netherlands Organisation for Applied Natural Sciences*

6.2.2 Content of the report

The report extensively elaborates on the methods as described in the previous section. The HIA output is summarised in Table 6.1A/B.

Table 6.1A/B Summary of estimates of weight and/or BMI impacts in HIA report

6.1A	(1) Restrictions on children's exposure to food & drink advertising	(2) Greens and fruit provision at school
Literature	Causal relation between TV advertising and weight gain among children is plausible.	Consumption protects against Obesity. No dose-effect relations available.
Quantitative modelling	TV advertising adds 0,1 kilo to children's' weight (aged 6-12). If exposure is reduced to zero, Obesity could decrease from 17% to 16,5%.	Provision at school promotes consumption with 20 gr. a day. Effect on Obesity not quantifiable, yet plausible.
Delphi (24% response)	Experts estimate a reduction of exposure to result in 1.4% reduction of total calorie intake	-

6.1B	(3) Consumption scenarios of soft drinks, snacks, sweets and physical activity	Estimated effect on weight or prevalence of Obesity and obesity
Scenario study	1. Replace soft drink by glass of water	-2% among children aged 6-12 -1,5% among children aged 12-16
	2. Decrease consumption of sweets and sugars by 25%	-1,5%
	3. Decrease refreshment and snacks by 5%	-1,1% among children aged 6-12 -1,2% among children aged 12-16
	4. Increase daily walking by 10 minutes	-0,1 kg among children ages 6-12 -0,2 kg among children aged 12-16 Obesity decreases 0,3% obesity decreases by 0,2%
	To reduce prevalence of Obesity and obesity to the 1980 level, considerable changes in mean energy consumption and/or physical exercise are necessary.	

Because the quantitative model produces estimates that are deemed insufficiently reliable, the assessor decides to also conduct a Delphi study among both internationally recognized authors, in a first round, and the Covenant partners, in a second round. These methods of analysis are elaborated in paragraph 6.4.1.

6.2.3 A reconstruction of the Covenant and HIA processes

The idea of doing a HIA on the Covenant on Obesity is proposed by an obesity expert professor of Nutrition and Health at Free University of Amsterdam. From the first proposal for HIA to the Ministry of Health (January 2005) to the approval of the HIA report, the HIA

process takes 7 meetings (18 months) between researchers from Erasmus MC and the Ministry, to discuss proposals, adjustments and (preliminary) results (see table 6.2).

Table 6.2 Timing of HIA to the development of the Covenant Obesity and Action plan (Covenant observation period = *grey)*

Obesity policy & Covenant	*Date*	HIA
Initial discussion meeting Ministry and 25 societal and business organizations	*May 2003*	
Cabinet Prevention White paper 'Living longer in good health': Obesity priority	*Nov 2003*	
Unilever visit Minister of Health: covenant proposal	*Spring 2004*	
First pre-covenant meeting	*Aug 2004*	
Covenant signed and published	*Jan 2005*	Joint HIA proposal MGZ and BMG, small meeting with Ministry of Health
Minister of Health in Parliament threatens food industry to take action	*March 2005*	Broad meeting joint HIA proposal with Ministry of Health: decision to uncouple assessment from policy analysis
	May-Dec 2005	Observations project group meetings and policy interviews
	May05-Oct 06	Impact assessment of different measures
	July 2005	Meeting with Ministry of Health: selection of policy interventions to assess
Expert meeting Covenant draft Action plan	*Sept 2005*	Meeting with Ministry of Health: selection of interventions to assess on effectiveness
Presentation Covenant Action plan 'Energy in balance'	*Oct 27, 2005*	
Presentation Energy label	*Feb 2006*	Discussion meeting with Ministry of Health partial assessment
Accession 3 new Covenant partners	*May 2006*	Draft assessment report to Ministry of Health
	August 2006	Discussion meeting with Ministry of Health draft assessment
	Sep-Oct 2006	HIA ends with results from Delphi

6.2.4 Events following the HIA

The events that occur after the HIA is completed do not have any relationship with the HIA, because the Ministry of Health does not communicate the HIA results to the Covenant partners. Therefore, they are excluded from this chapter.

6.3 Frames of obesity in the Covenant and the HIA

6.3.1 Frames of obesity and the Covenant as a potential solution

In general public health policy, the Minister of Health Hoogervorst, member of the Liberal Democratic Party, is committed to the market-oriented governance mode with a preference towards self-regulation. That preference is clearly recognisable in the Prevention paper 'Living longer in good health' (2003), in which obesity is prioritised. The obesity policy frame is described by one of the higher Ministry officials involved in the Covenant process. He argues that the state cannot govern society against the tide of societal trends, i.e. people will not trade comfort provided by technology 'just' for the sake of physical activity. According to him, the state does play a modest part in attitudinal change. That complex process consists of pressure groups, publicity, knowledge creep from science to popular media, and governmental action, which all together in the long run induce societal change. That has for example been achieved in anti-smoking and environmental issues. The Covenant is therefore based on common sense precautionary action and a mixture of incentives towards diverse societal groups.

Nevertheless, within the Ministry as well as within the public health sector, different policy frames exist. Sub departments concerned with for instance food safety have developed an 'occupational distrust' towards commercial activities such as sports sponsoring by fast food companies. Within the public health sector, including the Ministry, there is a strong sense of the importance of the environment in lifestyles and behavioural patterns. The national Health Promotion institutes (Nutrition Centre, NISB, NIGZ), which are executive and knowledge organisations under coordination of the Ministry, disagree with the individual responsibility principle underlying the Covenant. The Nutrition Centre respondent states that promoting physical exercise will have only limited effects as society is organised around comfort; and that the population is to be protected against the detrimental effects of food marketing and omnipresent food outlets. According to her, examples of self-regulation, such as the voluntary 'nutritional value or allergens declaration' that has taken decades to be implemented by a only minor part of the food companies, show that legal regulation in the end remains indispensable.

Parallel to the Covenant process, the NIGZ independently presents its '15 norms for growing up with a healthy weight'. After deliberations, the 15 norms are added to the Ministries' proposed actions within the Covenant Action plan, yet not without struggle.

NIGZ now is to develop local practices, in which the Covenant Action plan is linked to local settings.

The non-health Covenant partners mainly frame the obesity issue on its relevance to their own core business. Obesity is increasingly considered a strategic issue in the food business, for example. Some of the partners in the Covenant want to maintain or promote their reputation. Multinational companies prepare to address the 'public court of public opinion', in which public blaming, shaming and suing threatens the reputations, as well as consumer demand, of fast food companies in the United States. They invest in self-regulation and collective action to avoid legal regulation, control and bureaucratisation. They want to preserve their 'societal licence to operate'. Moreover, from a business ecology perspective, their market position can only be maintained by continuous adaptation to societal developments and demand, as well as creditworthiness and willingness to invest.

Others, such as the sports federation, see the Covenant as an opportunity to extend their network and create demand; or do not see the Covenant as an opportunity, yet, participate to maintain relations because the Ministry has asked them to. To the Covenant partners, the issue is about much more than a health problem, and the stakes are high and very different among the partners involved. That requires a meticulous process, in which content follows process arrangements (a common goal-seeking rather than purposive process).

Outside the Covenant, there are societal parties that critically follow the progress made in the Covenant process. Symbolic language is used to create a pro- or contra position on the Covenant. For instance, the Consumers Association publicly labels the Covenant a 'pathetic lot', and the Action plan a 'soother' for Parliament. The Ministry and the Covenant Office in their turn consider the Consumers Association to be an 'outboard motor' to enhance progression within the Covenant. The Association maintains close relations with members of Parliament, and exert a lobby strategy to increase their attention for the Covenant's undertakings with the aim to build pressure on the Minister to come up with an acceptable action and implementation plan.

6.3.2 HIA frames

When we initiated the HIA, we were hardly aware of the conflicting health and policy frames within the public health sector. We were more focused on conflicting policy

frames between the health and non-health Covenant partners, and inclined to assume that the HIA can contribute to frame convergence.

A higher Ministry official sketches the boundaries of what HIA may politically accomplish. Ministry officials first and foremost provide their Minister with support on high profile, yet less rational issues, for which the Minister is held accountable by Parliament. In order to get the Minister's support for policy investment in lower profile issues, officials must gain the Minister's trust in those, often more technical, issues that are difficult to communicate in Parliament. The Ministry increasingly regards the HIA as a potential threat to the Covenant's progress, because the quantitative model produces uncertain outcomes which can easily be 'misused' by Covenant partners or societal parties to obstruct the development and dissemination of the Covenant Action Plan. The attention for policy analysis of the Covenant process, as part of the HIA, will not rule out these risks and the Ministry therefore requires its separation from the technical assessment. During the HIA, the health officials consider the HIA to be a modelling experiment rather than a policy advice to the Covenant, because the predictions are considered too uncertain and policy recommendations to be hypothetical rather than potential.

Briefly summarised, we observe a societal controversy over the Covenant as a potential solution to the obesity problem, controversy within the Covenant process over the extent of commitment and investment in self-regulation, and controversy over the HIA that is perceived to become harmful to the Covenant process by producing uncertain and controversial 'facts'.

6.4 Reframing the obesity issue

How are these controversies addressed? First, some of the Covenant interactions and strategies are described. Then the role of the HIA is elaborated. This order is followed in the analysis of the frame challenges and responses, the boundary-ordering devices and the level of standardisation.

6.4.1 Frame challenges and responses

One moment where the controversies are confronted and addressed in the Covenant process, is the selection and stage setting of the Covenant process. During this process, a

number of boundary-ordering devices emerge to strengthen the chosen approach, which are described in section 6.4.2. The HIA process has several moments where it is confronted with new challenges: negotiating approval and commitment for the HIA, the changing perception of HIA method and output, separation of HIA and Covenant stakeholder analysis, selecting potential obesity measures, requesting the participation of Covenant partners in the Delphi method, and addressing the controversial output of the HIA.

Selection and stage setting in the Covenant process

The Minister of Health does not accept the initially proposed huge list of participants for the Covenant. He wants a covenant with the food industry. Ministry officials argue that such a shortlist may be unacceptable to the public and to Parliament, and propose a short list and stage setting of the Covenant, in which new partners may join the Covenant in a later stage. The minister agrees to this selection of 'first-order participants' and the accession timetable for new partners.

In this new selection other proposed policy departments (Economic Affairs; Social Affairs; Transport and Waterworks; Agriculture, Nature & Food quality) are excluded except the Ministry of Education, Culture & Science (OCW). The Minister argues that interdepartmental cooperation processes take a long time because every policy official has to agree into detail. Such sector-crossing initiatives must be communicated at a high official level within Ministries to obtain support to pass the consultation level and actually produce specific policies and activities. In order to achieve quick and visible results, the Minister includes the Ministry of Education, hoping the other departments will follow later on.

One of the means to achieve cooperation from non-health sectors and societal actors is the use on non-health argumentation to substantiate the need for collective action to prevent obesity. The Ministry of Health, on the basis of the WHO and Dutch advisory council reports, argues that obesity in the future will lead to a heavy chronic burden of disease, linked to welfare and comfort (a lack of physical activity). The Ministry continues to stress a rise of health care as well as social cost (social welfare, lack of labour); the labouring population will decrease even more. Combined with increased health care needs of the greying population, too large a part of the labouring population may be needed to provide (World Health Organisation) care, unbalancing the labour market.

Negotiating approval and commitment for the HIA

A week before the Covenant is signed on January 27, 2005, we submit our first proposal with the Ministry sub department of Nutrition, Health Promotion and Prevention, to do a HIA of the Covenant Obesity action plan. It consists of a combination of a quantitative assessment of health impacts of proposed measures, and a policy analysis of the Covenant development process. Additionally, we propose an evaluation meeting with the partners to discuss the perceived value added of the HIA to the Covenant process. We frame the objective of the HIA as 'to (scientifically) substantiate the course of policy action of the Covenant, and propose suggestions to improve the legitimacy and effectiveness of the Covenant in tackling obesity.'

During the first meeting, the Ministry officials initially approve of the proposal, asking for an assessment of health impacts from the specific activities of the Covenant Action Plan, and a consultation of the Covenant partners of the preliminary HIA results. Their cooperation is considered indispensable for the assessment. The Ministry would like to have the Covenant put into perspective of e.g. the national Urban policy ('Grotestedenbeleid'). Furthermore, the Ministry asks for a stakeholder analysis to analyse which implementation measures are necessary for the Covenant action plan to be developed. The officials have to consult within the Ministry and with collaborative knowledge centres the RIVM and the Knowledge Centre Obesity before formally approving, and promising collaboration with our HIA proposal. To the Ministry 'the HIA is okay as long as it does not stand in the Ministry's way'(17-01-2005), meaning the HIA is not to interrupt or impede the Covenant process in any way. This is the first obligatory point of passage for the HIA, which is elaborated in several requirements for the HIA design during the process.

The changing perception of HIA method and output

At an early meeting, the Ministry of Health project leader of obesity policy (who has a PhD in Epidemiology herself) expresses the presentation of the method to have made a solid impression. Nevertheless, during the second meeting, other Ministry officials question 'whether it is administratively wise to perform the assessment of Covenant proposals by quantitative modelling, because such models, instead of evidence, produce extrapolations that provide mock certainty.' As such, the HIA could potentially cause damage to the Covenant process: 'If a proposed measure would turn out to have little health impact, the Ministry would not necessarily omit it from the Action plan, especially if the particular measure commits partners to the Covenant. On the other hand, it might

be used by the Covenant partners as an argument not to invest in it.' (March 8, 2005). Therefore, the officials state that they do not always want such information to be known. Additionally, the proposed Delphi method causes concern with the Ministry, because the Covenant partners are more likely to question the results than from quantitative modelling. The Ministry asks for a strict procedure for the selection of Delphi respondents.

Moreover, presenting evidence at this stage of the Covenant process may harm the delicate relations built. The process at the time is characterised by partners questioning their positions and accountability rather than creating content for the Covenant. As a result, the Ministry chooses to communicate opportunities instead of constraints (such as threatening with legal regulation), and presenting evidence might be seen as a threat.

Separation of HIA and Covenant stakeholder analysis

Despite the initial (verbal) approval of the combined approach in HIA, it takes three months and an adjustment of the initial proposal before the HIA is formally approved of. Still the Ministry wants the assessment done for the reasons mentioned above, and to inform Parliament of the expected effectiveness of Covenant measures. The conditions for this HIA are:

- The health assessment is to be separated from the policy analysis, focusing the assessment on general obesity measures rather than the Covenant. The Ministry is the commissioner of the HIA; the Covenant office is the commissioner of the policy analysis.
- According to the Ministry, the HIA will be used as a 'source of inspiration' for future measures rather than as a judgment of the Covenant plans. Officials express doubts about the strength of the HIA output as quantitative modelling is built upon broad assumptions, and consider the HIA to be an experiment of the robustness and suitability of the method for the policy process.
- The Ministry will openly communicate the HIA to the Covenant partners, and the researchers are allowed to present the results to them by the end of the first Covenant (email 27-April 2005).

Under these conditions, that are presented as obligatory points of passage, the initial expectations of the HIA are no longer met:

> *'They (the Ministry, MB) did not want to introduce the HIA in the Covenant process without knowing the output. Then we decided to perform the HIA for the Ministry (instead of the Covenant partners, MB). That, of course, was not what we initially indented. From a purely scientific perspective, one would say, (…) you have to*

> *put any idea about desirable outputs aside. You have to report all results, including sensitivity specification. Making a choice is up to the government, not the scientists. Now it contains a filter: does the Ministry find it useful to policy (of the Covenant partners, MB)?'* (assessor)

Selecting potential obesity measures

During subsequent meetings in July and September, potential obesity measures are selected, some of which are weakly linked to the Covenant. The Ministry seeks to enhance the Covenant partners' efforts and investments; and prefers results to be presented in a positive way.

Unlike its earlier suggestion to assess the labelling of food products with a quality mark, the Ministry introduces a new obligatory point of passage in that signposting is not to be assessed in the HIA. Signposting is a highly sensitive measure, which is negotiated and developed with the food industry and retail at that moment. As opposed to the suggestion of the assessor, based on a literature study, to make signposting obligatory, the Ministry wants to promote self-regulation towards a universal system (the same label used on different products in different retail selling points). Finally, the Ministry requests an analysis of the following topics: (1) restrictions on advertising towards children; (2) the provision of greens and fruit at school; and (3) a scenario study on the consumption of soft drinks, snacks, sweets and physical activity.

In order to have the Ministry approve of the HIA, the researchers adjust their proposals according to the Ministry's wishes. Yet, the initial objective of the HIA (to (scientifically) substantiate the course of policy action of the Covenant, and propose suggestions to improve the legitimacy and effectiveness of the Covenant in tackling obesity) no longer is attainable. The Ministry formulates yet another obligatory point of passage in that the HIA is to inform the Ministry internally in their course of action, and the HIA is not or only limitedly communicated to the partners. Later on, the Ministry decides 'it is not expedient to present the HIA results in the project group of the Covenant, because they do not challenge the partners to take action more urgently, and the Covenant is aimed at developing joint activities'. The Ministry concludes that the scientific literature insufficiently substantiates the output of the HIA, and therefore questions the suitability of the HIA in this process. Afterwards they also conclude that the timing of the HIA is too early, and as a monitoring instrument it could have more meaning than as an assessment tool.

Requesting the Covenant partners' participation in a Delphi study

The reason for the assessor to adopt the Delphi method in addition to the quantitative modelling technique is the absence of reliable evidence. Although a recent scientific publication (Swinburn et al, 2006) refutes the preliminary estimations in the HIA, the assessor also questions the estimates in that article. The best available method to assess these estimates, according to him, is a Delphi:

> *'The idea is that estimates from such a panel are more informative than no estimate. (...) If we cannot do it as it should be done, then we should to do it as it can be done.'(assessor, Erasmus MC HIA meeting)*

The Delphi method has traditionally been a technique aimed at building an agreement, or consensus about an opinion or view, without necessarily having people meet face to face, such as through surveys, questionnaires, e-mails etc. This technique, if used effectively, can be highly efficient and generate new knowledge. In the HIA, a Delphi study is undertaken to supplement estimates from the literature and from modelling by expert opinion.

The assessor selects participants from the National Institute of Public Health and the Environment (TNO/RIVM), from the Erasmus MC Public Health Department, and international experts who have recently published scientific articles on the subject. He asks them to answer three questions: (1) Can you present your own estimates of impacts of TV food advertising on child consumption and weight, and how sensitive do you think these estimates are? (2) Assuming that nutrition advertising to children is restricted, what percentage of the explanation do you think will be lost? (3) What is the impact of television advertisement as compared to other forms of marketing? He plans the results of the first round to be fed back in a summarised form as input to a second round (iterative feedback).

A second panel of Covenant partners are asked to answer the same questions. This panel can provide information on parameters, which are less known in scientific research. According to the assessor, the Covenant partners can provide inside information, yet, they are not without interests. The strategic connotation of this second panel becomes clear in the aim of this second Delphi:

> *'to feed back to the Covenant partners what estimates we have collected on these questions, versus the results we obtained from scientific experts. The idea is that the partners are involved in the procedure, and our (scientific, MB) perspective is articulated in the legitimacy questions we have on the proposed measures. The scientific perspective covers generally accepted knowledge on a number of parameters. The Covenant partners will develop an understanding of the issue, which could lead to more commitment. In the end, the Delphi Covenant panel has an educational objective.' (assessor, August 22, 2006)*

The assessor considers the proposed measures to be legitimate if they are effective in preventing or reducing obesity. More importantly, the second panel provides the assessor with a means to articulate, on the one hand, the science in assessing obesity measures, and, on the other hand, incorporate 'less scientific' elements in the HIA:

> *'If action is needed, opinions become important, and those are facts at a different level. Opinions as such are often also facts or ideas that need to be taken into account.' (assessor, August 22, 2006)*

Nevertheless, while some international experts respond to the Delphi call, the Covenant partners do not, because they disagree with the underlying assumptions.

Controversial output of the HIA

The Ministry requires the HIA output to be as undisputable as possible to present it to the Covenant. Nevertheless, the HIA cannot live up to this expectation because of a lack of specifically defined policy measures to serve as input to the HIA. The Covenant process for a long time is more focussed on building relations before agreeing on specific measures. Moreover, the systematic collection of scientific data is only starting to take off, and the relationship between, for instance, food advertising and obesity or even health is subject to dispute:

> *'It is also interesting to see that the results of calculating estimates are disappointing: specific policy measures, like the provision of fruit and greens at schools, hardly seems to yield a higher life expectancy.'* (Assessor, August 8, 2006)

Quantification of impact estimates, according to the assessor, has turned out to be difficult. Introducing the HIA output to the Covenant partners could, according the Ministry officials, harm the process rather than urge its progress:

> *'Advertising is a sensitive topic and self-regulation needs to be enhanced. I think some partners would use it (the HIA, MB) to emphasise that negative impacts cannot be proven. I cannot use the HIA to build pressure for action. (…) This HIA was aimed at toying with the idea of quantitative modelling, does it enhance the debate? Now, the output is multi-interpretable. It will not move the Covenant partners to take more action.' (Ministry official, August 8, 2006)*

This is confirmed when the assessor invites the Covenant partners to take part in the Delphi study. The branch organisation of the food and drink industry (FNLI) opposes to the assumption in the HIA that advertising affects obesity. In response to the Delphi invitation, the FNLI questions the research design to identify advertising effects on obesity. The assessor writes an extensive response, which is the last contact with the FNLI. In that

response, he refers to the WFA document that FNLI had enclosed, which does not refute Hastings' conclusions in a review of 'the effects of food promotion to children', that:

> *'This does not amount to proof of an effect, but in our view does provide sufficient evidence that an effect does exist'* (p.3) (Hastings, Stead et al., 2003)

'Proof' and 'evidence' here apparently are not the same. Similarly, the assessor repeatedly formulates conclusions as 'plausible' or 'likely'. According to him, an effect on obesity is 'plausible', when there is proof that advertising influences children's choices, as well as what people buy, and if there are scientific publications that 'support' a weight- increasing effect. If publications and empirical research are not available or contested, theory becomes important: how food promotion and advertising influence what people like or find delicious, what they buy, how that affects their consumption behaviour, and, ultimately, their weight.

