Urban Studies

Why bright city lights dazzle and illuminate: A cognitive science approach to urban promises

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Abstract

Despite the many uncertainties of life in cities, promises of economic prosperity, social mobility and happiness have fuelled the imagination of generations of urban migrants in search of a better life. Access to jobs, housing and amenities, and fewer restrictions of personal choices are some of the perceived advantages of cities, characterised here as 'urban promises'. But while discourses celebrating the triumph of cities became increasingly common, urban rewards are not available everywhere and for everyone. Alongside opportunity, cities offer inequality, conflict and poor living conditions. Their narrative of promise has been persistent across different times and places, but the outcomes and experiences of urban life compare poorly with the overoptimistic expectations of many newcomers. And yet, millions still come and stay regardless of odds, raising the question why we have such positive and persistent expectations about cities. To examine this question, this paper considers the process of urban migration from the perspective of decision-making under uncertainty. It discusses how decisions and evaluations are based on imperfect information and offers a novel contribution by examining how the cognitive biases and heuristics which restrict human rationality shape our responses to urban promises. This approach may allow a better understanding of how people make decisions regarding urban migration, how they perceive their urban experiences and evaluate their life stories. We consider the prospects and limitations of the behavioural approach and discuss how biases favouring narratives of bright

urban futures can be exploited by 'triumphalist' accounts of cities which neglect their embedded injustices.

摘要
尽管城市生活存在诸多不确定因素，但经济繁荣、社会流动性和幸福的承诺激发了一代又一代城市移民寻求更好生活的想象力。获得工作、住房和便利设施，以及减少个人选择方面的限制是城市的一些可见优势，这里称之为"城市承诺"。但是，虽然庆祝城市胜利的话语越来越普遍，但城市的福利并不是随处可见，也不是每个人都可以获得。除了机会，城市还提供不平等、冲突和恶劣的生活条件。他们移民对承诺的叙述在不同的时间和地点持续存在，但城市生活的结果和经验与许多城市新移民过于乐观的期望相去甚远。然而，尽管有这一切，数以百万计的人们仍然来到城市并留了下来。这提出了一个问题：为什么我们对城市抱有如此积极和持久的期望。为了研究这个问题，本文从不确定性下决策的角度思考城市迁移的过程。本文讨论了决策和评估如何基于不完善的信息，同时，通过研究限制人类理性的认知偏见和启发式思维如何塑造了我们对城市承诺的反应，本文作出了新的理论贡献。这种方法可以更好地理解人们如何做出有关城市移民的决策，他们如何看待城市体验并评估他们的生活故事。我们思考行为方法的前景和局限，并讨论偏向于城市光明未来论述的偏见如何被城市"胜利主义"的论述所利用。这种"胜利主义"的论述忽视了城市内在的不公正。

关键词
认知偏见和启发式思维、决策、社会流动性、主观幸福感、城市迁移、城市胜利主义

'… And by the way, the man who told
That London's streets were paved with gold
Was telling dreadful porky-pies'.
(That's cockney rhyming slang for lies.)
The cat went on, 'To me it seems
These streets are paved with rotten dreams.
Come home, my boy, without more fuss.
This lousy town's no place for us.'
(Roald Dahl, 'Dick Whittington and His Cat', 1989)

Introduction

For centuries, people have been flocking to cities in search of a better life. Despite their changing fortunes over time, big cities have always been perceived as the places to go to for jobs, amenities, socio-economic mobility, freedom and happiness. Whatever their background, people could reinvent

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themselves anew by moving to the city and abandoning the social constraints of their original milieu (Yamagishi et al., 2012). There they would also enjoy the economic externalities triggered by the urban environment and step on the escalator of accelerated upward mobility (Fielding, 1992; Glaeser, 2011). Together, these perceived advantages of cities build a set of expectations which we characterise as 'urban promises'.

However, bright city lights can dazzle as well as illuminate. There is ample evidence showing that the urban escalator is not available everywhere and for everyone. While the potential aggregate economic benefits of urban agglomeration are evident across different periods and places, the outcomes for individuals are extremely diversified. Some receive disproportionally high rewards from urban life, but cities turn out to be disappointing for many hopeful migrants, causes ranging from illness, social collapse and poverty in the industrial cities of the past, to congestion, un(der)employment, pollution, loneliness, socio-ethnic conflict and inequality in today's advanced capitalist cities (Davis, 2006; Florida, 2017; UN-Habitat, 2016).

Such evidence has substantiated the notion that cities are places of inequality and that their aggregate positive impacts on human life have their fair share of winners and losers. And yet, even if reality does not hold up to expectations, the overwhelming belief by newcomers that cities will bring them a better future persists. Millions still come to cities facing unknown odds and stay despite negative experiences, from migration streams from developing countries looking for economic opportunity to young, educated migrants hoping for career advancement and self-realisation (King et al., 2018). However, both the objective socioeconomic outcomes and the subjective experiences of urban life tend to compare poorly with the overoptimistic expectations of many urban

migrants (Knight and Gunatilaka, 2010; Williams and Donald, 2011). Cities have indeed shown a remarkable attractive force throughout history, which raises the question why so many people have such positive, persistent and possibly overrated expectations about them.

A cognitive science perspective

A substantial amount of research has examined the cognitive mechanisms shaping the spatial preferences of individuals and influencing their consequent location decisions, perceptions and judgement of experiences (Gould and White, 1986; Harvey, 1970; Meester and Pellenbarg, 2006; Oishi, 2010; Pred, 1967). This literature has confronted assumptions of urban migration as a rational choice, based on an objective assessment of costs and benefits and an informed anticipation of the future. On the contrary, the construction of our spatial preferences – including those attracting us to cities and nudging us to stay in cities – can be interpreted as the product of decision-making under uncertainty, based on imperfect information, shaped by individual perceptions, values and desires, and relying on many contingent, non-economic factors. Research integrating these ideas develops concepts such as bounded rationality or satisficing behaviours, as derived from Herbert Simon's work (1955, 1957, 1959).