According to the Ministry officials, the theory in the HIA insufficiently takes into account how the exposure to TV advertising is only a small part of the exposure to inactivity and snack consumption in front of the TV. They draw conclusions for policy:

> *'Educating parents and children to reduce their children's TV exposure would be much more efficient than legally restrict food advertising, which would take years. Moreover, the industry will find alternative ways to spend their marketing budgets, for instance on the internet. Addressing the industry within the Covenant to enhance self-regulation will be more efficient than legal enforcement'* (August 8, 2006).

Besides scientific arguments for *effective* policy, the Ministry here also introduces feasibility arguments to produce *efficient* policy.

From the description of the challenges and responses, the Covenant emerges as a relatively successful attempt to reconcile the different meanings of obesity and the proposed solutions through a co-design of the Covenant Action Plan. The HIA, on the other hand, is confronted with several obligatory points of passage for the HIA, which are all incorporated in the HIA design. Nevertheless, the final obligatory point of passage is the rejection of the aim to communicate it to the Covenant partners. The only use the HIA is left with, is a scientific elaboration of the quantitative model that is developed.

6.4.2 Boundary ordering devices

A recurring element in the discussions about the method and output, whether with the Ministry of Health or within the Erasmus MC project group, is the relationship between

uncertainty of the estimates and *acceptability* of recommendations. Underlying assumptions, limited data and a observed gap between estimates and recommendations threaten the usability and acceptability of the HIA as a whole. For example, the Ministry of Health questions the advertisement restriction recommendation: based on the literature ('causal relation between TV advertising and weight gain among children is plausible'), the author concludes that advertising towards children should be restricted either by self-regulation or government reinforcement. The Ministry counter argues that the causal variable of weight gain among children is exposure to TV rather than the advertisement itself. Effective measures, according to the Ministry, could therefore also consist of increasing awareness among parents to reduce exposure. A dilemma rises: How strictly can and should (European Centre for Health Policy) recommendations be derived from the estimates? (HIA project group meeting, May 8, 2006).

In the course of conducting the assessment, a substantial dilemma occurs as a new authoritative, scientific publication (Swinburn, Jolley, Kremer, Salbe, and Ravussin, 2006) proves preliminary HIA results on consumption effects on obesity to be heavily overestimated. Initially estimated big effects become very small. The HIA author refers to the scattered, non-integrated databases and limited available knowledge to explain this change. The HIA project group discusses the consequences (HIA project group meeting, May 8, 2006): Which conditions are minimally required for material used in HIA? How many studies does the HIA have to build upon minimally? If the uncertainty of the estimates is obvious, what recommendations can be derived from them?

Boundary ordering devices within the Covenant process

The Covenant serves as a boundary object to integrate participants in a new network for the tackling of obesity. Network integration at this stage consists of umbrella and branch organisations. These have very different backgrounds, structures and organisational power depending on the number and variety of member organisations (some of which are branch organisations themselves, like the Dutch Federation of Food and Drink Industries is a member of the Confederation of Netherlands Industry and Employers). For some of these organisations it is hard to negotiate beyond the ambition of its least willing member. The capacity to mobilise their members depends on the extent and diversity of the membership account, general mandate and specific issue mandate on the one

hand, and the availability of exclusive resources, administrative capacity, autonomy and coercion (e.g. expulsion) on the other hand.

Network integration furthermore is difficult by the different positions and mandates the representatives in the project group bring along. Some organisations send high profile administrators with authority, freedom to negotiate, and saying within their own organisation, while others delegate policy officers with limited mandate and authority. During the observation period, this difference in mandate is considered to keep progress minimal. The project group therefore is supplemented with a steering group of administrators to enhance progress towards identifying common grounds and explicating commitment.

The selection of participants

Additionally, the selection of participants is a strong boundary ordering device, enlarging the boundary of obesity as a public health problem and incorporating other meanings of obesity, but also incorporating other types of potential solutions. Ministry of Health is not convinced, for example, that information and mass media campaigns will bring about behavioural change. The Ministry wants to explore the opportunities for citizen and behaviour oriented incentives, such as health care insurance premium differentiation. Bringing in the branch organisation of care insurers (ZN) may provide a bridge to cross the boundaries between the public health and prevention sector and the private health care system in the Netherlands. Premium differentiation in the current Health Insurance Act is forbidden, but according to a Ministry of Health official: 'if we agree that rigorous measures need to be taken to tackle obesity, we may start to think about how to change the law' (27-09-2005).

A 'consensus-building' strategy

During the observational period of the project group meetings, an interim manager of a joint pool by the ministries of Housing and Health is the Head of the Covenant Office, who also chairs the meetings of the project group (April 2005- March 2006). His ideas about how the Covenant process should be managed are derived from process-oriented techniques like 'consensus building' and 'interactive policymaking', concerning how to create or accelerate a social movement on environmental issues. Taking initiative for cooperation, mobilizing actors, creating energy, ambition and speed are central

elements. The regular policy officials are not very familiar with this kind of process management of Covenants,

The process roughly consists of different phases: achieve agreement on cooperation intentions; then use energy to create synergy; finally create sense of co-ownership. There are two possible roles for the head of office: facilitator or chair. A facilitator organises a smooth process, but leaves responsibility for the content to the participants; he creates trust by taking flexible positions and opinions in response to argumentation; shows affiliation with different interests; helps participants recognize their potential gain. He departs from the 'agreement to disagree' to build consensus on overall values and goals on an abstract level before diving into negotiations over responsibilities, means and other specific details. He seeks support with the 'avant-garde' to intervene in the process and convince or build pressure on 'laggards'.

The draft Covenant Action Plan

During the development of the Covenant action plan, however, the head of office finds him self put into the role of chair by the Covenant partners: taking more substantive responsibility for putting individual initiatives together, investing a lot of effort into creating ambition and synergy, coming up with plan that is meaningful to the partners as well as the Minister of Health, Parliament, and society. He visits high profile administrators of all participating organisations and assembles a steering group to 'enlarge the cake'; has high Ministry officials make telephone calls with laggards to enhance commitment.

This draft is also used to engage potential opponents in society. The Ministry as well as the Covenant support office actively approach a selection of non-participants in order to set conditions for public perception through the media. The expert community, for instance, is actively involved to reflect on a draft version of the Action Plan in September 2005. On the one hand, the expert meeting is formally aimed at assessing the effectiveness of proposed measures and identify forgotten elements that need to be covered, which enhances a public perception of an expert-acknowledged action plan. On the other hand, the meeting is informally aimed at ensuring (or at least communicating) the metaphor of a 'half-full glass' instead of a half-empty one, meaning the action plan is not the total solution of the obesity problems, but a first and promising impetus for action. If experts during the consultation express a lot of critique, it provides the Covenant partners with the opportunity to control damage beforehand. This way,

the expert community by consultation is 'committed' to publicly respond to the action plan in a mildly rather than radically critical way.

High Ministry of Health officials also consult the Dutch Consumers Association and the Dutch Obesity Association, among others, to incorporate as much of their criticism in the final action plan to prevent a negative public reputation of the Covenant. It is a specific strategy to create trust and mobilise network resources. Timing of the public presentation of the action plan at the beginning of the Annual Budget negotiations in Parliament (Sept-Nov).

Critical agents

- The two Unilever advisory members of the Covenant project group while developing the Action Plan, who have broad experiential knowledge as administrators
- The Dutch Consumers Association from the outside stirred up the Covenant partners not to come up with an Action plan that is nothing more than a 'pathetic lot' ('slappe hap').
- Covenant ambassador and chair of the Steering group Paul Rosenmöller is a former union leader (FNV Transport), and a former Member (1989-2003) and faction leader (1994-2002) of the Dutch political party Green Left in the Second Chamber of Parliament. He nowadays hosts a television series of in-depth interviews with remarkable Dutchmen, and has additional jobs in various government and non-government committees. He grew up in a business entrepreneurial family, and has developed a trustworthy public reputation.

Linking organisations through competence exchange

An interesting observation is the increasing exchange of particularly experienced and skilled professionals between different kinds of organisations. Examples are the director of the Netherlands Nutrition Centre, who previously worked as a marketing director for Unilever; and the new Head of the Covenant Office since April 2006, who previously worked as a senior policy officer on health care and social security for the Confederation of Netherlands Industry and Employers. It is too early to describe the consequences, but the exchange may be expected to improve the conditions for cooperation.

Boundary ordering devices in the HIA process

The Covenant is a boundary object that attempts to reconcile the different frames of reference of the participants by addressing their needs. In the outside world, the Covenant is initially associated with commercial objectives rather than public health objectives. The Covenant seems to developsocietal acceptance by presenting the Action Plan and using the media to show the different activities undertaken (for example, the joint food product label).

Nevertheless, the interaction structure the Covenant provides cannot be combined with the technical orientation of the quantitative modelling in the HIA, because the assumptions underlying that model are not accepted by the Covenant partners (including the Ministry of Health). That way, the association the partners have with the HIA is limited to a strict public health perspective that rules out other relevant perspectives. The HIA becomes politicised.

6.4.3 Standardisation

Within the Covenant, the approach of 'consensus building' is a kind of standardised way to address complex, multi-faceted policy problems. This approach leads to the common claim that obesity is an individual responsibility, yet the solution is in the hands of the societal and governmental parties. Yet, the project manager finds that he cannot act as the prescribed 'facilitator', because the Covenant partner push him and the Covenant Office to put substantial effort in developing a draft of the Action Plan.

The quantitative model in the HIA turns out to be subject to many political choices that are revealed in the obligatory points of passage the Ministry of Health demands. The HIA assessor tries to incorporate different sources of knowledge through engaging the participation of the Covenant partners, yet, they do not accept the offer because they contest the motives and assumptions explicated in the invitation. Even though the points of passage have all been integrated in the design, the Ministry disqualifies the HIA as a policyrelevant research. Although the Ministry considers the scenario study as well as the recommendations for further research to be very useful, the HIA does not contribute to 'fact stabilisation' in the Covenant and policy arena.

To briefly summarise the reframing process in this case, the HIA has not contributed to agendasetting, because the problem of obesity is already on the agenda. The solutions are controversial within and outside the Covenant. While the Covenant adopts strategies

to embrace and engage the different frames to develop a commonly agreed point of departure, the HIA is incapable of reconciling the different frames because it adopts one particular frame and rules out all the others: the technical design especially in the Delphi method is not value-free and cannot rationalise the choice between competing obesity and solution frames. The case provides hard, yet valuable, learning material for future HIAs, which are elaborated in the last section.

6.5 Summary and reflections

What are the roles of the quantitative assessment design and the Covenant design in reframing obesity in the Covenant action plan?

The Ministry of Health officials initially intend to include, but later on decide to keep the HIA off the Covenant agenda, because they consider the HIA methods of quantitative modelling and the Delphi study to be insufficiently sensitive in its output, and therefore open to strategic misuse which would harm the Covenant's progress. The HIA therefore is not consequential at all for the integration of obesity in the activities and policies of the Covenant members. The Covenant, on the other hand, has an important agenda-setting impact: besides seeking external publicity for joint activities presented, the (mostly branch) organisations of the Covenant partners, undertake several 'internal' activities to mobilise the branch members to undertake action in their own interest.

The Covenant captures very different meanings of obesity within the scope of the aim to jointly tackle obesity. The partners decide to participate because the derived problems of reputation damage and a call for legal regulation threaten the order and stability of their core businesses, or because the Covenant offers strategic opportunities to improve their core business. To a limited extent, the Covenant brings about a new division of labour between the participants and some resources are integrated. The Covenant partners attend monthly meetings at the Ministry of Health, and some participate in the development of the joint energy label. During the period of observation they also delegate one of their communication officers to develop a common communication strategy. Moreover, the Ministry organises a meeting with the (Ministry-funded) Netherlands Nutrition Centre, in order to make knowledge available to the Covenant partners.

In the initial HIA proposal, the policy analysis of the Covenant process is intended to identify arguments that improve the feasibility and acceptability of the HIA to the

Covenant partners. Nevertheless, the Ministry of Health perceives the HIA to represent a fixed meaning of obesity as a health problem that rules out other meanings. Such a fixed problem orientation of the HIA is seen as a threat to the delicate process of creating a joint capacity to solve or address the obesity problem adequately. The Ministry reframes the HIA from an initial promising policy tool to an insufficiently reliable research tool. The kind of co-design the Ministry of Health adopts in continuously requiring new obligatory points of passage for the HIA is counterproductive to any effort to develop evidence-based policy. The kind of evidence referred to here, is not just the epidemiological kind of evidence, but also the political, normative, argumentative evidence used in such policy processes. The relevance of these kinds of knowledge is reflected in the statement of the Ministry, that, besides questioning the certainty of predictions and their underlying assumptions, policy reality has changed from the Ministry of Health threatening with legal regulation at the beginning of the Covenant process towards promoting self-regulation among the partners.

In this case, the Ministry considers the HIA merely as an experiment to develop the scientific quality of obesity predictions and measures of the effectiveness of interventions. Nevertheless, there are two challenges that also show the limits of scientific consensus about quantitative modelling in this case. Firstly, during the HIA a scientific article is published that significantly reduces the predictions made in the HIA. Quantitative modelling of obesity determinants depends on a weak data and knowledge base, so when does quantitative modelling become reliable? Secondly, a Delphi study is undertaken to estimate missing data on the relationship between TV food advertisement and consumption. Yet, response among scientific experts is 24%, and neither of the Covenant partners responds. When does the Delphi provide scientifically acceptable estimates? These problems require an extensive debate among scientific scholars in order to solve the scientific controversy.

These conclusions raise important questions about the intrinsic value of impact assessments in policy processes. If it produces more political and, in this case also scientific, controversy than it solves, is there an alternative instrument or strategy to integrate health in public policy? In chapter seven, a fourth case study looks into the agendasetting of health without using HIA, allowing for observations of informal strategies to integrate health in policy by 'health advocacy'.

Chapter 7
Simulating informal coordination by health advocacy

7.1 New research questions

The previous case studies of HIA invite to some intermediary reflections before continuing with the game simulations. To explain how reframing may or may not lead to the integration of health in policies, this research distincts between different kinds of coordination, which Health Impact Assessment may offer. In the last three chapters, HIA practices have been analysed that offer a previously defined research design, an interaction procedure, or both. In alle three cases, the HIA merely contributes to agenda-setting of health, and only in the Dordwijk HIA to plan adjustment.

In all three cases it has become clear that agenda-setting or individual policy adaptation results from reframing the instrument of Health Impact Assessment to support the priorities and action scope of the policymakers and planners addressed. On the one hand, HIA practices have to overcome the rather bad reputation of a 'bureaucratic, negative hurdle to decision-making' among policymakers addressed. On the other hand, the sometimes fixed frames of health and HIA within the public health sector need reframing as well.

Previously defined research designs for HIA, such as the City & Environment model or the quantitative modelling through Multi-state Life tables, initially receive support, because these innovative methods create expectations about providing new 'hard' knowledge. In both cases, however, the policymakers addressed during the HIA request adjustments of that initial design to specific local needs to make knowledge 'usable', and to feasibility conditions to make problems 'doable'. Moreover, in the one case without such a design, the housing officials do not consider the absence of such a design to be an obstacle. Rather, it provides the opportunity to develop a jointly agreed design for the HIA.

The interaction design has particularly proven suitable for explorative aims. In addition to exploring the content of the relationship between housing and health, also relations between both policy sectors have to be sorted out, and their respective network relations. The exploratory meetings reveal differences in cultural as well as policy frames, which are relevant to make HIA successful. The selection of topics, timing and people and institutes involved make the HIA acceptable to the receiving parties, even

though it does not not lead to policy adjustment. The Covenant arrangement also leads to convergence on the joint approach to obesity, although the HIA is disconnected from the Covenant process. The technical assessment in HIA, on the other hand, hows in two case how politics are generated instead of resolving controversies.

A relevant question that arises is whether there are alternatives for HIA that may improve the integration of health in policies. Without HIA, such efforts depend on unplanned, informal and intuitive strategies. Such cases are hard to observe in research, because the strategies remain implicit, and researchers from the outside have limited access to them. In addition, all case studies of HIA have revealed the relevance of tacit, experiential knowledge for reframing. Sometimes tacit knowledge obstructs the integration of health in policies, because it feeds the resistance of fixed frames (for example previous experiences with environmental impact assessment label HIA as a hurdle to decision-making). On other occasions, tacit knowledge is an enabling factor as a resource to break the resistance of fixed frames (for example, experience in maintaining external relations provides strategies to urge the least willing actor in the Covenant to commitment and visible investment). In the previous cases, the HIA mobilised such experiential knowledge to surface by evoking responses to the HIA. The game simulations provide the opportunity to explore the role of tacit, more experiential knowledge in integrating health in public policy without such structuring designs.

Thirdly, as the previous case studies focussed primarily on the relationship between the HIA and policymakers addressed, how does health advocacy (without HIA) relate to the broader policy context in which other topics, interests, actors, initiatives are articulated? After all, policy-making is weighing all articulated interests and health is merely one of them. Which conditions have been controlled in order to observe the role of experiential knowledge, is elaborated in the next paragraph, followed by an analysis of the game at play in the same format as in the previous chapters. The general qualities of the game simulation as a research method have been described in section 1.3.4.

7.2 Game simulation design

To identify the position of health advocacy in relation to other actors and institutions articulating different interests in the policy context, the game was designed to zoom out of the HIA to the policy subsystem of an urban planning project. In cooperation with two game simulations experts of the Academic Center for Experiments in Simulation (ACES) of

the Department of Public Administration (Erasmus University Rotterdam), we selected an existing game of an urban renewal planning process, which we adjusted to the specific characteristics and conditions of integrating health in public policies.[43]

Urban planning is already politically complex. Different stakeholders interpret the problem differently; yet need each other to reach their goals. This aspect applies to urban renewal planning as well, as we have seen in chapter 4. For that reason, we selected an urban planning process for the game simulation. As health is not a priority in urban planning, advocacy will thus be contested. Moreover, the urban planning timetable is problematic: implications for health will only become clear when the contours of the plan are clarified, yet, then it may be too late to influence the plan to protect or promote health. Furthermore, in the literature, health impacts from urban (re)construction have not (yet) been established as accepted and commonly known. As a result, health advocacy lacks scientific evidence to substantiate claims. The practical relevance of selecting urban planning as a topic for the game simulations is that the Ministry of Health urges municipalities to apply HIA to such projects.

We have adjusted the existing game as follows:

- The general assignment to all participants to arrive at an integral plan for the area by the end of the game was supplemented with a specific assignment to the Community Health Service role, to seek attention for specific health issues. We asked them to become a 'partner in the planning process.' We instructed them that how they should do that was up to them.
- We added another role to the game: the Social Welfare Service, which is a municipal service under the authority of the alderman Welfare and Public Health. This role was to increase the competition for attention and resources with the Community Health Service.
- We designed the potential health problems, especially the environmental ones, to be at the boundary of acceptable and unacceptable, just within legal standards, in order to observe how different interpretations of these problems may arise, and their implications for action.
- We asked the researcher from the Erasmus MC Public Health Department to write a Health Monitor report and a basic document on all potential health impacts that participants might articulate during the game (see Appendix C). Soon after the game started, we disseminated the Monitor to the alderman and municipal officers

[43] In this chapter, 'we' refers to the author of this thesis, H. Mastik PhD and R.G. Scalzo MA of the Academic Centre for Experiments in Simulation.

of Public Health, and the Community Health Service; and announced it in the ´Kamperwaard Gazette´ with a possibility to request the report. The Community Health Service is instructed that background information is available on any health impacts, yet, we only provide information of specific topics requested by them.

Reconstructing an urban wasteland

The planning process in the game takes place in the fictional town of *Kamperwaard*, a medium-sized town in the middle in the Netherlands. West of the town, the area of a former gas plant called '*Pluspunt*', needs reconstruction (see colour figure 7.1 at page 210 and colour figure 7.2 at page 211: the dotted area between the industrial estate 'De Punt' and the appartments of 'Waaszicht'). It has been neglected for years, which allowed for several recreational as well as criminal activities to have developed.

Pluspunt is surrounded by a deprived neighbourhood to the north (*Bouwlust*); a residential neighbourhood to the south (*Marlot*); and the former gas plant offices (to the east) nowadays house yuppies with young children in exclusive apartments. Besides the neighbours, other stakeholders are the Islamic Association, linked to the many Muslims living in *Bouwlust*; the Chain store Business Association; and the housing corporation. Within the municipality, the Alderman of Public Works and his department of Urban Development are responsible for the reconstruction project, and the Alderman of Social Affairs and Public Health, the Social Development department, and the Community Health Service are also represented in the game.

Potential health issues concerning this area are linked to lifestyle (smoking, alcohol, obesity); psychological distress and domestic violence. Additionally, the area is subject to air pollution by lorry traffic to and from the transportation centre located in the city centre; noise nuisance by train and lorry traffic, and there has been soil pollution at *Pluspunt* in the past.

When, how, and with whom?

In December 2005, two simulations were conducted with 42 field experts in research, civil service and political practices related to health policy. While 17 health experts ensured the input of expert knowledge and experiential knowledge of researching activities, the presence of 5 servants, 6 managing directors and 7 aldermen provided a guaranteed input from political-administrative experiential knowledge (see table 7.1).

Table 7.1 Participant characteristics

Current job position	No. participants
Health or environmental expert	18
Senior civil servant	5
Managing director	6
Alderman	7
Staff health branch organisations	6
Total	42

From the 42 participants, 34 have experience with attempts to integrate health in public policies and plans, and 21 with Health impact Assessment.

We assigned the participants randomly to the role in the game (two per role), and provided them with a description of role priorities in the planning process of *Pluspunt* and a brief history. They were specifically assigned to develop a strategy to set the political agenda for their role priorities during the game. The health stakeholders could set the agenda for health either by developing an HIA or by other means. This way, observation of the argumentation to do or not to do an HIA became possible.

With the help of four assistants, I observed and categorised participants' behaviour during the game by filling out an observation form. Furthermore, the game was reconstructed together with the participants in a group reflection meeting directly after the game. Finally, a pre- and post measurement of the participants' perceptions of HIA and health priorities consisted of three (short) surveys: before the game; directly after the game before the joint reflection; and two weeks after the game (see table 7.2).

Table 7.2 Evaluation moments and topics

Before the game	Directly after the game before the joint reflection ('emotion indicator')	Two weeks after the game
Education Daily position Work experience with HIA and integral health policy	Role in the game Satisfied with results Actions undertaken and means used to bring point forward? Strategy adjusted while playing? Effects on other participants	Role in the game Strategy and effects Was it fun, informative, realistic and relevant? Usefulness for practice

After both games, the observations were collected in a thick description of the strategies and interactions in each game. Together with an evaluation survey, these thick

descriptions have been sent to the participants to test, clarify and complete both game reconstructions.

7.3 A reconstruction of the urban planning games

In this paragraph a brief overview is presented of how the content of the Pluspunt Plan developed in both games. The strategies and interactions are described in paragraph 7.5.

December 7, 2005

Table 7.3 summarises the priorities (partially prescribed) and strategies (not prescribed) at the beginning of the game.

Table 7.3 Role priorities and strategies at the beginning of the game (December 7)

Roles	Priorities for Pluspunt	Advocacy strategies
Alderman Public Works	Neighbourhood development, maintain high income groups, budget-neutral plan	Consultation rounds
Urban Planning Department	No green/recreation, Emmapark is near	Housing corporation is important partner in finance, Marlot is partner in sports facilities
Alderman Social Affairs & Public health	Neighbourhood development, maintain high income groups, budget-neutral plan	Needs assessment for welfare services
Social Development Department	Youth and employment, strengthening social infrastructure	Consultation rounds
Community Health Service	Environmental burden: unsuitable for housing. Recreation and 'green lung'.	Request more policy to control drugs misuse
Residents Bouwlust	Youth and employment, recreation at the canal	Fight the other residents, coalition with Islamic Association
Residents Marlot	Worried about degeneration. Urban village of middle-income housing	Early acquaintance municipality, prepared to invest privately, coalition with Waaszicht, press attention = last option, legal advice attorney.
Residents Waaszicht	Urban villas, no shops, no mosque, no social services	After soil decontamination, Pluspunt will be expensive, we have nothing to worry about
Chain store Association	Integrated plan of social and commercial services and housing	Seek cooperation with housing corporation
Islamic Association	Mosque, community centre for student homework support, social housing	Coalition with Bouwlust
Housing corporation	Phased development of Pluspunt and the 'Big Punt', housing to enable Bouwlust renovation, house production	Close contact with the municipality, seek cooperation with Chain store Association
Welfare Foundation	More social workers, housing and services for Bouwlust	

At the end of the game, after several consultations, the Aldermen present a preliminary plan:

- The transport centre will be relocated to make room for sports facilities.
- Renovation of Bouwlust is top priority. After decontaminating the Pluspunt soil, limited housing flats are planned to temporarily house Bouwlust residents in order to renovate Bouwlust. In the longer run, housing as well as commercial retail is planned at the 'Big Punt'. That, however, requires a 'City & Environment procedure' (see chapter 4), and provincial dispensation.
- The swimming pool in Bouwlust will be demolished to make room for an integrated mosque and community centre
- Along the river Waas, a boulevard will be constructed.

This plan is received with a lot of scepticism among the stakeholders. The only stakeholders, who state to be quite content, are the housing corporation and the residents of Marlot. The Bouwlust residents and the Islamic Association suspect power play of the housing corporation in ignoring the environmental health risks of housing in the area. The Welfare Foundation claims 'the money has won once again'. The Alderman responds to criticism that the stakeholders have to keep their ambitions within feasible limits: Bouwlust has a lack of space, there are only limited financial means making commercial activities indispensable. The environmental studies show that limited housing is possible after decontamination.

Despite their frustrations, the coalition between the residents of Bouwlust, the Islamic Association, the Welfare Foundation (and implicitly the CHS) turns out to be quite successful, as the municipality announces a renovation of housing in Bouwlust, and to make room for the integrated mosque and a community centre with social services in the short run. Nevertheless, the residents don't want to leave their houses to make renovation possible. The Community Health Service, on the other hand, remains empty-handed after declaring Pluspunt to be unsuitable for housing, while, based on the 'green spot' in the environmental maps of Pluspunt, the Alderman of Public Works in the end still decides to plan flats.

December 14, 2005

Table 7.4 summarises the priorities (partially prescribed) and strategies (not prescribed) at the beginning of the game.

Table 7.4 Role priorities and strategies at the beginning of the game (December 14)

Roles	Priorities for Pluspunt	Advocacy strategies
Alderman Public Works Urban Planning Department Alderman Social Affairs & Public health Social Development Department	Service level is good, not too many shops, await consultations Neighbourhood degeneration and Maintenance Emmapark Welfare priority, Islamic Association and Bouwlust are important, yet, do not forget Marlot	Municipal officers have to arrange the process, coordination and integration of interests themselves. UPD handles 'hard sector' and residents, SDD handles 'soft sector', Aldermen manage the main lines.
Community Health Service	Lifestyle and quality of the living environment	No protest song, internal coalition with municipality, contact Welfare Foundation
Residents Bouwlust	Concerns about degeneration and pollution. Recreational area and allotments. Renovation of Bouwlust. Employment and social cohesion.	Seek cooperation with Welfare Foundation and Islamic Foundation to increase influence and emphasis social responsibility of the housing corporation
Residents Marlot Residents Waaszicht	Health concerns about traffic, no more housing, concerns about house and neighbourhood devaluation	Coalition Marlot and Waaszicht, send letters to municipality and CHS about air quality. Prepare a petition. Talk to Bouwlust.
Chain store Association	Combi of housing and commercial centre for employment and social cohesion	Seek cooperation with housing corporation
Islamic Association	Social and cultural services, among which a mosque	Cooperation with Bouwlust, convince Marlot they have nothing to fear, cooperation with CHS
Housing corporation	Rented houses for Bouwlust residents to enable demolition, livability priority	Support livability idea with municipality, seek cooperation with Chain stores, then wait and see.
Welfare Foundation	Housing for the handicapped or psychiatric patients	Ask information from CHS: health status of residents, socio-economic status, environmental health

Halfway the game, when the municipal officials have consulted most of the stakeholders, the municipality presents three scenarios for the Pluspunt Plan:

I '*Coophaeghe*': sports facilities and shopping centre for starting entrepreneurs, and a mosque with community centre

II '*Welleven*': urban services: social development centre, housing, mosque

III '*Groenewaard*': low- to high-income housing and welfare services in Bouwlust

The municipality prefers the preliminary scenario III '*Groenewaerd*', because it contains a budget-neutral option (housing sales will finance service provision). The high income residents of Marlot and Waaszicht are angry that they are not being heard. The housing corporation and Bouwlust residents miss the problem analysis of house degeneration in Bouwlust. Following the presentation, they all develop alternative scenarios. The

Community Health Service writes an advice, to which they never receive a response (see box 7.1).

Box 7.1 Health advice Pluspunt from CHS to the municipality (Dec 14 2005)

Considerations *Pluspunt*:
(1) Concerns about health status *Bouwlust*
(2) Overweight among youth
(3) Psychological distress due to liveability conditions
(4) Moderate air quality
(5) Community degeneration

Potential solutions:
(1) Maintain swimming pool in *Bouwlust*
(2) Facilities physical exercise instead of distribution center (e.g. skate or ice track)
(3) Combined housing and care facilities at *Pluspunt*
(4) Coordinated plan of action for *Pluspunt* and *Bouwlust*
(5) More facilities in *Bouwlust*
(6) Low-traffic opening up of business estate *De Punt* (bicycle/ public transport/pedestrians)

The Bouwlust residents, together with the Islamic Association, makes a deal with the housing corporation: a mosque and welfare services including 25% for expensive housing to finance services and Bouwlust renovation. After presenting the alternative to the municipality, this 'broad coalition' succeeds in influencing the municipality plan. The aldermen present their second draft plan to the stakeholders just before the end of the game: scenario II '*Welleven*' becomes the preferred option.

7.4 The integration of health in the Pluspunt Plan

One overall conclusion of both games is that the participants seize the opportunity of the Pluspunt consultations to put all kinds of problems on the agenda, for which the Pluspunt Plan is supposed to provide a solution. That, of course, is impossible, yet very realistic in planning processes. In both games, environmental health risks are articulated and taken seriously by policy actors as well as stakeholders, resulting in the removal of the transport centre. Yet, the attempts of the Community Health Service to put more social and behavioural health problems on the agenda do not reoccur in the plans or communications of other participants. The plans presented at the end of both games do, however, implicitly contain elements that will indirectly protect or promote health, such as welfare services and housing renovation in Pluspunt. So: no explicit frame

convergence occurs, yet, the plan altogether does contain potentially positive implications for health.

None of the participants use health as an explicit argument to keep the existing, yet threatened facilities in the plan (swimming pool, homework supervision, community centre, employment). In the second game, the CHS tries to provoke more attention to social and lifestyle problems in the deprived neighbourhood of Bouwlust. Participants in both games do explicitly refer to environmental health problems or concerns of air pollution, noise nuisance and soil pollution. The Alderman of Public Works, the department of Urban Development, the Chain store Business Association, and concerned neighbours as well as the Community Health Service request data on these topics.

Except for the removal of the transport centre and soil decontamination, health is not explicitly inserted into the Pluspunt Plans. Both games do result in an extension of the *Pluspunt* area to its direct surroundings: linking its reconstruction to the future redevelopment of the industrial area of the 'Big Punt', and making the Pluspunt Plan instrumental to the social problems of *Bouwlust*. The social problems implicitly provide the Social Development Department and the alderman with increased authority in the planning process.

With respect to health, there is no newly agreed division of labour or tasks. For example, if the CHS in the first game tries to put environmental health on the agenda of the residents, they respond that they are worried about degeneration rather than health. During both games, there are several task demarcations articulated, though. The participants criticise the housing corporation for example on their social responsibilities, although the corporation in both games prioritises the social problems in Bouwlust from the outset of the game. Another example are the Chain store Association's attempts to bring their integral housing, social and commercial services approach to the attention of other stakeholders and municipal planners. The only stakeholder that did not immediately turn down their offer is the housing corporation. These task demarcations are elaborated in paragraph 7.6.

Although the Community Health Service is not involved, resource integration is likely to occur as the housing corporation and the Islamic Association invest their financial means in the plan (at least that is the intention, yet in the first game we do not know if they are willing to as the game stops halfway the process).

Although there is a lot of policy integration observed in both games, health is only a minor part of it. Reflecting on the positions and strategies of other participants may help to learn about the position and strategies of the Community Health Service.

7.5 Frames of the role of health in the Pluspunt Plan

Frames in chapter three have been operationalised as interwoven normative and causal beliefs, which foster communication and sense-making. Frame characteristics are order and stability; a unity of fact and value; embedded in institutions; embodied in dispositions; and (once embedded and embodied) fixed and resistant to outside challenges to frame reflection.

The problem and solution frames for a large part have been imposed on the participants in their role descriptions that were handed out before the game started (see tables 7.3 and 7.4). All participants in the game simulations frame the planning process for Pluspunt as an opportunity to put their own interest on the agenda. These different frames during the game developed towards proposals for the area. Common elements in the proposals are a focus on neighbourhood renewal and service provision for the residents of Bouwlust. To make the plan financially robust, a coalition emerges with the housing corporation to build houses at Pluspunt for the private market. These proposals overall received considerable support: 24 participants are satisfied with what they were to able to realise in the game. Another 10 had mixed feelings, while 6 participants were unsatisfied.

The Community Health Service encountered some difficulties in reaching their goals in the games: for instance, they had to decide between competing priorities of lifestyle oriented prevention or environmental protection. Moreover, they are confronted with residents and other roles that contest the problem frame of the CHS as a health problem: 'this is about neighbourhood degeneration, not about health'. Whenever the CHS adopts a more activist approach, this evokes resistance among their clients. The CHS does not look out for potential clients or coalition partners, except when they send out one 'advertisement' of their services. They rather await requests for advice, which is given without reflection on the meaning of the advice for their clients. As a result, they cannot prevent to be actively approached by the richer residents of Marlot and Waaszicht, instead of the poorer residents of the deprived neighbourhood Bouwlust,

whom the CHS wishes to serve. The supply-driven approach obstructs the CHS in delivering meaningful services to the poorer residents.

Another striking observation is the decision, twice, where CHS fobs off requests for information or a meeting: first the residents of Marlot, later on the Chain store Association. In response, the residents turn to the RIVM for information. The CHS considers these parties to be self-supportive and their problems to be of minor importance. Besides fixed role frames of other parties in the game, also routine behaviour turned out to be a potential disabler: for instance the ignorance of the importance of the 'Kamperwaard Gazette' to bring positions and solutions forward, and mobilise relations to engage in a debate or even in a coalition.

The discussion meetings directly after the games point out that these observations do not serve to illustrate the incompetence of the participants in the games, but highlight the difficult position in which the CHS has to operate within the mandate set by the municipality, but also by the expectations of the target groups of citizens it serves. The strategies and actions are further elaborated in the following section.

7.6 Games at play: Reframing the health issues at Pluspunt

In this paragraph, the strategies and interactions during both games are described and analysed on their consequences for agenda setting and creating an influential position in the planning process. Framing is defined as a way of representing knowledge within a network of relations built on a shared system of (policy) beliefs. Reframing as a process is the confrontation of different knowledge and policy frames on health in order to identify common grounds for collective action. The process of reframing is analysed by identifying the challenges and responses in the interaction process.

7.6.1 Frame challenges and responses

In the first game, the Community Health Service (CHS) immediately accessed the agenda of the department of Urban Development articulating a direct threat to population health from the drugs syringes scattered at *Pluspunt*. After precautionary measures had been announced, the CHS took a very long time to agree on a health advocacy strategy. It only re-entered the game after concerned citizens contacted the CHS for information on air pollution and noise nuisance. At that meeting, the CHS stated

that the soil was contaminated as well and would need to be cleaned up. It led to great disturbance among the citizens, who published angry letters in the Kamperwaard Gazette because no one had notified them of the risks, when they bought their houses. The Alderman of Social Affairs en Public health then calls in the CHS, which is subject to her authority, and prohibits them to speak in public on this matter.

In the second game, many CHS requests to the municipality for a 'fraternal meeting' remain without a response. Only when the municipality has drawn three scenarios, the CHS is invited to respond in terms of health risks. There is hardly opportunity to put CHS priorities on the agenda unless they are explicitly linked to the three scenarios. At the same time many stakeholders request the CHS for information, but the CHS only succeeds in putting forward their own priorities with the Welfare Service and the housing corporation. After the aldermen have presented their draft plan for *Pluspunt*, the CHS provides the municipality with a written health advice (see box 7.1), which also remains without a response.

The CHS participants were frustrated in their fixation on the health priority. In both games, they openly questioned the demarcation between the policy domains of urban development and public health. Additionally, fixed frames rather than interactions with, for instance, the Chain store Business Association and the housing corporation led their actions. The Chain store Business Association, for instance, requested the CHS for a meeting at the very beginning of the game. The CHS responded by the end of the day, just as the municipality, thereby missing the opportunity to hear about the Association's willingness to invest in a reconstruction plan that serves financial-economic objectives as well as local employment and social facilities. The Association in both games played a marginal role, which frustrated them. The prejudice consisted of the idea that the Association would only be concerned for their own gain, which was assumed to be opposite of the interests of the neighbouring residents. The housing corporation at some instances was confronted with the same kind of prejudice, but, as an executive and government-linked actor, it still played a significant role in the planning process.

These frames impede rather than promote a dialogue towards cooperation. To the municipality, these organisations are attractive coalition partners, as they bring along (financial) means to make municipal plans budgetary feasible. As a result, these organisations usually have a position in which they can direct the plans to develop according to their preferences.

In both games, the problem definition is unclear. In the group reflections after the games, participants question whether they were dealing with urban planning or health. After the second game, the CHS criticises the scenario development:

> *'The few times we sat at the table, the debate did not go into health issues, the urban planners put building construction issues first.'(CHS)*
> *'It was an urban planning issue.' (Alderman)*
> *'that depends on the problem definition.' (CHS, December 14)*

It bothers the CHS participants that the discussion focuses on environmental conditions and available solutions of social services and facilities, before the problem definition had been properly discussed.

Other roles

Other roles are also confronted with prejudice. The municipality and the CHS associate the Chain store Association with commercial, individual gain, thus ignoring its attempts to bring forward their willingness to invest in integrated plans for housing, social and commercial activities with a clear collective gain. The Chain store representant claims:

> *Social entrepreneurship was received with distrust. We talked about employment, but never received any response.'(December 14)*

The municipality reflect on their response:

> *'The municipality responded in a reserved way to gain an overview. Perhaps we responded from a cliché perception of 'investor fairytales'.' (Aldermen, group reflection, December 14)*

Additionally, prejudice is found concerning the Islamic Association promotes social integration activities beyond the realisation of a self-financed mosque, yet, does not feel recognised. The resident organisations criticise the housing corporation to pay more attention to the social problems of Bouwlust, while the corporation is willing to invest in a Bouwlust renovation in relation to Pluspunt. These fixed frames of other parties result in distrust and resist an open communication, leaving these others no room to articulate their ambitions clearly and enlarge the potential of solutions. As many prejudices are implicitly part of problem and policy frames, they are counter productive in mobilising collective solutions.

In both games, some of the participants formed coalitions, which by negotiation with the Alderman of Public Works and the department of Urban Development saw their interests represented in the final reconstruction plan. An important aspect in obtaining this representation is making one's own priorities negotiable. One of the Aldermen during

the evaluation meeting stated that especially those parties that were prepared to moderate their own demands and compromise, have influenced the plan effectively. Other parties, fixated on their own interest and not prepared to be cooperative, turned out to be ineffective at influencing. The Alderman of the second game stated that the residents association of *Marlot*, which merely expressed resistance, 'in the end was not considered to be a serious discussion partner'. Their resistance consisted of letters, in which the municipality is confronted with accomplished facts and positions; a signature campaign even before the reconstruction plans are presented; walking away from the presentation, even though it is clearly stated that it concerns preliminary plans that are still open to debate and input.

While the proposed plan remains within the legal standards, the parties with a formal saying (in this case the Alderman Public Works and the department of Urban Development) allot the CHS with a marginal role. Even the Alderman of Public Health and the department of Social Development in both games did not consult nor respond to repeated attempts from the CHS to contact them until the very last moment.

Although some participants, especially those who plead for these facilities most vigorously, felt that their requests had been denied, the reconstruction plans at the end of both games comprised measures to provide social facilities in *Bouwlust*. The feelings of neglect during the evaluation meeting turned out to be the result of negative perceptions of the consultation process, and the activist presentation of the interests by the stakeholders, while the output of the planning process actually fulfilled a great part of their wishes.

Several participants use the health argument to substantiate their own interests at specific moments in the process. The Marlot residents in the first game use health to prevent the mosque at Pluspunt: soil contamination is very expensive, as a result only expensive functions suit the area that is their back yard. They clarify afterwards that they did not bother about the truthfulness of their claims as long as it served their purposes. The residents of Waaszicht use the CHS claim that Pluspunt is unhealthy, against the alderman of Public Works to prevent a 'second Bouwlust at Pluspunt'.

An example of reframing one's own core business to someone else's in order to build a coalition is put forward during the second game, when the Islamic Association seeks cooperation with the Community Health Service and the Welfare Foundation:

> *'As we could provide you with access to the target group of immigrants through the establishment of a mosque and a community centre, we would like to exchange ours views with yours.'* (December 14)

7.6.2 Boundary ordering devices

There are some boundary ordering devices in the games: the empty maps that were handed out to all participants to illustrate their draft plans by colouring spatial functions during the game; the information we provided on request during the games; the preliminary Pluspunt scenarios and plan; and the environmental exposure maps of the area (see colour figure 7.3 on page 212). They all serve as items that broaden, as well as demarcate the scope of the problems and issues articulated by including new aspects and connotations while shifting the focus and priority towards those new problem elements.

The policy and planning processes are usually coordinated in two ways: broad consultations first, or a preliminary plan first. Broad consultations was applied in the first game, as described by one of the participants:

> *'Our strategy was to obtain as much information as possible and present that to out alderman to design a plan. Much to our surprise, the final draft plan looks quite different than the one we started with. We planned the multifunctional centre at Pluspunt, but new things kept coming up. It is difficult: as we were very busy, we split so we could talk to everyone. Nevertheless, we ended up with less room for internal coordination.' (Urban Planning Departmen,t Group reflection, December 7)*

The second game focussed on a quick preliminary plan presentation, as described by one of the Aldermen:

> *'We wanted to present a number of scenarios early in the process, to prevent people from thinking we were doing nothing, and to meet their expectation to get down to business. We wanted to force stakeholders to a substantial discussion instead of pure interest advocacy. We were coordinating and selective in talking to other parties. We thought we could keep things open and take into account the stakeholder reactions to our preferred option. It was difficult, because most stakeholders want more than tob e consulted.' (Group reflection, December 14)*

These policy and planning processes require a specific kind of capacity building to integrate health in policies. One question is whether the Community Health Service is up to such a task of health agenda setting and advocacy. In the reflection immediately after the games are finished, participants question the role of the Community Health Service in such processes:

> *'We had difficulty to design a strategy, because we are a municipal service. How much initiative are we allowed to take in such matters? Who is the audience of the Community Health Service: the municipal organisation or stakeholders and citizens? As a public service we tried to answer all questions, the alderman did not like that. But people took advantage of our answers. Then we received a letter from the alderman with a ban on public speaking. Only then we finally got a meeting with the alderman.' (Participant in Community Health Service role, December 7)*

Participants view the CHS as a municipal organisation serving policymakers and citizens with information rather than representing or advocating a health interest in policy processes. In other words, the CHS does not have a power position, either formally or informally.

Moreover, one participant adds that the daily practice at a CHS consists of 'detailed work with numbers'. These numbers should be translated to what urban planning officials can actually do with them. Another participant adds that there is a lot of information available, but it is used selectively. Information does not guarantee action. Participants disagree on whether the CHS should operate an outreaching strategy, or stick to an advisory role to the municipality. The City Board should support that municipal officers learn how to interpret and act upon health information.

The participants labelled the best strategies to be those that focus on presentation and relation maintenance. In the first game, the Islamic Association was prepared to compromise, although later on they claimed too much room for the mosque at the cost of social services. In the second game, the Marlot residents from the very beginning opposed to every option articulated:

> *'The presentation of Marlot did not pave the way for a meeting: they did not accept anything. That attitude was counter productive. The first presentation was very firm. We considered them to be a difficult group, and not as a serious partner for consultation, as opposed to other resident groups. They built a coalition and developed an influential position in this matter.' (Aldermen, group reflection, December 14)*

7.7 Summary and reflections

In both games, policymakers set the agenda for health and adjust the Pluspunt development plan by removing the transport centre. There is, however, no explicit frame convergence on health. In both games, the Community Health Service wants to frame health more broadly, comprising lifestyle and social environment, but insufficiently finds opportunity to articulate and advocate that frame.

The non-health roles in both games explicitly frame health as environmental health and implicitly in the provision of social or welfare services. Moreover, the non-health roles in both games focus on potential bottlenecks of the proposed options, while the Community Health Service acts from the health issues that come forward in the Health Monitor. Just like other stakeholders, the CHS reframes the Pluspunt Plan as an opportunity to put the health problems in the municipality on the political agenda.

One of the immediate observations in both games is the crowdedness of activities, in which the CHS is only one actor. In reality, all these activities are hidden from observation unless one has a central position in the process. It directly confronts the CHS with the difficulty of accessing a municipal office, of which they are supposed to be part, yet being ignored in the rush of municipal officers and alderman consulting stakeholders, responding to their calls, and in the mean time trying to develop draft plans. Striking is the observation that the alderman of Social Affairs & Public health and the Social Development Department do not call upon the Community Health Service to make health visible as an aspect in the planning process. Afterwards, the Community Health Service feels neglected in her attempts to articulate the health theme in discussions. Besides public health, they are responsible for social and welfare services, and frame health from a service provision perspective. They respond to all the calls made upon them by stakeholders as well as the other municipal department, rather than pro-actively put health on the agenda themselves.

Reframing strategies are observed that are potentially helpful to the CHS. Some non-health stakeholders act as entrepreneurs in pro-actively developing plan alternatives in emerging coalitions. While other stakeholders act in the face of their interdependencies to realise their priorities in plan development, the CHS in both games adopts a rather one-directional, or supply-driven communication about health. They hardly undertake action to explore the demand for health issue solutions (at least among other stakeholders than the municipality). However, that is not a suitable strategy, as the CHS turns out to have an interdependent position as well, to make health accepted as a

relevant planning aspect. Moreover, stakeholders display strategic behaviour in reframing health information into relevant issues linked to their own priorities. Rather than proactively taking notice and advantage of concerns that stakeholders frame to be non-health (which allows the CHS to try and reframe that concern into a health issue), the CHS in response denounces and dismisses the way information is used, which, again, does not invite others to build good relations with them.

An observed barrier to frame convergence are the fixed perceptions, in both games, of other roles as 'self-interested profiteers', which obstruct the exploration of their potential contribution to a solution that serves the common interest. These often remain implicit during the game. The fixated frames come up in the group reflection meetings directly after the games, in which the 'victims' articulate them. Only then, participants become aware, which enables cross-frame reflection. Finally, routine behaviour among different roles in both games blocks creativity in mobilising power resources such as the media and the Municipal Council of Representatives, although those are controversial options for the Community Health Service, who are accountable to the Alderman and the Municipal Board of Administrators.

Although rather implicit, the participants did play their game relatively in concordance with health interests. The relative 'neglect' of the Community Health Service health frame is rather surprising considering that all participants in reality are related and committed to health. It raises questions about whether the Community Health Service is the most appropriate actor to advocate health. It also raises questions about the position of so-called experts on health: do they play an accepted role in local policymaking processes? The games seem to suggest that the position of local experts is different than that of experts at the national level, where there is less direct interaction with citizens, and stakeholders are represented by expert branch organisations.

Evaluation of the simulations by the participants

As the game simulation is an innovative research method, participants were asked to give their opinion on the content and organization of the games. The response to the evaluation survey a few weeks after the games is 79%. The participants graded the visualisation of bottlenecks and threats to agenda setting of health in reconstruction planning with a 7.2 (out of 10). Cases in point of those bottlenecks are the extent to which health issues got attention during the reconstruction planning process (4.9); the profundity of the debate (6.2); and the time spent on important topics in the process

(6.1). All participants found these bottlenecks realistic, though somewhat overrated as the game was labeled a 'pressure cooker'. The grades for the bottlenecks confirm the observations.

The extent to which the game was realistic was graded with a 7.7. Realistic features recognised are the dialogues and lobby work, civil service is passed by the politicians in final decision-making, residents from deprived neighbourhoods are consulted, yet hardly heard, interest groups are never satisfied, even if most of their requests are met. Normally there are many formal institutions and arrangements that temper pressure as well as progress.

Although the game simulations were not intended to instruct or train participants, they were asked whether the simulation changed their insight into these kinds of processes, because such games can easily be transformed into training tools. Participants graded new insights with a 6.1, while deepening existing understandings was valued with a 6.6. Finally, the organisation of the games was valued 7.5; practical support during the game (7.0); information to play the role (7.0), and time for playing and evaluating the game (6.3).

The game simulations have contributed to this research by putting efforts to put health on the agenda of other policy actors into the perspective of the full dynamics of such policy processes. In the games, the participants are confronted with different frames, interests and positions during and after the game. The games show how reframing health in non-health policy processes without organised explicit knowledge (in a research design) and guaranteed relations (in a process design of interactions) requires other than cognitive skills. Mobilising support requires reflective skills to create positive, tacit experiences in informal relations with policy stakeholders.

Chapter 8
Conclusions and discussion

The questions and purposes of this research are briefly summarised as an introduction to this chapter. Then, the conceptual and empirical findings are presented in answer to the research questions, and the implications for HIA practice are discussed.

8.1 The effectiveness of Health Impact Assessment

Health Impact Assessment has emerged from the need for health authorities to respond to complex population health problems. These problems are caused by combinations of individual and environmental ´determinants´ (Lalonde, 1973), which are not entirely known and are covered by different policy sectors. From a rational-technical approach, the determinants of such problems require a preventive approach at the population level that crosses the sectoral boundaries, aimed at creating 'Healthy Public Policy'. It requires integrating the health aspect in public policies ranging from policy adjustments to collaborative action. In order to early detect potential health problems from public policies or plans, Health Impact Assessment (HIA) is used to estimate or predict these impacts at the EU, national and local policy levels.

Nevertheless, a dominant concern of proponents of this approach is the effectiveness of HIA in influencing policy to prevent damaging impacts and promote healthy effects. Many authors in the HIA literature argue that the scientific quality should be enhanced in order to improve the effectiveness of HIA. In this thesis, we argue that the approach of technically oriented HIA aimed at evidence-based policy clashes with the political-administrative requirements and incentives, and ignores important social and normative implications of the issue raised. There is nothing wrong with the aim for Healthy Public Policy, yet, it requires a different approach in order to create the political and administrative conditions that are indispensable for policy change. This thesis aims to put HIA into a governance perspective to identify the purposes HIA may have in policy practice, the suitability of HIA to fulfil these, to reconceptualise Health Impact Assessment accordingly, and to incorporate the necessary strategies for fulfilling the purposes in the design of HIA. The central question in this study is thus a conceptual and an empirical

one: *What is the role of Health Impact Assessment in integrating health in public policy, and how can it be improved?* In the following five sections sections, the research questions will be answered.

8.2 Health Impact Assessment as a boundary object to reframe public policies

A brief overview of current HIA practices in the Netherlands and abroad learns that HIA is applied on many different topics and policy levels, in many different formats, with varying goals and purposes. This variation in ideas and practice requires a conceptual re-orientation on the relationship between HIA and policy in order to enable an evaluation of its effectiveness. The first research question refers to the ideas behind Health Impact Assessment, articulated in the HIA literature, about what it is supposed to do in relation to policies and policy processes, and how it is supposed to do that: *How can the relationship between Health Impact Assessment and the integration of health in public policy be conceptualised*?

As argued in chapter two, some HIA authors provide initial clues on how to conceptualise the relationship between HIA and the policy process, emphasising the need for an interaction design in addition to the research design and a long term focus on institutional change in addition to short term policy adjustment. These authors also define different purposes of HIA with regard to integrating health in public policies. As an outcome, the integration of health in public policy can be observed in the willingness, expressed by the non-health policymakers addressed by HIA, to invest in collective, sector-crossing action on health problems on a scale of low commitment to high commitment. Policymakers put the health issue on their own agenda; policymakers adjust their policy plan to HIA recommendations; policymakers engage in monitoring and preventing health problems in their own future policies or plans policymakers (resulting in a new division of labour); and policymakers create and redistribute organisational capacity and competencies in order to enable monitoring and prevention 'on the spot' (resource integration).

The question of *how* these commitments can be created remains obscure, however. Recent evaluations that focus on HIA effectiveness in policy change show a general lack of support among policymakers and of institutional incentives, and recommend to make HIA a recurring activity that is integrated in organsiational

procedures. Nevertheless, these evaluations hardly provide clues on how, exactly, to improve support for, and organisational integration of, HIA. One blind spot in the HIA literature thus are the strategies needed to fulfil the policy purposes of HIA. Although the Merseyside Guidelines for HIA do elaborate a bit on negotiating the Terms of Reference for the assessment with relevant policymakers and other stakeholders (Scott-Samuel, 2001), an important part of the strategies needed are the social aspects of creating usable knowledge for policy. To fill those gaps in the conceptualisation of the relationship between HIA and the policy process, more general theories of policy production and knowledge creation have been explored in chapter three.

An instrumental approach

An instrumental approach to the relationship between research and policy is well represented by the governance literature and the Knowledge Utilisation studies. Policy analysis shows a development in the view on policy production, in which the normative approach of rational choice (Simon, 1947) is supplemented or replaced with the empirical observations of political bargaining and exchange (Lindblom, 1959, 1979), and subsequently the cooperative governance through persuasion (Kickert et al, 1997; Koppenjan and Klijn, 2004). The Knowledge Utilisation Studies reflects this development in challenging the paradigm of 'Speaking truth to power' and focussing on the political aspects of policy production to explain knowledge uptake (Weiss, 1977, 1991).

The critique on the instrumental approach, however, reveals that it does not solve some persistent policy problems, which end up in a policy stalemate. Such 'intractable policy problems' (Hisschemöller, 1993; Hunter, 2003; Koppenjan and Klijn, 2004). apply to some of the public health problems that the Healthy Public Policy movement attempts to adress in HIA (Hunter, 2003). Schön and Rein (1994) argue that at the core of these problems is a conflict between perceptions on the policy problem and solutions between different actors involved. These perceptions define what is considered a fact and what is deemed relevant. Such 'policy frames' cannot be solved by evidence-based reasoning, because the 'facts' are disputed as well. Moreover, the resulting policy stalemates may very well induce a decision to refrain from action ('non-decision-making', Bachrach and Baratz, 1963), causing the problems to persist and become more pressing. Furthermore, the instrumental, static approach ignores this threat to democratic legitimacy of public policy, and fails to address the dynamics of policy change. Schön and Rein propose to replace the instrumental approach by a 'reflective design rationality'.

The reflective approach of reframing policy

The reflective design rationality portrays policy production as a reflective process of feedback and adjustments on initial and subsequent policy designs. Instead of reasoning on the facts of a situation, a design rationality requires policy designers to make sense of the multiple reponses to the initial design in interactions between the initial policy design within the network and with the context. These responses provide 'back talk' on a lack of fit between the initial design and the context that needs fixing. Such reflection may lead to 'reframing' the perceptions of policy problems and solutions.

The concept of 'reframing' (Schön and Rein, 1994) has been identified in different studies of policy change over longer periods of time. Framing is a way of representing knowledge within a network of relations built on a shared system of (policy) beliefs. Frames are clusters of interwoven normative and causal beliefs about policy problems and solutions, which foster communication and sense-making (Hoppe, 1998). The pragmatic solving of frame conflicts entails a reflective inquiry into the policy practices, rules, process, positions and arguments, and their underlying institutional and metacultural frames held by relevant actors. Schön and Rein have identified four strategies that enable a pragmatic resolution of frame conflicts: through contention (rejection of the solution proposed), marketing (adjust the design to accommodate the interests of the users, negotiation (compromise) or co-design (collaborative re-design).

Following this line of reasoning, sector-crossing public health problems in this research are conceptualised as 'intractable policy problems'. The question is how public health policymakers design their strategies to integrate health in public policy through HIA, and how HIA may enable cross-sectoral frame reflection to induce or guide the reframing of public policy. The concept of reframing furthermore adds an indicator of the integration of health in public policy to those already identified from the HIA literature, which are elaborated in the table 8.1.

The integration of health in public policy

Besides the indicators already identified (agenda status, policy adjustment, division of labour and resource integration), integration may of course also be absent. In cases of unresolved frame conflicts, non-decision-making may occur and end up in a policy stalemate: policymakers deny the call for collaboration of policy adjustment in the HIA (or refrain from any response). The reframing concept, on the other hand, introduces an outcome of frame convergence, in which policymakers are enlightened but, as yet,

refrain from action (Schön and Rein, 1994; Weiss, 1991). See table 8.1 for a summary of the indicators on the scale of health integration in public policy by a proxy of the commitment of the policymakers expressed in a shared argumentation (frame convergence, agenda status) and/or an investment in cooperative action for health (policy adjustment, division of labour, resource integration). The division of labour in monitoring and responding to health impacts by investing resources reflect a change of intersectoral rules about positions and responsibilities, and are therefore labelled an institutional change.

Table 8.1 Integration of health in public policy: a scale of commitment of non-health policymakers addressed to invest in health, expressed in word and act

Commitment	Indicator	Observation
Individual policy level	0. No commitment	Policymakers deny the call for collaboration or policy adjustment in the HIA, or refrain from any reponse
	1. Frame convergence	Policymakers explicitly recognise the relationship between a potential health problem and non-health policy
	2. Agenda status	Policy makers place potential health problems on their agendas to a) discuss and explore, and b) make decisions on whether and how to act on them
	3. Policy adjustment	Policymakers adjust their plans to HIA recommendations
Institutional level	4. New division of labour	Policymakers engage in monitoring and preventing health problems in their own future policies or plans
	5. Resource integration	Policymakers create and redistribute organisational capacity and competencies in order to enable monitoring and prevention 'on the spot'

HIA as a boundary coordination object

In this research, public health policymakers are observed on how they design a strategy to create Healthy Public Policy by collaborative action with other policy sectors. The analysis is focussed on the way they act on the frame conflicts such an approach evokes. Reframing can be enhanced by inventing 'new features of policy objects or pratices that synthesize elements of the conflicting frames'(Schön and Rein, 1994). One of these features may be the creation of 'usable knowledge' (Lindblom and Cohen, 1979). This is addressed by the concept of 'boundary work' from the Science and Technology Studies (STS). It occurs when actors challenge the cognitive authority of science, for example in policy frame conflicts. Reconceptualising Health Impact Assessment as a coordinaton tool instead of scientific research may enable the HIA to become instrumental in the reframing process. As such, it would provide opportunity for

negotiating the boundaries between health, health determinants and public policy through reconstructing the knowledge status of the content of the HIA. HIA is thus conceptualised as a 'boundary object' (Star and Griesemer, 1989) that provides a research as well as an interaction design for creating 'usable' knowledge (Lindblom and Cohen, 1979) and 'doable' health problems (Fujimura, 1996). The design and process of the HIA may provide boundary-ordering devices to reposition the work of health and non-health policy-makers in response to the claims of the HIA. Standardisation of methods for data collection and interpretation may help to build fact stabilisation in the knowledge network.

This conceptualisation provides an innovative perspective on both the instrument of HIA and the realisation of public health policy, as well as on cross-sectoral policy practices in general. The question is whether, and how, HIA as a boundary object enables reframing of public policy through loose or more strict designs, and what are the consequences for the integration of health in public policy? The conclusions to the empirical questions described below are linked to the reflections presented at the end of each empirical chapter. For more empirical illustrations, see those reflective sections.

8.3 Empirical findings

Does the HIA succeed in reframing policies to integrate health considerations? In the next sections the conclusions to the research questions are presented.

8.3.1 Intractable public health problems

The (potential) health problems identified in the three HIAs in the case studies show characteristics of intractable policy problems. All potential health problems are multi-causal and partially unknown: how noise nuisance (HIA Dordwijk) and social safety (HIA Housing policy) exactly produce health problems, and what predetermines the development of obesity at population level. As a result, the policymakers addressed consider the evidence the HIAs produce rather inconclusive. The ambiguity of the problem is reflected in its potential status of the problems when policymakers in the Dordwijk HIA and the HIA on obesity question the underlying methods of extrapolation

and prediction. Likewise, the ambiguity of the problem is observed in policymakers who accept the solution, yet reject the problem definition, such as in the Dordwijk HIA and the HIA on the Covenant on Obesity. In the Dordwijk HIA the houses are relocated to make the plan financially feasible and politically legitimate rather than because the health problem is deemed insurmountable. The Covenant partners engage in the Covenant because of strategic reasons as well, rather than because they feel they are responsible for the obesity problem and they have to fix it.

An example of the dynamics of the policy problem is reflected in the HIA on Obesity. While the Ministry of Public Health initially expresses an interest in analysing the effects of food advertisement restrictions and signposting (a hallmark on food products to distinguish healthy from unhealthy products) in HIA, those topics are excluded or disqualified later on because the Covenant process has led to a commitment to self regulation and cooperation rather than legal measures. Moreover, signposting has become a sensitive subject in the Covenant as some companies 'preliminarily' present an alternative system to promote their reputation and produce a competitive advantage. While signposting is dismissed during the HIA process, the objections to advertisement restrictions are articulated after the HIA is finished, leaving it with little relevance to the changed commitments in Obesity policy.

8.3.2 Limited commitment to integrate health in public policy

To what extent, and how, is health integrated in the policies and plans in the case studies?

An overall conclusion about the outcome of HIA is that, in the cases analysed, commitment to integrate health in policy is only observed at the individual policy level. Institutional policy change (a new division of tasks and resource integration) only occur to a certain extent. The observed commitment at the individual policy level moreover is rather ambiguous. This is elaborated below. Table 8.2 summarises which commitments on the scale of willingness to integrate health in public policy have been observed in the case studies.

Table 8.2 Summary of the observed commitments among the policymakers addressed to integrate health in policy in the case studies

	I. HIA C&E on urban reconstruction plan	II. HIA housing policy*	III. HIA Obesity policy**	IV. Integration of health in policy without HIA in game simulations
Rejection or denial of HIA recommendations	During the process yes, in the end they are accepted	No	Yes	Attempts for explicit health advocacy are mostly neglected
Frame convergence	No, acceptance on strategic motives	Yes, in the housing officials directly involved	No (within the Covenant yes, but not as a result of the HIA)	Not on health explicitly, although all interests are addressed in the final plan
Agenda status	Yes, aldermen agenda; Several other HIAs follow on request in other urban projects and municipalities	Yes, explorative essays on housing, safety and health within the Housing Ministry	No	Yes for environmental health urban planning agenda, other health aspects remain implicit
Policy adjustment	Yes, housing relocated Building construction recommendations followed	No, although health mentioned in action plan 56 deprived neighbourhoods; Action plan 'Youth, environment and health'	No (within the Covenant yes, but not as a result of the HIA)	Yes, freight transportation centre removed from urban residential area
Division of labour	Limited	Limited	No	Not explicitly for health
Resource integration	Limited	Limited	No	Not explicitly for health

*The health sector follows up on HIA recommendations: HIA on national urban policy; development manual 'healthy and safe construction'; development 'HIA in EIA' (environmental impact assessment)
** The HIA does contribute to HIA model refinement and the development of qualitative methods for HIA like Delphi

Rejection or denial of HIA recommendations

In the Covenant case, the HIA ends up in rejection by the public health policymakers themselves. Their argument concerns the lack of rigour of the estimates. From the process reconstruction it becomes clear that the Covenant is a very sensitive political issue within and outside the Covenant. The partners have to be constantly reminded of the added value of the Covenant to their purposes, while public opinion and some parties in Parliament need te be convinced of its worth as well.

Frame convergence

In the HIA on Housing policy, the housing officials who are directly involved in the HIA change from an initially sceptic frame of the relevance of health in housing policy towards an expressed interest in the issues of physical activity and social safety in the housing environment. The other cases show no frame convergence: they reject the problem definition and the claim for policy change.

Agenda-setting

Except for the policymakers of the Covenant on Obesity, the policymakers addressed all put health on the agenda, yet for different reasons. While the urban renewal manager in the Dordwijk HIA briefly consults the Aldermen before deciding to follow the HIA recommendations and publish the HIA report together with an intermediary project report, the housing strategy officials publish an essay to further explore the relationship between health and housing within the Ministry, and organise a follow up meeting with one of the co-authors of the HIA. The Housing HIA moreover contains recommendations mostly directed at the Ministry of Health (conducting more HIAs etc), which rules out a decision on whether housing policy is to follow HIA recommendations. In the Obesity case, the health officials initially intend to include, but later on decide to keep the HIA off the Covenant agenda. In the game simulations, the Urban Renewal Department puts environmental health on the agenda after articulated citizen concern, while Community Health Service calls for attention are left unanswered.

Policy adjustment

While the Dordwijk Plan is adapted following the HIA recommendations, as described before, in the other cases there are no, or only minor, adjustments. In the Housing HIA, the White paper has already passed Parliament when the HIA is conducted. Moreover, the officials involved are less concerned with specific policy development and implementation than with long term housing strategies. Health is mentioned in two Action plans, yet how to address it is not specified. The obesity HIA ends with research recommendations rather than policy recommendations. In the game simulations, there is no HIA conducted. Policy adjustment is observed in both games. The Community Health Service successfully moves municipal departments to clean the park from drugs syringes, and to commission research into the environmental health aspects of the area. The neighbourhood renewal proposal, the end product of the games, however, is mostly

based on voluntary cooperation between participants other than the Community Health Service representing health interests.

Division of labour

A new division of labour is hardly observed in the case studies. Only in the Dordwijk HIA, the project manager commits the urban renewal plan to the HIA recommendations in the intermediary report presented to the Municipal Council of Representatives. In the game simulations, the coalitions between municipality and societal partners (e.g. the housing corporation and residents) are based on negotiated commitments to act on specific problems, such as the quality of housing renovation in an area adjacent to the planned area.

Resource integration

There is no resource integration for health problems observed. In the Housing HIA, the Ministry of Housing initially intended to co-finance the HIA with the Ministry of Health, yet, never received an invoice. Network integration is not continued after the HIAs are finished, except for the Covenant, which already exists when the HIA is initiated. In the game simulations, resource integration occurs within the coalitions, of which the Community Health Service is not part. The CHS is not explicitly excluded, yet, lacks the relations to hook up with other stakeholders to build coalitions. The coalition partners share the benefit of the resources represented in the coalition: e.g. residents in the adjacent neighbourhood profit from housing corporation investments, while they give up their claims to the new housing, allowing profits to co-finance renovation.

Briefly summarised, all HIAs have created dynamics in the policy or planning processes, resulting in different levels of commitment. The HIA starts a process of deliberation, although it is hardly or not at all continued after the HIAs are finished. In the game simulations, different health aspects (e.g. environmental or behavioural) seem to compete for attention. Yet, the end proposals are both in concordance with health interests, although health remains implicit in those proposals as well as the negotiations leading towards them. Because of the relatively low or mixed levels of commitment in all the cases, one may wonder whether HIA is really needed to integrate health in public policies, or does it complicate that process? The reframing processes provide some clues.

8.3.3 Current HIA practices generate conflicting frames of health in policy

The health frames articulated are conflicting in all cases. For example, while the City & Environment model in the Dordwijk case is aimed at risk prevention, the renewal project group enacts a health promotion perspective in the Health Park Plan. A striking observation in all cases is that even within the public health sector, and the Ministry, there are conflicting frames of health and HIA. The most obvious manifestations in the cases are: a) the alderman of health care in the Dordwijk HIA who together with the renewal project manager urges the HIA practitioner to circumscribe the HIA to manageable issues from planning perspective; b) the embargo on the HIA report in the Housing HIA; c) the condition to separate the assessment from policy analysis in the HIA on the Covenant on Obesity, and d) the complete neglect of the Community Health Service calls for attention to social and behavioural aspects of health in the game simulations.

The game simulations show that the neglect of this health frame is not merely caused by a lack of attention in crowded planning processes where health must compete with other interests, but also by different frames of the kinds of solutions the Pluspunt renewal may offer to which kinds of problems. The Pluspunt Plan cannot solve all the problems articulated by stakeholders; yet, some issues are successfully incorporated into the plan while others are not. Moreover, the game simulations show that the Community Health Service, rather than its usual administrative and professional roles, with HIA is pushed into an advocacy role, for which the CHS is not particularly suited.

HIA frames

While in the general HIA discourse among HIA developers, experts and practitioners, the assessment of *potential* impacts from *proposed* policies is the central focus, resulting in *predictions* or *estimates* of health impacts, this representation proves difficult to realise in policy practice. The case studies in this research show that these predictions or estimates are questioned at all times by policymakers involved. They consider them to be either too abstract, subject to (too many) uncertainties, or in fact absent. Another argument against this HIA frame is that the policymakers experience the HIA as a policy test rather than as an instrument to frame conditions for policy optimisation.

HIA cannot be assumed to always represent and articulate a similar health frame to policy. A comparison of the Dordwijk HIA and the game simulations show that policymakers addressed have opposite policy frames with respect to health: health as a promoting element of the plan, or health as a restricting element of the plan. The policy

frame of policymakers addressed determines for a large part how successful reframing can be designed and undertaken.

Policy dynamics

In the obesity and housing HIA there are contextual, already ongoing changes that may be a resource for enhancing the intersectoral capacity of HIA. In the housing HIA case, the housing policy transition [44] is the driving force behind the willingness of the Strategic sub department officials to become involved in the HIA. The transition, instigated upon the Parliamentary Enquiry into the housing subsidies the 1980s, marks a re-arrangement in government-society relations (from public rent sector governed by the Ministry towards a private housing sales and rental market within a legal framework set by the government), and in intra-governmental relations (i.e. low rents through subsidies no longer used as an enabler of controlled low increase of wages). It marks a priority change from quantitative supply towards demand and quality driven housing policy, inducing attention for social, safety and health conditions in the housing environment and public space. In a process-oriented organisational reform at the Ministry, the Housing sub department of Strategy is established to create room for relatively independent middle and long term explorations of future housing demand and governability. These are fertile conditions to an invitation from the Health Ministry to explore housing-health relations in a Health Impact Assessment, even though it has not directly led to specific measures and implementation.

In the obesity case, the Covenant on Obesity, with important public and private sector-crossing participants, could provide HIA practitioners (and commissioners) with a potentially willing audience. That audience hosts a wide range of knowledge resources relevant to *a* feasible and acceptable implementation of obesity prevention policy by the government, societal actors and individual citizens. The Covenant offers experiential knowledge resources (such as cooperation and coordination experience in Covenant processes, public and external relations management in private businesses). In addition to the already mobilised explicit resources of authoritative health scientists and their reports in existing obesity policy, additional explicit knowledge resources are available in marketing, business, consumer behaviour expertise. Nevertheless, the HIA is considered incompatible with the Covneant process, because the evidence provided in the quantitative model is at odds with the obesity frames of the Covenant participants.

The mobilisation of such ongoing changes outside or at the margins of the public health sector as preconditions for HIA is even more important, according to the

observation in all three case studies that the health authority [45], as an administrative enabler of HIA, acts ambiguously. In all cases, (limited) financial and organisational resources have been made available to initiate HIA (develop models, train professionals, create a budget), yet hardly any resources have been made available to enable the actual applications of those models in practice, and implementation of HIA recommendations in policies. Without proper resources, HIA proponents cannot show its worth.

8.3.4 HIA design not compatible with strategic reframing by policymakers in a dynamic context

Policy frames in the cases turn out to be dynamic in all cases. This offers opportunities to set the agenda for health. The Dordwijk Health Park offers an opportunity within normally non-health oriented urban policy development, just like the housing policy transition creates room to explore the social aspects of housing environment. The Covenant on Obesity is an innovative governance arrangement, opening up opportunities to engage non-health actors. Nevertheless, in all cases controversies arise that the policymakers addressed make explicit in the obligatory points of passage for the HIA. The strategies for solving the controversies that arise when introducing the HIA range from contention or rejection of the HIA by the Ministry of Health in the Covenant HIA, negotiation in the Dordwijk case, and co-design of the HIA in the Housing case.

In the game simulations, reframing is observed without HIA structuring the strategies. Health frames momentarily converge when the CHS raises alarm about drugs syringes scattered around the area where children are playing, and when indignant residents turn to the media to express their concerns about (alleged) soil pollution. Only environmental health concerns from residents and the CHS together, about air pollution and noise, lead to more permanent frame convergence and urban plan adjustment. The role of experiential knowledge proves to be very important in designing and applying effective lobbying strategies, which do not seem to be central in the training of skills and competencies in Community Health Services. Moreover, in both games and among different roles including the Community Health Service, fixed perceptions of other roles as 'self-interested profiteers' obstruct the exploration of their potential contribution to a solution that serves the common interest. In other words: prejudice obstructs the

[44] A fundamental, irreversible, long term institutional change of housing policy priorities and procedures

necessary extension of the health network outside the institutional boundaries to mobilise indirect channels to policymakers addressed.

Health determinants as boundary-ordering devices

The HIA provides opportunity to discuss the departmental and sectoral boundaries of authority and responsibility in public health problems. In the general healthy public policy discourse, for instance, health determinants theory (chapter one) has enlarged the scope and definition of health to include its causes instead of its consequences (absence of disease). In the case studies, the health determinants are presented as policy objects or policy aspects that redefine the boundary between health en non-health, as well as enlarge the scope of the policy subject to include health. The health concept is reconstructed to include policy terms formerly (and often still) labelled as 'non-health': e.g. *environmental* health in spatial planning and urban construction (in which the environment is an already institutionalised policy aspect), *safety* in the living environment in housing policy, and television *advertisement* of food in private marketing strategies.

Research and interaction designs as boundary-ordering devices

The cases of HIA in this study depart from different design structures. The Dordwijk HIA consists of a detailed quantitative City & Environment model. By lack of knowledge and data, the HIA on housing policy departs from an interaction procedure instead of an elaborated research design. The HIA on Obesity departs from a given assessment design, as well as a given governance structure (the Covenant). The distinction serves to illustrate what is the added value of the combination of an interaction and an assessment design, and how these designs interact and develop in order to induce or guide the reframing of public policies to integrate health considerations.

As concluded in the thesis by Lennert Veerman, the method of HIA consists of two steps: estimating the effect of proposed policy measures on determinants of health in terms of increased or decreased exposure, and making predictions of the impacts on health. Veerman states that while health impact predictions can be established when data are available, the exposure to determinants is more difficult to establish, because that requires specific (non-health) knowledge on the policy and determinant at hand. As a result, HIA requires multi-disciplinary cooperation in order to formulate realistic

[45] The Ministry or in the municipal HIA case: the Alderman, public health official and Community Health Service

assumptions, hypotheses, and extrapolations, obtain access to relevant databases and methods, and strengthen relations with policymakers who know and trust these experts. The research models in the City & Environment HIA and the Multistate Lifetables enable multi-disciplinary coordination to develop methods and data into knowledge into 'evidence'. Nevertheless, it does not reach the status of evidence.

In the case studies, the cooperation with other knowledge disciplines is not self-evident and needs continuous interactions to clarify what is needed (when and how). In the Dordwijk HIA, the municipal environmental officers lack a pressing need to deliver the necessary data in time. Moreover, they question certain methodological aspects of the HIA, which may even become competitive to their own environmental studies. The wish of the regional Environmental Platform to experiment with HIA may become at odds with municipal environmental interests. In the Housing HIA, cooperation is organised with experts on the determinants analysed: traffic safety, physical activity, social safety and safety in the house. As the expert institutes do not formally depend on each other, there are no significant obstacles in the process.

The interaction arrangement in the Housing HIA has proved to enable reframing in cases where a specific assessment design still needs to be developed. The absence of an interaction arrangement in the Dordwijk HIA may explain why expectations have been exchanged only at the end of the process, allowing only for damage control instead of a commonly supported HIA. The HIA on Obesity, however, could not benefit from the Covenant because it was detached before the assessment started.

An important observation in the Housing and Obesity HIAs is that the interaction arrangement is developed along the way, just like the research design. In interactions with policymakers addressed, the rules of the game are developed and adjusted. The three-step plan for the Housing HIA is adjusted to address other policy actors and comprise more meetings to prepare the HIA. The timing of the formal HIA assignment after the Policy paper is approved in Parliament has proved to be an enabling rather than disabling element in the HIA. Within the Covenant, the partners initially settle the basic responsibility and accountability rules, before elaborating who is going to invest in which actions, when, how and with whom. The open process contributes in both cases to the construction of a 'doable problem'.

Is HIA effective as a boundary object in reframing policies to integrate health, and how can it be improved?

The conclusion to the final research question is that HIA is only to a limited extent effective in reframing public policy to integrate health. HIA practices in all cases remain the primary responsibility of the public health sector with limited or hardly no involvement of the other policy sectors addressed. Moreover, the HIA proponents disregard the opportunities and resources that are present in actors and stakeholders outside the bureaucratic realm of the public health sector. The boundaries between between different policy sectors are not discussed, and, with the exception of the Housing policy HIA, there is limited consideration for 'usefulness' of knowledge to the policymakers addressed, nor for the feasibility of policy alternatives to make problems 'doable'. Although there are some boundary-ordering devices that emerge during the few interactions undertaken, these do not result in policy change, except for the Dordwijk case.

Even though policymakers put the health topic on the agenda, and sometimes even change the policy plan, the associated motives reflect strategic frames on the issue. The internal friction and conflicting frames between different sub- departments within the Ministry of Health and within the public health sector, observed in all cases, account for a great deal of the ineffectiveness of HIA. The embargo on the Housing HIA report, the conflict of interests the Alderman of Health Care is confronted with in the Dordwijk case, the rejection of the HIA in the Covenant case all reflect the uncertainty within the public health sector on how to proceed.

A second important finding that accounts for the limited effectiveness of HIA is that the HIA proponents mostly ignore the strategic dimension of the claims directed at policymakers in different sectors. We have observed that the acceptance of the proposed solutions to the health problem in the case studies did not result from the health arguments used, but from strategic-tactical reasoning by the policymakers addressed in the HIA. First, the project manager in the Dordwijk case, assuming that a health impact assessment would show the health benefits from the Dordwijk Health Park Plan, strategically identified the HIA as an opportunity to provide the project with positive attention in the media and the City Council. Later on, the project manager wanted to protect the urban renewal plan against the risks the HIA posed: the financial risk of an unattractive housing location to potential buyers, and the political risk of a negative image or even plan rejection in the City Council. Also in the Covenant case, we observe that the (private) Covenant partners have engaged in the Covenant process to protect

their public image, prevent legal regulations by self-regulation, attract new consumers or create new strategic alliances.

The policymakers in the Dordwijk and the Covenant cases reject the problem definition of a sector-crossing health issue for which they would be co-responsible, yet, they accept the proposed solutions for strategic reasons. The frame conflicts observed are solved pragmatically when policymakers reject the HIA in the Covenant on Obesity case (the continued contention strategy by Schön and Rein), or when policymakers negotiate the options to turn the HIA into a win-win situation in the Dordwijk case (the negotiation strategy). The Housing policy case is the only observation of an attempt to co-design the HIA in a frame-reflective approach that leads to reframing in the officials directly involved.

A third observation that accounts for the limited effectiveness of HIA in reframing public policy are the conflicting purposes and roles that are required to create support among different sectors to integrate health in public policy. Especially in the game simulations, these role conflicts between the expert, the advocate and the process manager become visible. In chapter seven, the position of the Community Health Service shows friction between the expectations from the environment to play the role of health advocate, while the formal position of the CHS does not explicitly allow such a role. The CHS is not consulted within the municipal institutions involved, because the CHS is an administrative organisation, which is supposed to implement the requirements of the Collective Prevention and Public Health Act, and the local health policy plan. Is health advocacy necessary given the fact that the other participants did implicitly consider health and the outcome did reflect indirect and direct benefits to health? If the citizens and stakeholders in such policy processes do not support the health probems a CHS wants to put on the agenda, then there must be strong arguments to continue the advocacy strategy. Besides, independent organisations such as consultancy agencies might be more in the position to advocate health that way without negatively infecting the administrative and political relations.

8.3.5 Overall conclusion

When combining the conceptual and empirical findings, the overall conclusion of this research is that the current emphasis on a technocratic design and practice of HIA in the Netherlands obstructs rather than facilitates the integration of health in public policy. It

leads to a politicisation of knowledge rather than to the rationalisation of policy. Its (implicit) purposes of improving the input and output legitimacy of public policy, identified in chapter three, are hardly fulfilled. While HIA may have improved the output legitimacy of the project plan in the Dordwijk case in the decision to adjust the project plan, the input legitimacy of public policy is ignored in Dutch HIA practices because there is no participation of stakeholders or citizens. Public health policymakers in the Netherlands are in need of a reflective redesign of HIA in practice in order to create (some of) the conditions for the integration of health in public policy.

Given the conceptual explorations in chapter two and three, it is not surprising that the emphasis on a technical design for HIA in Dutch practice has proven to be hardly effective in integrating health in public policy. In two of three cases, the HIA complicates rather than facilitates the desired policy change. On the other hand, in all cases, policymakers put health on the agenda, which shows how HIA does create some dynamics in the policy process, yet, lacks the capability to turn it into a tangible result. The HIA on Housing policy, however, shows how an interaction design with an open mind and a reflective approach can induce a reframing of policy in the policymakers that are directly involved in the HIA process. The observations in this case that the converged frames did not spread to other departments in the Ministry of Housing, or to housing implementation actors provide the kind of feedback that is needed to optimise the HIA design for future practices.

8.4 Discussion

In the next section, we will account for the validity of the conclusions and the claim for a redesign of HIA . These, of course, have important implications for practice. The creation of dynamics and the management of frame reflection in HIA is elaborated in sections 8.4.2 and 8.4.3. From a policy perspective, this research has lead to a reconceptualisation of the instrument of HIA. It requires a new definition for HIA, which is presented in ection 8.4.4. Finally, to mark this thesis as one point in the learning process on how to integrate health in public policy, a proposition for debate is posed as a way to manage the politics of healthy policies in the long run.

8.4.1 Methodological reflections on this research

The research process underlying this thesis is characterised by different, re-occurring stages of continuous theoretical and empirical reflection. Based on increased understanding, the conceptual model has been revised several times, as well as the analysis of the case studies. This interpretive approach of reflection-in-action has enabled us to identify the explanatory mechanisms underlying a number of conditions and strategies for HIA and the integration of health in public policy. Nevertheless, the conclusion not to drop HIA as an ineffective instrument, but to continue its practice in a revised way shows a 'normative leap' from description to prescription that is accounted for in the next section.

The 'normative leap' in prescribing a redesign of HIA

The innovative feature of this research is the link between the governance perspective on Health Imapct Assessment and the social aspects of knowledge creation, which helps to refine the purposes for HIA towards improving the input and output legitimacy of public policy. The concepts of boundary work and reframing public policy can be used as strategies to fulfil those purposes. The empirical observations in the case studies, however, show a flawed process in which boundary work and reframing can hardly develop. This is accounted for by the brief period of oberservations in this research relative to the studies in which the theoretical concepts were developed. The reason why we conclude that the integration of health in public policy is in need of a reflective design for HIA rests on a number of observations.

To begin with, from the empirical observations in this study, the question may arise whether there is an alternative available that is likely to be more effective than Health Impact Assessment. The only alternative observed is the informal coordination between departmental officials, either in interdepartmental project teams or on an ad hoc basis. HIA has been developed just because the ad hoc communications within the bureaucracy proved to be ineffective. In the case of interdepartmental project teams, HIA may not be necessary anymore, because support is already established to take part and invest in those teams. HIA, on the other hand, has showed to promote agendasetting and building support. However microlevel it may be, HIA has succeeded provoking a response from the policymakers addressed, resulting in an agenda status for health in the Dordwijk Plan and in the strategic housing policy department respectively. Even though the Dordwijk project manager did not consider health as a decisive

argument, the policy adjustment resulted in a positive direction for health. The reason why the influence stops when the agenda is set is that the process of interactions stops. That is why we argue that the process of interactions should be integrated as a crucial component of HIA rather than excluded from HIA. The alternative proposed in this thesis is to redesign HIA as a hybrid, flexible and reflective process instead of a fixed research assessment with fixed rules and roles.

Secondly, the design and development of HIA may learn from the practices of environmental and social impact assessment in the United States, where the same technical orientation has been observed to become politicised and replaced by an independent, participative and reflective design (Carley, 1986; Hajer, 1991). Compared to EIA and SIA practices, HIA practice in the Netherlands is still in its infancy. The stages of reframing are difficult to identify in the brief period of observation of one single HIA in a specific policy area in this study. Perseverance, learning and diffusion, and capacity building typically develop in multiple applications of HIA in the same policy area with the same policy actors and stakeholders, which are, as of yet, not available in the Netherlands. HIA still is in an experimental stage, confronting other policies with a new challenge and proponents are learning to cope with the feedback, criticism and disqualifications they are confronted with in return. We argue that, as a result of a lack of room for reflection in the HIA design, there is a need to formalise that learning process through the incorporation of policy feedback into the HIA design.

Thirdly, the 'normative leap' we take by prescribing a reflective redesign of HIA is based on the observation that the concepts of reframing and boundary work have been identified in empirical studies that took a historical perspective over decades. These studies describe 'success stories' that serve as 'best practices' in policy change and knowledge creation respectively (Schön and Rein, 1994, Star and Griesemer, 1989).We use them as sources of inspiration to improve HIA practices.

Nevertheless, there is no proof that the proposed alternative will guarantee a better integration of health in public policy. Participation, for example, is contested in political and academic debates: who represents who, what are the benefits to whom, do the benefits outweigh the transaction costs of mobilising participants? Therefore, an important recommendation for research is to analyse such participative practices of HIA thoroughly. These practices occur in Anglo-Saxon countries, and Thailand has even embedded the participatory HIA in the new National Health Act.[46]

[46] According to the Thai National Health Act B.E. 2550 (2007), HIA is designed to be a "social learning process", which has been developed so that all stakeholders in society can be involved in examining the

Validity and generalisability

In order to establish the internal validity, the case reconstructions have been fed back to key actors in those cases. Nevertheless, this research comprises of three case studies and one game simulation, which raises questions about the generalisability of the conclusions. We have argued that the effectiveness of HIA in integrating health in public policy depends on the specific context characteristics and dynamics. As a result, the design of HIA would have to address both the universal quality criteria for research and the local setting at the same time. While the policy frames, rules and routines, capacities, network relations may differ between cases, the process of boundary work to enhance or guide the reframing of public policy through HIA is applicable across cases, because this process is reflective of those characteristics. Boundary work enables the continuous adjustment of the HIA design of research and interactions to these local demands, characteristics and possibilities.

8.4.2 Practical implications for HIA: creating dynamics in the HIA process

The case studies show how policy change as proposed in the HIA not necessarily results directly from good quality HIA, as we have seen in the Dordwijk HIA (chapter four). Moreover, the absence of policy change does not mean the HIA was badly conducted, as we have seen in the Housing HIA (chapter five). Although a recognised knowledge base will help in producing convincing arguments, the relationship between scientific quality and policy change depends on much more conditions in the process. The case studies show that the processes of policy production and knowledge production in HIA are inextricably bound up in what Van Buuren calls 'interwoven threads for establishing facts, creating images or meanings and reaching a consensus' (Van Buuren, 2006). He proposes to purposively interweave those threads to produce satisfactory policy design choices, by means of alternating the emphasis on different roles and procedures during the process. If HIA is heading for deadlock in interaction with policy processes, the alternation of roles and procedures may introduce new elements to the process that enable an escape from stalemate.

One striking observation in the case studies is the shift in different roles of the HIA proponents during the interaction process. Front stage the HIA is to deliver scientifically sound evidence of health impacts from policies from an independent, objective position

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health impacts of policies, projects or activities that have already affected or may affect groups of people (NSW Health Impact Assessment Project eNews, June 2007, no. 18).

(HIA City & Environment, HIA Covenant Obesity). This can only be realised, however, through backstage processes of networking, mobilising support and power resources directly with the policymakers addressed, or indirectly with powerful stakeholders who may influence the policymakers addressed (Bal et al, 2002). In this process, the HA proponents have to negotiate the boundaries of their mandate to analyse health impacts and advise policymakers, which are made explicit in the Terms of Reference for HIA (Bal, 1998). The policymakers turn these Terms into a pragmatic mandate that serves their priorities and capacities. In HIA literature, these Terms are often seen as a precondition for HIA. This research shows that the Terms are not a starting point for the HIA, yet, are the result of important deliberations with policymakers and stakeholders that form the backbone of the HIA process.

In other words, the *feasibility* of a HIA is an ongoing process rather than a precondition. It can be enhanced, triggered, induced. In that light, the importance of assessing feasibility as a conditional touchstone at a certain point of time is in inferring feasibility-inducing strategies. The receptiveness for HIA may be enhanced by an explorative discussion of options, in which the policymakers are 'seduced' to take part by showing their potential gain in engaging with a HIA. Yet, the potential gain may, of course, be unknown at the beginning, so the first discussion should be aimed at commitment to the process rather than to the substance of the HIA.

It would be wise not to combine these roles of 'independent expert' and 'policy entrepreneur' or 'health policy broker' at the same time or in one person so as to avoid credibility problems. Both are necessary to maintain usefulness of the HIA. So how is scientific integrity maintained while at the same time enhancing the feasibility of policy change? A distinction could be made between a researcher responsible for the actual assessment, while an intermediary 'spokesman' is introduced to handle all deliberations, negotiations, and other contacts with the policymakers and stakeholders involved. Another option could be to distinguish between the Community Health Service as a 'front office' to handle all communications with policymakers and stakeholders, while a 'back office' (such as the RIVM or private consultancies) performs the actual assessment. Further practical implications are described in the next section.

8.4.3 Delivering 'serviceable truth'

The empirical findings help practitioners to develop a grip on the complexity of policy change. This is elaborated in recommendations for a reflective redesign of HIA, oriented at delivering 'serviceable truth' (Van Eeten & Ten Heuvelhof, 1998) to adequately address intractable policy problems.

The practical implications for HIA practice are that these problems cannot be solved easily. Different actors in different settings need to be confronted with them over and over again, until there is a window of opportunity to change them. HIA not only assesses health impacts, but also detects when a window may open. The process design proposed below, which also comprises policy analysis, focuses attention to the latter. Not only does HIA contribute to the detection of a policy window, it may also influence the conditions with which a policy window may open, for instance through having influential stakeholders participate in the HIA and making the health issue public. If operated in a flexible way, the research and interaction designs are mutually reinforcing in evoking a reframing process of health, HIA and policy. While both are necessary conditions, neither are sufficient conditions for the integration of health in public policy. If operated flexibly, they enable controversy around the policy as well as knowledge implications of health issues to be resolved by reconstructing the authority of 'evidence', 'usable knowledge', and 'doable problems'.

A process design and process management for HIA

Fine-tuning the design of HIA to the content and processes of the policy plan addressed is expected to enhance the commitment of policymakers to integrate health in their policies. Cooperation requires a continuous reflection on the problem and solution frames and capacities of the policy actors involved. Frames of health, HIA, and policy are fed by the organisational and policy culture in which people work (Bueren et al, 2003). Formal and informal contacts may bridge the cultural differences between different policy fields. With a reflective design, HIA will create more room for dialogue and exchange, in which the co-construction of research design and rules of the interaction game with the policymakers addressed enable the identification of common grounds for cooperation (Berg, 2004). That requires a flexible HIA team, in which different kinds of knowledge and skills are available to enable the mobilisation of independent expert, as well as advocacy and mediator or process manager roles. It also requires a strategy for recurrent HIAs in order to build experience and more structural relations.

Moreover, the experiences and consequences of HIA need to be evaluated as a learning strategy to improve future applications.

Our porposal combines the input from health professionals and policymakers. In the first two stages, policy analysis is required of the starting point of social relations between health and non-health parties involved, which will result in a process design. Analogous to the Merseyside Guidelines for HIA (Scott-Samuel et al, 1998, 2000), a distinction is made between substantial and procedural steps, aimed at identifying dilemmas concerning the feasibility and acceptability of HIA. Once identified, these should be discussed to determine how they can be prevented or solved. Then the agenda is set for all relevant topics to all actors involved, as well as the way in which knowledge will be exchanged during the HIA, generating variation in problem-solving capacity. During the HIA process, options are selected in agreements on the rules for cooperation and accountability as they become more detailed. One condition is that the actors involved articulate their trust and agreement with the procedure proposed (De Bruijn, Ten Heuvelhof et al., 2000). Important principles for design are:

- Postponing substantial decisions on the assessment design in order to create room for the exchange of priorities and expectations, which enable a well-considered and coordinated choice of design.
- Partners do not have to commit themselves to the end result beforehand.
- Create feedback moments at which partners may decide to withdraw (exit-option).

Such a design may contribute to:

- Commitment to the process, which allows for commitment to the content to grow.
- Consensus or common grounds that make the HIA acceptable
- Tolerance: the partners do not contribute to the end result, yet will not block or hinder the process.

In the ***screening*** stage, policy analysis is required to:

a) Identify relatively independent stakeholders who may have an influential position, for instance citizen representatives, business entrepreneurs, employers, housing corporation.
b) Make an inventory of resources needed and available in the network. There are tangible and intangible resources to successfully influence policy. Tangible resources are: electorate, financial budget, infrastructure or organisation of capacity, and a

mandate of the groups represented. Intangible resources are: access to networks and locations of influence and decision-making, availability of explicit research knowledge as well as experience and skills, informal authority, media access.

c) Positioning the frames and capacities of stakeholders with respect to the health issue and the HIA as an instrument

If the screening reveals that support is lacking or difficult, there are three options:

1. Find an alternative way of reaching cooperation and coordination (i.e. introduce a new authoritative person as an intermediary).
2. Postpone the HIA to a future moment, at which conditions are more favourable (i.e. new government after elections).
3. Restrict the formal audience of the HIA to the public health sector to gather information without the ambition to create collective action.

During the ***scoping*** stage, the potential health issue is explored more thoroughly while the policy analysis delivers cornerstones for jointly agreed Terms of Reference on the HIA. The exploration is intensified to determine the substantial complexity of the potential health issue as well as the extent of conflicting perceptions and interests. These result in a selection of proposed policy measures for scrutiny, health determinants, HIA questions, and the rules of the game: who will conduct the HIA, when, how, on whose advice, etc. Collecting and discussing a variety of potentially relevant options for HIA to enlarge the capacity for solutions enables the selection of potential policy alternatives. Other solutions for process dilemmas are coordinating the pace of progress on cooperation and coordination, the amount of people involved, the openness or closeness of the process, and elaborating organisational rules.

At the end of the scoping process, the necessary capacity is established, which includes the competencies and skills. In addition to cognitive skills for performing a valid assessment of health impacts, normative and reflective skills are needed for mediating between health and other collective interests, as well as between knowledge and policy. For instance, in case of sensitive relations, HIA should not aim to resolve conflict, but facilitate interaction, exchange and dialogue by presenting different alternatives or new perspectives on the issue (Edwards and Schaap, 2000). Normative skills consist of argumentative skills, willingness to negotiate, ability to identify common grounds and strategies. Reflective skills consist of experience in influencing or policy-making practices, openness to different problem and solution frames, capability for cross-frame reflection

and putting one's own frame of reference into perspective, as wel as capability to create a learning organisation by structuring opportunities for evaluation and reflection, and having a flexible attitude.

During the ***impact analysis***, policy dynamics should be monitored in order to identify relevant changes in priorities and capacities, or new challenges from the environment (i.e. incident or crisis in the media). At the same time, different sources of knowledge are brought together, and need to be coordinated in order to draw some generally accepted conclusions. Those sources comprise of both explicit knowledge from health research and other disciplines concerning the policy field at stake, and more tacit, implicit sources of experiential knowledge concerning the policy network and process, or the experiences of stakeholders and affected citizens.

The ***decision-making stage of policy adaptation*** is often mistaken for the stage to exert policy influence: influence should be enacted from the very first contacts in HIA preparation. If the actors involved have not committed themselves to the HIA (process) in earlier stages, they will not do so now.

Monitoring and evaluation, finally, consists of an evaluation of the HIA process, the effects on policy, and the outcomes in terms of health.

What if the process of the HIA stagnates, as commitment does not emerge?

- Conflicts can be removed to the margins of the process by, for instance, additional research
- Introduce new procedures: actors agree on a new procedure before content
- Introduce new actors who can evoke movement in the process
- Facilitate creativity: prevent a preliminary exclusion of ideas ('Say, what if…')
- Enhance reflection: create a setting in which doubt, inconsistency and time for reflection are not rejected
- End dysfunctional contacts

Briefly summarised, a process design and process management of HIA step by step create support, reduce uncertainty, enable the exchange of problem and solution frames, take account of dynamic changes in the context, promote transparency, and, finally, depoliticise decision-making. It prevents the HIA from being questioned and

becoming part of the political debate, and helps to construct the HIA into 'usable knowledge' for a 'doable problem'.

8.4.4 Towards a new definition of Health Impact Assessment

The conceptualisation of Health Impact Assessment as an instrument to integrate health in public policy refines the initial ideas in the HIA literature on the specific relationship between HIA and the policy process, and opens the black boxes in the HIA literature on the social aspects of knowledge creation in HIA and the mechanisms through which HIA can influence public policy. The Gothenburg Consensus definition of HIA does not comply with the refined purposes and strategies for HIA: 'HIA is a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential impacts on the health of a population, and the distribution of those impacts within the population' (WHO, 1998). This definition is in need of revision. The 'judgment' in the definition is indeterminate as it remains unclear to which and whose criteria or norms the impacts are assessed. Moreover it has connotations of putting a policy to the test rather than optimising that policy. Finally, this definition does not clarify why HIA is initiated and what it should offer more than scientific research already covers. Our proposal based on this thesis is:

> *Health Impact Assessment is an interactive coordination strategy for promoting the integration of health in public policy through improving the relevance of potential health impacts from proposed policies or plans, with useful, feasible, and acceptable policy alternatives.*

This definition demarcates HIA as a regulatory research from science research (Jasanoff, 1990), and clearly states its policy purposes and how to fulfil these. The policymakers'frames of the usefulness, feasibility and acceptability of the proposed alternatives are the main conditions for policy change. The political and normative implications of the claim for HIA are specified instead of ignored, enabling a management of 'the politics of healthy policies'.

8.4.5 Managing the politics of healthy policies

This thesis has revealed how current practices of HIA explicate and provoke the politics of healthy policies: policymakers and stakeholders strategically question the quality of the

methods of HIA in order to protect their primary task of policy planning or implementation against rejection. This process can be turned around by strategically redesigning HIA to reflect upon the positions and frames of the actors involved, learn from their policy feedback, and adjust the HIA to improve its relevance to them. Only then, commitment and support can be created among policymakers to integrate health in their policies and plans.

Analogous to the environmental discourse development from 'stop growth' towards 'sustainable development' as a positive sum game, the HIA discourse has similarly, albeit less inspiring, developed from 'judging policy' towards 'optimising the policy design'. What is missing, however, is what the optimised policy design actually means for reaching policy goals. While health effectively attracts political attention when there are people dying or being seriously harmed in the short run, HIA deals with potential problems that may occur in the future. Moreover, learning from the observation in the game simulations, where health is implicitly considered in the decisionmaking process, there may be no need to explicitly stress health as a problem. An alternative term that might serve as a boundary object is to consider the effects of policies on '*human resources*'. Such a term conceptualises health as a capacity, a means to an end, without denying the intrinsic value of health. The term is recognisable in different settings: human resources feed the community and level of social cohesion, the labour force, the electorate, the level of consumption, the school population, etcetera. To prevent the obstruction of HIA caused by the negative image of 'impact assessment' among policymakers, we suggest to change the name of Health Impact Assessment to '*human resources evaluation*' at the policy level.

In addition, the subsequent HIAs in the Dordwijk case indicates that in the short run, HIA can be practised more often. As long as it is still financed from public health funds and practiced by public health professionals, the policy actors addressed may consider the HIA to reproduce existing positions and boundaries rather than enforce new divisions of labour and resource integration. It is exactly at this position of informally creating a new understanding of public policy to include health, while at the same time reproducing formal positions, that HIA truly becomes a boundary object. It allows for articulating health concerns and questioning existing boundaries, while at the same time offering policymakers an 'excuse' to reproduce the same boundaries. The call for a legal requirement for HIA, analogous to EIA, will be counterproductive to the informal reframing process, because then, the relevance of HIA to policy will become 'legal compliance' instead of learning to improve policy legitimacy.

In the long run, the ultimate goal of HIA is to move from remedies of policy adjustment towards making human repercussions of policies part of the conceptualisation of policies. Mainstreaming health in public policy may be encouraged through promoting a 'Human Resources Evaluation' in policy production without such external procedures as HIA. The initiative then moves away from the public health sector. The question is whether the proponents of HIA, as opposed to the law of institutionalisation, have an ambition, and are prepared, to make HIA redundant in the long run.

List of abbreviations

CBL	Centraal Bureau Levensmiddelen (Dutch branch groceries and supermarkets)
CHS	Community Health Service (Gemeentelijke GezondheidsDienst)
DSP	Van Dijk, Someren en Partners consultancy
FNLI	Federatie Nederlandse Levensmiddelen Industrie (Dutch branch food industry)
GGD Nederland	Dutch branch Community Health Services
HIA	Health Impact Assessment
IIUD	Institute for International Urban Development
IPO	Intersectoral Policy Office
KHN	Koninklijke Horeca Nederland (Dutch branch hospitality sector)
MKB Nederland	Midden- en Kleinbedrijf Nederland (Dutch branch small businesses)
NIGZ	Nederlands Instituut voor Gezondheidsbevordering en Ziektepreventie (Dutch Health promotion and prevention institute)
NISB	Nederlands Instituut voor Sport en Bewegen (Dutch Institute for the promotion of Sports and Physical activity)
NOC/NSF	Nederlands Olympisch Comité / Nederlandse Sport Federatie (Dutch Olympic Committee and Sports Confederation)
NSPH	Netherlands School of Public Health
RIGO	Consultancy
RIVM	Rijks Instituut voor Volksgezondheid en Milieu (National Institute for Public Health and the Environment)
SWOV	Stichting Wetenschappelijk Onderzoek Verkeersveiligheid (Foundation of Scientific research into Traffic Safety)
TNO	Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk onderzoek (Dutch Organisation for Applied Natural Sciences)
Veneca	Vereniging Nederlandse Cateringorganisaties (Dutch branch catering business)
VNG	Vereniging Nederlandse Gemeenten (Association of Dutch Municipalities)
VNO/NCW	Verbond van Nederlandse Ondernemingen / Nederlands Christelijk Werkgeversverbond (Dutch Confederation of Employers)
WCPV	Wet Collectieve Preventie Volksgezondheid (Dutch Public Health Act)
ZN	Zorgverzekeraars Nederland (Dutch branch care insurers)
ZonMw	Zorg Onderzoek Nederland / Medische Wetenschappen (Netherlands Organisation for health research and development)

Appendix A Dutch cases of HIA 1996 - 2005

Tabel 2 Overview published 'broad scope' HIA reports 'in the period 1996-2004

Report kind	Practitioner organisation	Object
Screening	NSPH Facet policy[1]: Intersectoral Policy Office	Annual National Budget 1997, 1999, 2000, 2001 Draft electoral programmes political parties
	Facet policy	Coalition Agreement 1998, Strategic Coalition Agreement 2002
	National policy proposals 1996-2003	Ecotax Labour-related policy ICES national Urban policy Scoping national budget Education policy 2002
	Public Health Forum	Screening electoral programmes 2002 en 2003 and Headlines Agreement 2003
	RIVM, GGD Nederland, TNO, NSPH: Pilot Instruments local facet policy 2003-2004	Heerlen en Kerkrade: Policy determinant screening[3] Indoor air, noise suisance Krimpenerwaard[2]: Policy determinant screening Almere: Quick Scan Facet policy health inequalities Zwolle: Quick Scan Facet policy Tilburg: Quick Scan Facet policy Obesity in children Hoogezand-Sappemeer: Checklist HIA Housing plan 2002-2006 Leiden: Checklist HIA private construction in neighbourhood renewal Wageningen: Checklist HIA urban plan commercial Nudepark I en II
Assessment	RIVM Integral Health policy[1]: National policy proposals	High speed train Adjustment Tobacco Law Anti-smoking policy Anti-smoking policy Adjustment Alcohol and Hospitality Law Adjustment Dental care insurance provisions Screening housing policy HIA Housing policy

[1] From 2004 onwards RIVM cVTV
[2] Municipalities of Ouderkerk, Vlist, Schoonhoven, Nederlek, Bergambacht
[3] In Dutch: Beleidsdeterminantenscreening is 'HIA turned around': 'manageable' policy determinants are identified instead of health determinants

Table 3 Overview published reports HIA City & Environment

Project	Municipality	Practitioner organisation	Object
HIA City & Environment: Testing the HIA Checklist 1999-2000	Oosterhout	GGD Nederland & Provinciaal Bureau Medische Milieukunde	Innercity industrial area
	Rotterdam	GGD Rotterdam e.o.	Post war housing
	Almelo	GGD Twente	Station neighbouring area
	Eindhoven	GGD Eindhoven	Post war housing
HIA City & Environment Quantitative model: locale en regional reconstruction, Urban renewal 2000-2004	Amersfoort	GGD Eemland	Station neighbouring area
	Helmond	GGD Zuidoost Brabant	Innercity industrial area
	Leiden	GGD Zuid-Holland-Noord	Station neighbouring area
	Tilburg	GGD Hart voor Brabant	Innercity industrial area
	Halderberge	GGD West-Brabant	
	Tongelre zuid	GGD Eindhoven GGD Utrecht???	Post war housing
	Oudenbosch	Provinciaal Bureau Medische Milieukunde	Expansion train transport of goods Rotterdam - Antwerpen
	Dordrecht	GGD Zuid-Holland Zuid	Urban plan Health Park
	Giessenlanden	GGD Zuid-Holland Zuid	Transportation Centre Schelluinen-West
	Dordrecht	GGD Zuid-Holland Zuid	Smitsweg powerlines
	Zwijndrecht	GGD Zuid-Holland Zuid	Municipality of Zwijndrecht: environmental coditions
	Smallingerland	GGD Fryslân	Drachtservaart
	Vlaardingen	GGD Rotterdam e.o.	Riverzone: reconstruction
	Waddinxveen	GGD Midden-Holland	New housing plan De Triangel
	Moerdijkse Hoek	DHV	Industrial development

Appendix B Illustrations

Figure 1.1 *The wider determinants of health ('Rainbow model')*(Dahlgren and Whitehead 1992),

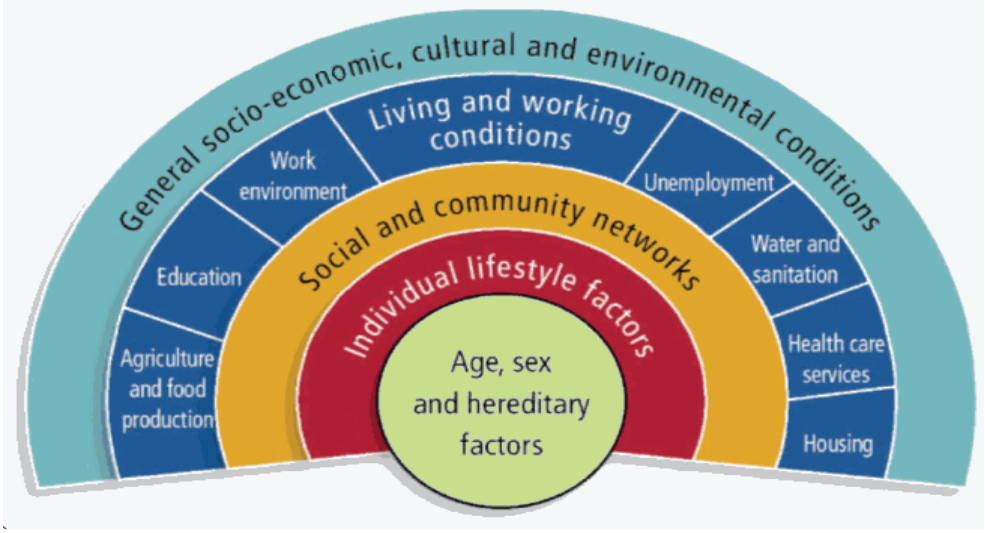


Figure 4.1 *Map of the project plan (coloured) on situation of departure (black and white). Adapted from (Akkersdijk, 2003).*

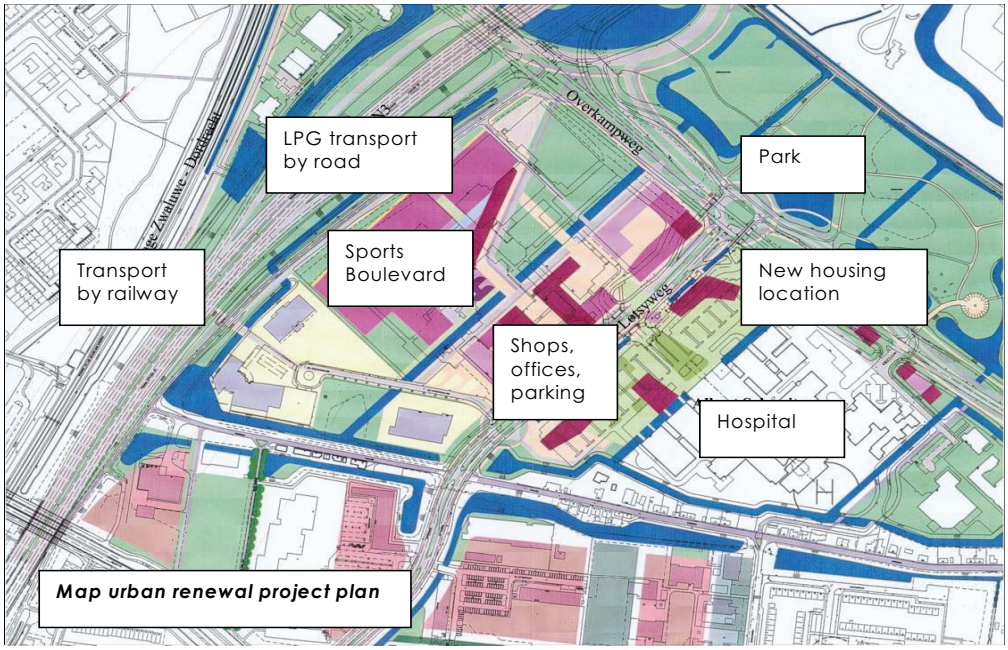


Figure 7.1 **City map of Kamperwaard**

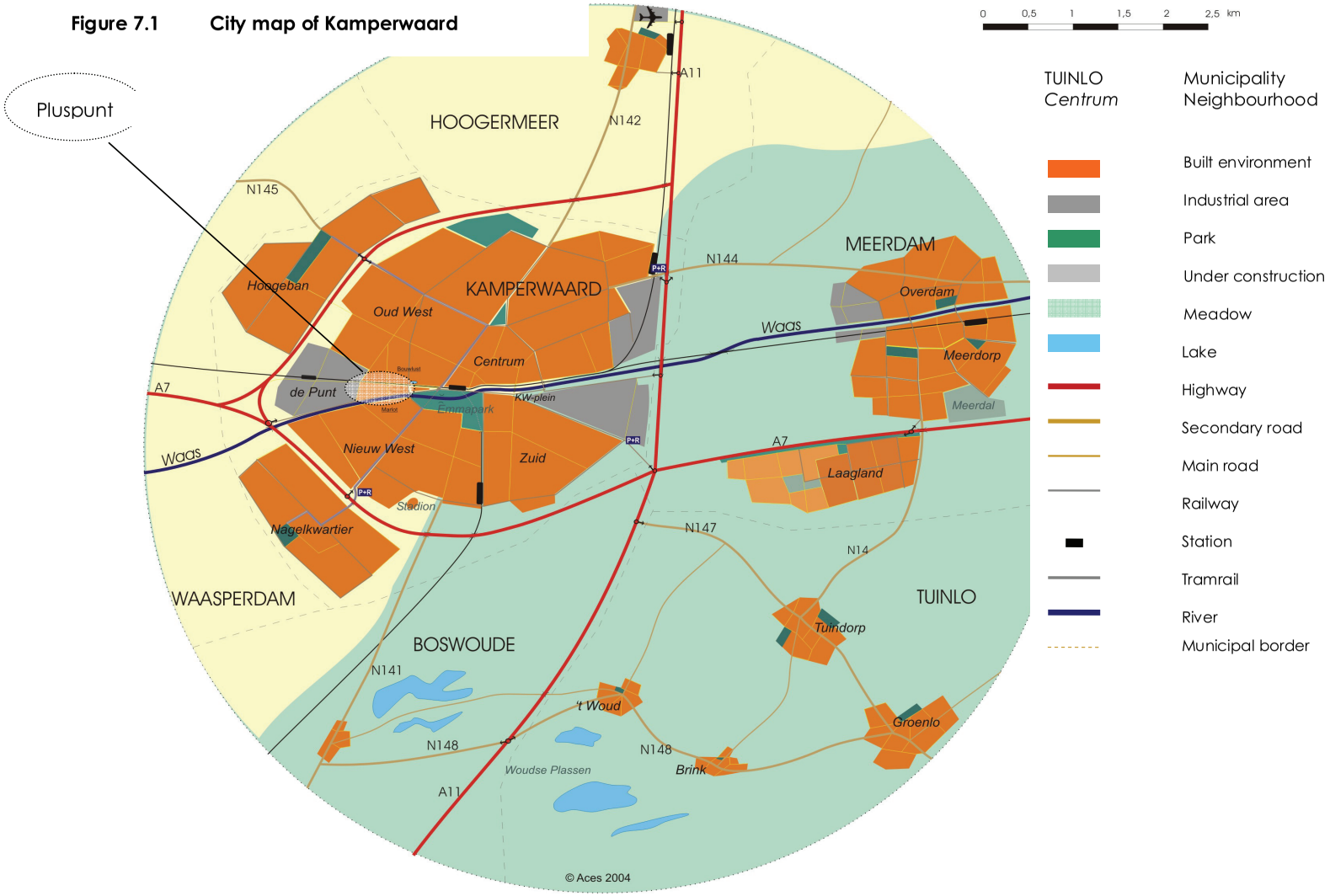


Figure 7.2 Map of 'Pluspunt'

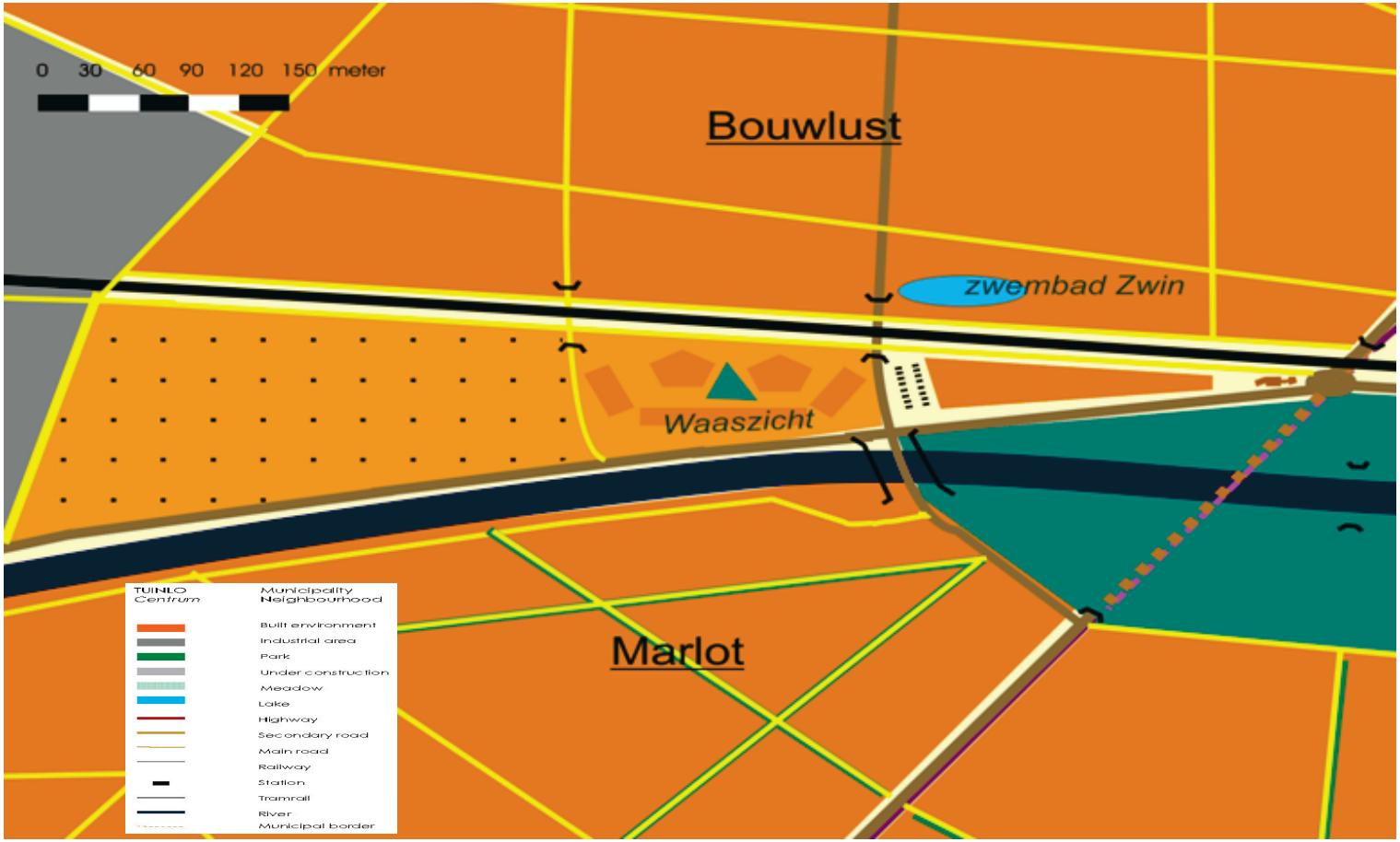
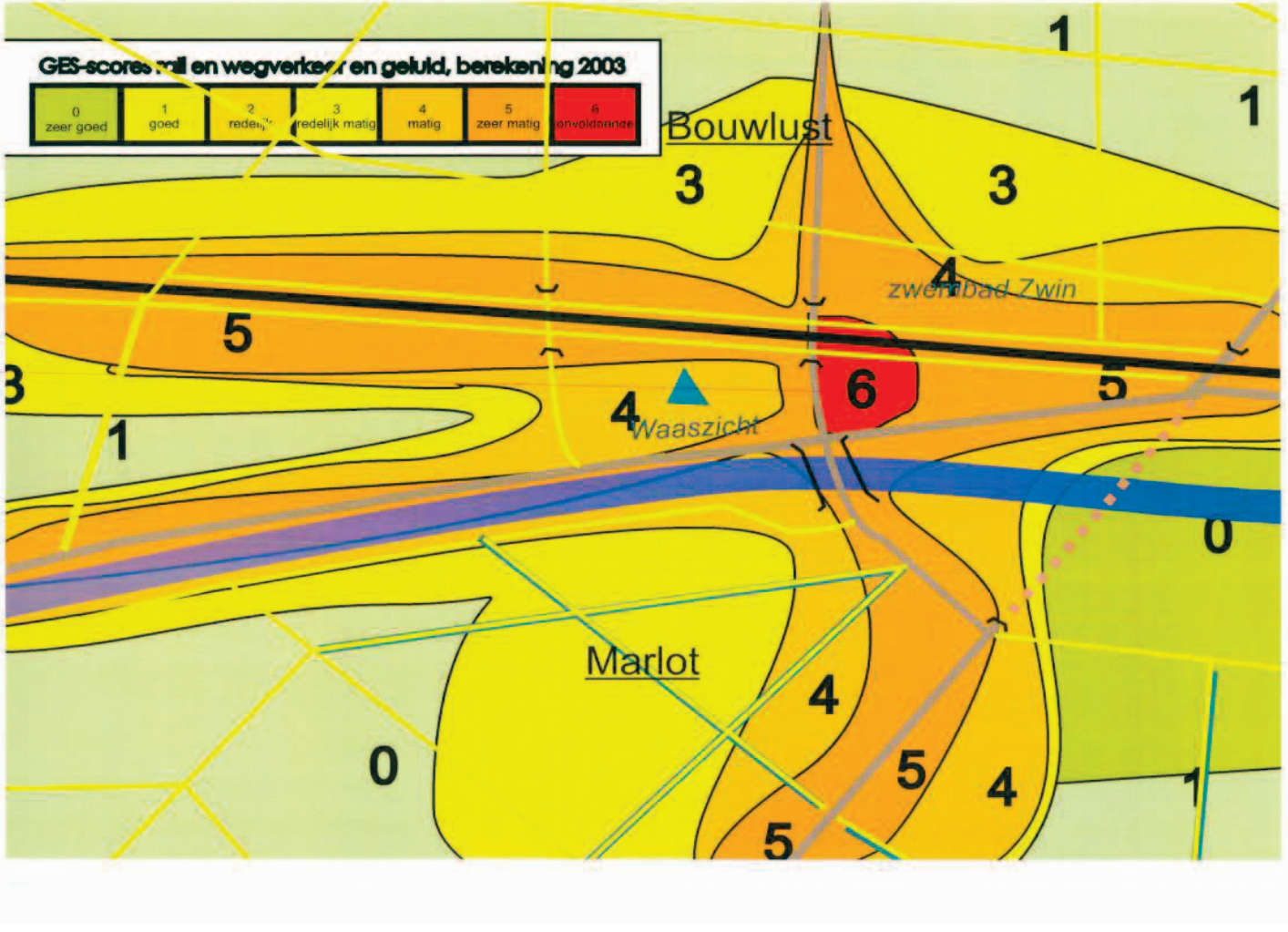


Figure 7.3 Pluspunt Environmental Health Map: rail and road traffic producing noise



Appendix C Respondents and participants

HIA of local reconstruction project 'Dordwijk'

Mr P. Bekkers	Project leader Dordwijk of Dordrecht Municipality	26-05-2004 01-10-2004
Mr C. Sas	Alderman Spatial development, traffic and transport of Dordrecht Municipality	14-07-2004
Mr A. Kamsteeg	Alderman Housing and Health Care of Dordrecht Municipality	19-08-2004
Mr A. Bandel	Project leader Albert Schweitzer hospital	13-07-2004
Mr R. Kooman	Environmental officer Dordrecht Municipality	16-08-2004
Mr N. van Bedaf	Project leader Sports Dordrecht Municipality	23-08-2004
Mr F. Zebel	Policy officer local health policy Dordrecht Municipality	10-02-2005
Mrs A. Boogaard	Policy officer Community Health Service Zuid Holland Zuid	10-03-2005
Mrs I. Akkersdijk	Medical environmentalist Community Health Service Zuid Holland Zuid (author HIA report)	15-06-2004 01-06-2006
Mrs T. Fast	Co-author HIA 'City & Environment' toolbox	26-08-2003 16-01-2004 00-11-2004
Mrs. S. Potting	Policy officer City and Environment , Ministry of Public health, Welfare and Sports	25-02-2004

HIA of Housing White paper 'What people want, where people live'

Mr A. Moerkamp and Mr J. Krijnen	Director Strategy department and Research coordinator White paper, Ministry of Housing, Spatial Planning and the Environment (VROM)	30-10-2003
Mr H. van Kessel	Novio Consult, external process manager White paper	11-11-2003
Mr J. Koffyberg	Co-author White paper, Ministry of Housing, Spatial Planning and the Environment	07-11-2003
Mr M. van Oostrom	Strategic policy officer Ministry of Housing, Spatial Planning and the Environment (involved in HIA)	05-11-2003
Mr R. van der Ent	Strategic policy officer Ministry of Housing, Spatial Planning and the Environment	05-03-2004
Mr O. Welling	'Bestuursdienst' Ministry of Housing, Spatial Planning and the Environment: research and policy instruments	21-01-2004
Mrs L. Samson (telephone interview)	Facet policy officer Ministry of Public health, Welfare and Sports (VWS) (involved in HIA preparation)	27-01-2004
Mrs Y. de Nas	Facet policy officer Ministry of Public health, Welfare and Sports (involved in HIA execution and implementation)	17-02-2004
Mr F. van Zoest	Coordinator HIA (preparation) in the Intersectoral Policy Office, Netherlands School of Public Health	22-01-2004
Mrs L. den Broeder	Coordinator and author HIA report in the Intersectoral Policy Office, Netherlands School of Public Health	09-02-2004
Mrs Wendel-Vos	Author HIA section physical activity, National Institute for Public Health and the Environment (RIVM)	00-04-2004
Mr M. Damen	Author HIA section Safety in and around the house, RIGO Consultancy	00-04-2004
Mr H. Korthals Altes	Author HIA section Social and fire safety, DSP Consultancy	00-04-2004
Mrs J. van den Bogaard and Mrs M. Weterings	Advisors Environmental health, Community Health Service Rotterdam	15-01-2004
Mr H. Meijer	Former alderman Housing, Rotterdam Communityity	26-02-2004
Mr J. Cleij	Former director Environmental Service Amsterdam Communityity, involved in City & Environment development	23-01-2004
Mr V. Smit	Netherlands Council of Housing, Spatial Planning and the Environment, policy advisor White paper	14-01-2004
Mr J. Thorbrugger and Mr M. Bontius	Senior policy advisors Netherlands branch organisation of Housing corporations (Aedes)	08-03-2004

Mr M. Kromwijk	Chairman Housing corporation Maasoevers Rotterdam	20-02-2004
Mrs M. van Veen	Chairman National Tenants Association (Woonbond)	18-02-2004
Mr C. de Reus	Project developer and former chairman Dutch Association of project development companies (Neprom)	29-01-2004
Mrs S. Potting	Policy officer City and Environment , Ministry of Public health, Welfare and Sports	25-02-2004
Mr H. Verkleij	Liaison officer Ministry of Public health, Welfare and Sports and National Institute for Public Health and the Environment (RIVM)	17-02-2004

HIA of Dutch Covenant on Obesity

Mrs C. Cuijpers	Project leader Obesity policy Ministry of Public health, Welfare and Sports VWS	10-05-2005 00-10-2006
Mr R. Dortland	Director Nutrition, Health promotion and Prevention department, Ministry of Public health, Welfare and Sports VWS,	27-09-2005
Mr R. Van Oijen	Head Covenant office, chairman project group, Ministry of Public health, Welfare and Sports	08-07-2005
Mr P Rosenmöller	(External) Chairman Steering group Covenant	23-08-2006
Mrs A. Hoek	Policy advisor, Federation Dutch Food industry (FNLI)	12-07-2005
Mrs M. Klok	Policy advisor, Dutch Royal Association of hotels, restaurants, cafes and similar establishments (KHN)	06-09-2005
Mr A. Martens	Policy advisor, Dutch Federation of Health Care Insurers (ZN)	12-07-2005
Mr M. Nuyten and Mrs C. Frenkel	Policy advisors Confederation of Netherlands Industry and Employers (VNO-NCW)	23-08-2005
Mrs C. Frenkel	As from April 1, 2006, Head Covenant Office, Ministry of Public health, Welfare and Sports VWS	00-06-2006 00-11-2006
Mr S. Graft	Division director Sodexho, Federation of Dutch Catering Organisations (Veneca)	17-08-2005
Mrs S. de Jong	Policy advisor Dutch Central Association of supermarkets (CBL)	11-08-2005
Mrs Y. Turenhout	Policy advisor Netherlands Sports Federation (NOC-NSF)	16-08-2005
Mr G. Vorstenbosch	Policy officer Ministry of Education, Culture and Science (OCW)	10-08-2005
Mr P. Verschuren	Director Unilever Health Unstitute, advisor Covenant Obesity	18-08-2005 01-11-2005
Mr K. van der Waaij	Director Unilever Netherlands, member of the Board of Directors of the Confederation of Netherlands Industry and Employers (VNO-NCW) advisor covenant	01-11-2005
Mrs K. Bemelmans	Project leader Obesity, Netherlands Nutrition Centre	10-02-2006
Mr J. Seidell	Professor Healthy Nutrition Free University medical center, director Knowledge Centre Obesity	05-12-2005
Mrs A. Vlasveld (telephone interview)	Policy advisor Netherlands Institute for Sports and Physical activity (NISB)	01-02-2006
Mr R. Kramer	Program manager Obesity, Netherlands Institute for Health promotion and Disease prevention (NIGZ)	24-01-2006
Mrs M. van Spanje	Chairman Netherlands Obesity Association	17-11-2005
Mrs G. Huijssoon	Project leader Nutrition, Dutch Consumers Association	14-11-2005
Mr E. Klein	Policy officer, Ministry of Agriculture, Nature and Food quality	03-03-2006
Mrs E. Teunissen	Policy advisor public health, Association of Netherlands Municipalities (VNG)	24-02-2005

Gaming simulations 'Agendasetting of health in local reconstruction planning'

December 7, 2005

Mr F. van Zoest	Project consultant Integral health policy iResearch
Mr J. Cleij	Former director Environmental Service Amsterdam Municipality
Mrs I. Lottman	Policy officer CHS* Leiden
Mrs F. Sandijck	Former director Welfare Service Rotterdam Municpality
Mrs L. Elsman	Medical environmentalist CHS Rotterdam
Mr R. Schaafsma	Director Public health care Fund (Fonds OGZ)
Mrs J. Reeuwijk	Researcher TNO Quality of life
Mr M. van Oostrom	Senior policy officer Ministry of Housing, Spatial Planning and the Environment (VROM)
Mr H. Wubbolts	Eia* coordinator province of Overijssel
Mr K. van der Wielen	Senior policy officer province of Flevoland
Mrs J. Visser	Medical environmentalist CHS West-Friesland
Mrs K. de Ruijsscher	Policy officer CHS Fryslan
Mrs G. Baan	Policy officer Public health, Tytsjerksteradiel Municipality
Mr D. Fokkema	Alderman Public health Tytsjerksteradiel Municipality
Mr C. Zwerver	Regional secretary environmental health, CHS Arnhem
Mrs M. Weterings	Medical environmentalist CHS Rotterdam
Mr S. de Gouw	director CHS Zuid Holland Noord
Mr S. van de Pavert	Postdoctorate fellow biomedical research Free University medical centre
Mr P. Letterie	Former director housing corporation
Mrs J. den Uyl	Policy officer Public health, Hardinxveld-Giessendam Municipality
Mr G. van Brenk	Alderman Public health, Hardinxveld-Giessendam Municipality
Mr J. Drewes	Senior policy officer Advisory Council for Health care and Public health (RVZ)

December 4, 2005

Mrs L. den Broeder	Senior researcher integral health policy, National Institute for Public Health and the Environment (RIVM)
Mrs J. van den Bogaard	Environmental health advisor CHS Rotterdam
Mr J. M. Boot	Project leader Public Health Forum
Mrs M. Comajta	Policy officer CHS Kop van Noord-Holland
Mr L. Veerman	PhD student Erasmus MC, quantification of HIA
Mrs J. de Goede	Epidemiologist CHS Hart van Brabant
Mr Zuiderveen Borgesius	Alderman Public health Wageningen Municipality
Mrs M. de Jager	Former alderman/ chairwoman Deventer Interest Party/ Public Health Forum
Mr M. Geurts	Environmental health specialist branch organisation CHS (GGD Nederland)
Mrs B. Rademaker	Secretary EIA Commission
Mr Barske	Mayor public health, Stein Municipality
B. Damming	Alderman Welfare and public health, De Wolden Municipality
Mr H. van Oers	Hoofd VTV/hoogleraar regionale VTV RIVM cVTV/Uni Tilburg
Mrs H. Bazuin	Senior Policy officer and research CHS Groningen
Mr P. de Jong	Alderman Public health, Spijkenisse Municipality
Mrs G. van den Broek	Policy advisor CHS West Brabant
Mr W. de Regt	Implementation officer research funding organisation ZonMw
Mrs L. Geelen	Medical environmentalist CHS Brabant/Zeeland
Mrs I. van den Broek	Policy advisor/ secretary project environmental health CHS Brabant/Zeeland
Mrs I. Wallenburg	Policy officer Advisory Council for Health care and Public health (RVZ)

*CHS: regional Community Health Service (GGD Zuid-Holland Zuid)
Eia: environmental impact assessment

Appendix D Relevant organisations and websites

Health Impact Assessment databases in the Netherlands:

www.hiadatabase.net National Institute for Public Health and the Environment, RIVM

www.gggkennisnet.nl HIA City & Environment (Dutch)

International sources of Health Impact Assessment:

http://www.who.int/hia/en/ World Health Organisation Geneva

http://www.euro.who.int/healthimpact WHO Europe

http://www.iaia.org/ International Association of Impact Assessment (HIA Section)

http://www.nice.org.uk/HIAGateway UK National Institute for Health and Clinical Excellence

http://www.hiaconnect.edu.au/ Australian Centre for Health Equity Training, Research and Evaluation (CHETRE) and the New South Wales Department of Health

http://www.deakin.edu.au/hia/ Deakin University Australia

http://www.ihia.org.uk/about.html International Health Impact Assessment Consortium

http://www.pcpoh.bham.ac.uk/publichealth/hiaru Health Impact Assessment Research Unit University of Birmingham

Health data

http://www.rivm.nl/nationaalkompas National Compass Public Health, RIVM (Dutch)

http://www.rivm.nl/vtv/data/site_atlas/index.htm National Atlas Public Health, RIVM (Dutch)

http://www.ec.europa.eu/eurostat/ Eurostat, sustainable development indicators, public health

http://www.euro.who.int/hfadb WHO European Health for All database

http://www.sourceoecd.org/database/healthdata OECD Health database

Integral health policy

http://www.gigaportaal.nl Municipal integral health policy activities (Dutch)

Other reports public health

http://www.quidatabank.nl Health promotion and prevention (Dutch)

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Dutch summary

'De politiek van integraal gezondheidsbeleid. Een heroriëntatie op het instrument Gezondheidseffectschatting om gezondheid te integreren in het overheidsbeleid.'

Doel en centrale vraag

Om effectief en legitiem beleid te kunnen ontwikkelen voor complexe publieke gezondheidsproblemen, zoals obesitas of luchtwegklachten door fijn stof, is samenwerking met andere beleidssectoren noodzakelijk. Vanwege de horizontale verhouding tussen overheidssectoren kan deze samenwerking niet worden afgedwongen. Eén van de instrumenten om het gezondheidsbelang te integreren in het overheidsbeleid is Gezondheidseffectschatting (GES), waarbij de gezondheidseffecten van voorgestelde beleidsmaatregelen van tevoren worden ingeschat teneinde dat beleid te kunnen aanpassen. Het dominante idee achter GES is gebaseerd op het paradigma 'speaking truth to power': het aanleveren van wetenschappelijk gefundeerde kennis om beleidsmakers te overtuigen. Dit leidt echter niet tot de gewenste beleidsveranderingen.

De onzekerheid en zorgen van beleidsmakers en academici over de effectiviteit van dit instrument vormen de aanleiding om de relatie tussen GES en het beleid vanuit een beleidsmatig perspectief te onderzoeken. De onderzoeksdoelen zijn gericht op het verduidelijken van de functies van Gezondheidseffectschatting vanuit beleidsmatig perspectief, de geschiktheid van de huidige opzet en aanpak van GES in de praktijk, en het aanleveren van ontwerpsuggesties voor verbetering. Vanwege de diversiteit aan verschijningsvormen van GES in binnen- en buitenland is een heroriëntatie op het instrument nodig voordat een empirische evaluatie mogelijk wordt. De centrale vraag is dan ook een conceptuele en empirische vraag: wat is de rol van Gezondheidseffectschatting bij de integratie van gezondheid in beleid?

Conceptuele verkenning van de relatie tussen GES en het beleid

De literatuur over Gezondheidseffectschatting biedt enkele aanknopingspunten om de wisselwerking tussen de vorming van GES en beleid te onderzoeken. Hierin wordt het belang van een ontwerp voor het interactieproces benadrukt en de noodzaak voor institutionele verandering om gezondheid te integreren in het overheidsbeleid. De functies die GES kan hebben in de beleidspraktijk variëren van het aanleveren van informatie tot het verbeteren van de legitimiteit van het beleid. Een centraal uitgangspunt is dat GES tot doel heeft de kwestie van potentiële gezondheidsproblemen

op de beleidsagenda zet. Om de consequenties van GES voor de beleidspraktijk in kaart te brengen is een schaal ontwikkeld van de mate van steun die beleidsmakers uitspreken voor de GES en de boodschap die de GES uitdraagt, en de investering om deze steun om te zetten in beleidsactie. Deze oplopende schaal bestaat uit (0) het afwijzen of onthouden van steun; (1) het uitspreken van steun zonder deze direct om te zetten in actie (convergentie van percepties); (2) het agenderen van de GES of gezondheidskwestie op de beleidsagenda; (3) het aanpassen van het beleids- of projectvoorstel aan de voorgestelde beleidsalternatieven in de GES; (4) het overnemen van de signalerende en preventieve beleidstaken om gezondheidsproblemen te voorkomen of aan te pakken (nieuwe taakverdeling); en (5) het beschikbaar stellen van capaciteit om deze taken vorm te geven (bronnenintegratie). In tegenstelling tot de eerste vier, vormen de laatste twee een institutionele beleidsverandering.

De GES literatuur biedt geen antwoord op de vragen hoe beleidsverandering of steun worden gecreëerd en wat daarbij precies de rol is van kennis. Aanvullende literatuurbronnen over beleidsanalyse leveren een passende invalshoek. Uitgangspunt is de oorzaak van hardnekkige en ongestructureerde beleidsproblemen, waarbij verschillende betrokken actoren vanuit hun verschillende referentiekaders conflicterende beelden hebben van het probleem en de mogelijke oplossingen. Deze referentiekaders bepalen wat wordt beschouwd als een feit en wat als relevant wordt gezien. Daarom vormt de instrumentele benadering van evidence-based handelen geen oplossing voor de impasses waar beleidsprocessen in kunnen verzanden. Een GES waarin geen aandacht wordt besteed aan de verschillende betekenissen en de dynamiek van het (potentiële) gezondheidsprobleem lijkt daarom gedoemd te mislukken.

De gezondheidsproblemen die aan de orde worden gesteld in GES zijn door het sectoroverstijgende karakter ook ongestructureerd. Bovendien kan de GES worden gezien als een uiting van onvrede over enerzijds de 'outputlegitimiteit' van het beleid, omdat er ongewenste gezondheidseffecten optreden, en anderzijds over wie mee mag praten in de beleidsvorming (de 'inputlegitimiteit'), waarbij vertegenwoordigers van het gezondheidsperspectief kennelijk zijn buitengesloten. Een alternatieve benadering, waarin deze normatieve en politieke aspecten worden meegenomen, bestaat uit een reflectieve in plaats van instrumentele benadering. In plaats van de feiten over het gezondheidsprobleem wordt hierin het proces van interacties tussen de beleidssectoren als aanknopingspunt voor beleidsverandering genomen. Zo ontstaat ruimte voor de herdefiniëring van problemen, en de herinterpretatie van feiten. Hierdoor wordt het

mogelijk om in de GES beleidsalternatieven te formuleren die door alle betrokkenen worden beschouwd als bruikbaar, haalbaar en aanvaardbaar.

Over de rol van kennis hierbij bieden de Wetenschaps-, Techniek, en Samenlevingsstudies een passend concept. In deze studies wordt onderscheid gemaakt tussen wetenschappelijke en beleidsgerichte kennis. Omdat ook wetenschappelijke kennis wordt beschouwd als de uitkomst van een interactieproces tussen verschillende invloedrijke actoren (evenals beleid), die verschillende eisen stellen aan het onderzoeksontwerp. De coördinatie van deze onderhandelingen over het onderzoeksmandaat vindt plaats door middel van 'grenzenwerk' tussen de verschillende kennisdomeinen. Grenzenwerk is een vorm van coördinatie waarbij concepten en materiële instrumenten worden ontwikkeld die de specifieke betekenissen en scheidslijnen tussen verschillende beleids- en kennisdomeinen overstijgen. Gezondheidseffectschatting wordt in dit onderzoek opgevat als een 'grensobject' om de dubbele coördinatie tussen verschillende beleidssectoren enerzijds, en tussen onderzoek en beleid anderzijds, mogelijk te maken. GES bestaat als coördinatie instrument uit een onderzoeksdesign en een interactieplan, en wordt hiermee verondersteld de percepties van de doelgroep van beleidsmakers over de rol van gezondheid in hun beleid te veranderen ('reframing').

Om te beoordelen hoe GES functioneert als grensobject en welke consequenties GES heeft voor het beleid, is in vier case studies vanuit een interpretatieve benadering onderzocht (a) in hoeverre gezondheid wordt geïntegreerd in het beleid; (b) welke percepties de verschillende betrokkenen uiten over de rol van gezondheid en GES als instrument in het beleid; en (c) hoe perceptieverandering plaatsvindt in samenhang met het onderzoeksdesign en interactieplan van de GES. De cases zijn geselecteerd op de aan- of afwezigheid van een vooraf ontwikkeld onderzoeksdesign en/of interactieplan: GES Stad en Milieu op Gezondheidspark Dordwijk stedelijke vernieuwingsproject (onderzoeksdesign); GER(apportage) op de Nota Wonen van het Ministerie van VROM[47] (interactieplan); GES op het Convenant Overgewicht (onderzoeksdesign en interactieplan); en tenslotte zijn in samenwerking met het bureau ACES[48] spelsimulaties ontwikkeld waarin een gemeentelijk planningsproces op het gebied van stedelijke vernieuwing is nagespeeld met deelnemers uit de praktijk om informele coördinatiestrategieën zonder GES nader te observeren (geen onderzoek, geen interactieplan).

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[47] Volkshuisvesting, Ruimtelijke Ordening en Milieu

Empirische bevindingen

In de case studies blijft de mate waarin gezondheid wordt geïntegreerd in het beleid relatief beperkt. De GES op het Convenant Overgewicht wordt door de beleidsmakers van VWS afgewezen en weggehouden van de Convenantpartners, terwijl de GES op het GES op het gemeentelijk plan van Dordwijk bijdraagt aan het besluit om de geplande woningbouw te verplaatsen naar een minder milieugevoelige lokatie, en de GER Wonen leidt tot agendering door verkennende onderzoeken en bijeenkomsten bij het Ministerie van VROM. Institutionele beleidsverandering door een nieuwe taakverdeling en een herallocatie van capaciteit vind nauwelijks plaats.

Een analyse van de onderliggende redenen waarom gezondheid slechts beperkt wordt meegenomen in het beleid laat zien dat de beslissing om een plan al dan niet aan te passen niet direct is terug te herleiden naar de kwaliteit van de GES. In alle cases wordt de GES door de beleidsmakers strategisch beschouwd, inclusief de beleidsmakers binnen de publieke gezondheidssector zelf. Zij maken de afweging of de GES als instrument meerwaarde of schade oplevert voor het realiseren van de eigen doelstellingen. Met name de GES op het plan Dordwijk en de GES op het Convenant Overgewicht lokken een dergelijke redenering uit door de relaties, effectschattingen en voorspellingen te presenteren als feiten, die door de beleidsmakers worden betwist. In de GER Wonen kiezen de initiatiefnemers, zich realiserende dat er weinig 'evidence' beschikbaar is, bij aanvang al voor een andere benadering. In een uitgebreid communicatieplan wordt over de deelname aan, de opzet en de uitvoering van de GER gedurende drie jaar onderhandeld, totdat de GER een opzet vertoond die acceptabel en haalbaar is voor alle betrokken partijen. Dan echter legt het Ministerie van VWS een embargo op het rapport, waardoor het interactieproces nagenoeg stil komt te liggen. Ook het Ministerie van VWS speelt dus een prominente, strategische rol bij GES.

De belangrijkste conclusie van dit onderzoek luidt dan ook dat de nadruk op een technisch-rationeel ontwerp van de GES in de huidige praktijk de integratie van gezondheid in het overheidsbeleid eerder belemmert dan bevordert. Het heeft een politiserend effect op de gepresenteerde kennis in plaats van het gewenste rationaliserende effect op beleid. Door de controle die het Ministerie wil uitoefenen op de GES blijft de uitvoering 'hangen' binnen de bureaucratische structuur van de publieke gezondheidssector. Er is dus nauwelijks sprake van collectieve actie binnen de

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[48] Academic Centre for Experiments in Simulation, Public Administration Department, Erasmus University Rotterdam

GES. Daarmee blijven veel potentiële coalitiepartners onwetend en veel bronnen in de beleidsomgeving onbenut. De legitimiteit van het beleid wordt nauwelijks bevorderd omdat het technische ontwerp van de GES in Nederland geen ruimte laat voor de participatie van belanghebbenden. De verklaring voor de beperkte effectiviteit van GES om gezondheid te integreren in het beleid ligt voor een deel bij het ontwerp van de GES, maar voor een deel ook bij de gesignaleerde interne verdeeldheid en onzekerheid binnen de publieke gezondheidssector. In alle cases resulteert die verdeeldheid in beslissingen die de integratie van gezondheid in het overheidsbeleid belemmeren. Ook roept de toepassing van GES op lokaal niveau door de GGD frictie op tussen de rollen van expert en pleitbezorger. De laatste is een politieke rol, die bij de GGD als administratieve overheidsorganisatie op gespannen voet staat met de hiërarchisch ondergeschikte positie tot de gemeente en de wettelijke verplichtingen om de WCPV uit te voeren.

Uit de combinatie van de conceptuele en de empirische analyse kom ik tot de conclusie dat een heroriëntatie op het instrument en het ontwerp van de GES noodzakelijk is. Ten eerste is er geen alternatief beschikbaar om gezondheid te integreren in het overheidsbeleid, terwijl de gezondheidsproblemen blijven bestaan. Bovendien heeft de GES in alle case studies wel degelijk agenderend gewerkt en is er dynamiek ontstaan in het beleidsproces. Het alternatief voor de technisch-rationele aanpak is een reflectief procesontwerp waarbij de regels, functies en rollen voor GES gaandeweg en in samenspraak met de relevante beleidsmakers en belanghebbenden worden ontwikkeld. Publicaties over de ontwikkeling van soortgelijke beleidsinstrumenten in de Verenigde Staten, zoals de milieueffectrapportage, laten zien dat ook daar een ontwikkeling heeft plaatsgevonden van een technisch-rationeel naar een participatief ontwerp. Vergeleken bij deze instrumenten, maar ook bij toepassingen van GES in het buitenland, staat de GES praktijk in Nederland nog in de kinderschoenen.

De randvoorwaarden voor het veranderen van percepties over beleid, zoals het organiseren van leervermogen en het ontwikkelen van competenties, worden pas gecreëerd als GES veel vaker wordt toegepast in dezelfde setting met dezelfde betrokken actoren, zodat een leerproces op gang kan komen. De toepassing van een procesontwerp vergt een intensieve samenwerking met de beleidsambtenaren die hun ervaringskennis inbrengen, evenals een intensieve coördinatie van expertkennis uit verschillende disciplines en impliciete kennis van belanghebbenden. GES is daardoor teamwork: de rollen kunnen flexibel worden verdeeld en de verschillende

achtergronden van de betrokkenen leveren bruikbare feedback op voor de aanpassing en het vervolg van GES praktijken. Daarnaast moeten vaardigheden worden ontwikkeld: naast cognitieve ook reflexieve en normatieve vaardigheden. Reflexieve vaardigheden helpen om de verschillende referentiekaders van betrokken actoren te doorgronden, en de eigen beelden daaraan aan te passen. Normatieve vaardigheden helpen om controversiële onderwerpen, dilemma's en dreigende conflicten te signaleren en aan te pakken.

Een vraag bij het reflectieve ontwerp voor GES is hoe de wetenschappelijke integriteit van de effectschatting kan worden bewaard in het intensieve interactieproces dat hier wordt aanbevolen. Hierbij kan onderscheid worden gemaakt tussen een 'front office' en 'backoffice': als de geadresseerde beleidsmakers de wetenschappelijke kwaliteit van GES van doorslaggevend belang beschouwen en de gezondheidskwestie weinig omstreden is (zoals infectieziekten en de bestrijding daarvan), dan bestaat de front office uit de expertorganisatie die expliciete kennis produceert over de potentiële gezondheidseffecten, terwijl in de backoffice de contacten, onderhandelingen en afwegingen plaatsvinden tussen representanten van de verschillende beleidssectoren. Als de gezondheidskwestie wel omstreden is, dan draaien de rollen om: de front office wordt de plaats van een actieve dialoog (zoals het Convenant Overgewicht) terwijl de backoffice kennis als argumenten aanlevert. Het onderzoeksontwerp is dan ondergeschikt aan het interactieproces.

Deze heroriëntatie op het instrument van GES leidt tot een nieuwe definitie:

> *Gezondheidseffectschatting is een interactief coördinatieproces om te bevorderen dat gezondheid wordt geïntegreerd in het overheidsbeleid, door de relevantie van potentiële gezondheidseffecten te vergroten met nuttige, haalbare en aanvaardbare beleidsalternatieven*.

Door de beleidsfunctie van GES te expliciteren wordt het mogelijk om door middel van een procesontwerp te anticiperen op de politieke aspecten van 'integraal gezondheidsbeleid'. Om de integratie van gezondheid in het overheidsbeleid verder te bevorderen is de term Gezondheidseffectschatting zelf wellicht ook aan vervanging toe. De term roept bij veel beleidsmakers negatieve associaties op met bureaucratie en vertraging van besluitvormingsprocessen. Een term die de sectoren aan elkaar zou

kunnen verbinden is 'Human Resources Evaluation', omdat alle sectoren in verschillende betekenissen te maken hebben met 'human resources': als electoraat, als arbeidskracht, als consumenten, als studenten, etcetera. Het uiteindelijke doel van GES zou moeten zijn om gezondheid, in de vorm van human resources, structureel onder te brengen in de beleidsprocedures van de andere beleidssectoren. Het is de vraag of de publieke gezondheidssector de ambitie kan en wil tonen om GES in de toekomst overbodig te maken.

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Curriculum vitae

Marleen Bekker was born in Oosterhout on the 14th of September 1973. In 1992, she finished the secondary university preparatory school (VWO) at the Mgr. Frencken College in Oosterhout. In 1993, she obtained a pre-bachelor degree in human geography at Utrecht University. After a year of travelling and an intensive Spanish language course in Mexico, she started higher vocational training in nursing (HBO-V) at the Hogeschool van Amsterdam. She finished het training in 1998 with an internship at the Academic Hospital Paramaribo, and a research thesis on sexual health education at the Policlinic of Venereal Diseases in Surinam. While she continued her studies in the Master of Health Policy and Administration Program at Maastricht University, she also worked as a nurse in several settings, including the Rehabilitation Centre De Hoogstraat; the Diakonessen hospital; Homecare Utrecht; and Medical Care Asylum Seekers in Utrecht. She obtained her Master's degree in 2002 after completing a research project on inter-organisational cooperation in the medical care for asylum seekers at the branch organisation of Community Health Services (GGD Nederland).

In September 2002 she began her work at the Institute of Health Policy & Management, Erasmus MC, with the research that forms the basis of this thesis. As part of her study she wrote a background report to the policy advice 'Publieke Gezondheid' (public health) from the National Council of Public Health and Health Care (RVZ, 2006). Additionally, she plays a role in the departmental education program, teaching on the subject of health policy evaluation in the Bachelor of Health Sciences and on comparative policy analysis of health care systems in the Master of Health Economics, Policy & Law (HEPL).

Currently she is a research fellow at the Institute of Health Policy & Management. She is involved in the preparations for an international audit of the national Public Health Forecast monitor (VTV) and the Health Care Performance report (Zorgbalans) of the National Institute of Public Health and the Environment (RIVM). Her studies on health research, policy and practice relations will be continued in a three-year research project examining how academic research, prevention practice and local public health policies are coordinated within Academic Collaborative Centres of Public Health in order to produce socially relevant and evidence-based public health care.

In the private realm, Marleen lives together with her partner Erik, and sings as a soprano in several chamber choirs.