The behavioural approach has influenced many disciplines, most prominently economics. However, its application to urban migration studies is challenging. Behavioural analyses of spatial dynamics are too individualised to make useful predictions and disregard wider social forces which constrain individuals regardless of their cognitive processes (Hayter and Watts, 1983; Meester and Pellenbarg, 2006; Sayer, 1982). As a result, 'behavioural urban geography' is no longer prominent among scholars and explanations

for urban attractiveness have shifted to rational choice models based on the economic opportunity paradigm, leaving the alternative perspective 'dead and forgotten' (Meester and Pellenbarg, 2006: 365). This has reduced our ability to support research with realistic models of human behaviour, departing from normative economic assumptions (Harvey, 1970) and building on the success of the behavioural approach in other fields.

Reinstating that perspective is timely and relevant for two reasons. First, because the shift to rationality in research comes hand in hand with recent scholarly and popular texts celebrating the potential of 'humanity's greatest invention' and the 'triumph' of the city, a trend aptly named 'urban triumphalism', among a variety of similar designations. This work stresses the apparent ability of urban environments to offer a 'richer, smarter, greener, healthier and happier' life (Glaeser, 2011), providing opportunity for all. But the narrative of urban triumphalism is contested because of its focus on economic factors to measure quality of life and explain choices, modelling of individuals as empowered rational agents pursuing opportunities, and consequent use by policymakers to justify the reduction of public intervention in cities and the neglect of urban injustices (Amin, 2013; Gleeson, 2012; Nicholls, 2011; Okulicz-Kozaryn, 2015; Peck, 2016).

Second, because cognitive scientists have been working on models of decision-making based on a number of cognitive biases and heuristics, which explain the way individuals anticipate the future, make decisions, perceive their experiences and judge their outcomes. The novel contribution of this paper is exploring this framework to understand the expectations, decisions, perceptions and judgements of the urban experience, under the hypothesis that the mechanisms shaping these processes are strongly influenced by the same cognitive biases that affect other types of decision-making. Examples of such biases are our lack of statistical intuition to evaluate risk, generalisation of exceptional cases, overconfidence about ourselves and our ability to control our environment, illusory cause–effect attributions and rationalisations of failures. Psychological literature shows that these restrict our capacity to make judgements about the future, the self and the world, as well as to fairly evaluate ongoing and past trajectories (Kahneman, 2003, 2011; Kahneman and Tversky, 1979; Tversky and Kahneman, 1971).

Bringing ideas from cognitive science into urban studies is not new, and such studies are common in environmental psychology and urban design journals. However, since the heyday of behavioural decision-making models in the 1970s and early 1980s, these ideas have mostly been used to understand perception rather than cognition – for instance, perceptions of different areas of the city, responses to the built environment, cultural familiarity enabling socio-ethnic clusters in cities, etc. Departing from that tradition, this paper offers new insights by directly interrogating the field of cognitive biases and heuristics and its potential to explain the mechanisms of anticipation, decision-making and judgement involving urban migration and the urban experience.

Research potential

The behavioural perspective claims that depending on the tractability of the problem and the imponderability of the future, humans are neither capable of optimal decision-making nor of unbiased assessments of the future, their environment and themselves. Precisely because it is so complex and unpredictable, urban life illustrates that kind of problem. Exploring how the enduring attractiveness of cities as well as the penetration of positive messages about cities are supported by cognitive biases

provides another way to interpret the human response to cities, including their ability to retain even those people whose hopes and dreams have not been fulfilled. This helps shed light on several relevant issues for policy and research:

- The reasons for the consistent attractiveness of large cities throughout history, despite their varying socioeconomic prospects and living conditions.
- How a risky and uncertain enterprise such as moving to the city makes people overcome their preferred state of staying in a familiar place (Morrison and Clark, 2016), even if basing their decisions on contingent information.
- Whether people continually realign the reference point used to evaluate their life trajectory and therefore risk accommodating to disappointing living conditions mitigated by permanently deferred expectations.
- Whether, in response, urban policies act on hopes and dreams rather than actual contexts and opportunities, considering that people are more willing to accept inequalities if they believe in their own chances of success (Davidai and Gilovich, 2015).
- How one-sided, overoptimistic messages in 'urban triumphalist' discourses can exploit our cognitive predispositions, to better spread their powerful narratives and obscure how fairly cities are delivering to citizens.

While this perspective is valid for any kind of migration, we focus on migration to large cities, first, because of its global magnitude and potential social and environmental implications. Second, owing to the salience of the 'urban triumph' story in recent years and its association with the largest cities.

We proceed by reviewing evidence about the impacts of urban life on groups and individuals. Then we examine the cognitive biases embedded in decision-making under uncertainty and connect them to the rationale under which cities are conceived as sites of promise and prosperity. The arguments apply to contexts where people have reasonable options available, rather than to extreme situations across the globe where cities are an escape from hunger, war or persecution, where other decision-making mechanisms related to survival certainly prevail. We conclude by discussing how the incorporation of this perspective can be productive for research and assess the implications of either exploiting our cognitive biases to fuel narratives about urban triumphs or acknowledging them to enable more critical participants in urban life.

Examining urban promises

Cities are places of inequality. Even a self-proclaimed 'urban optimist' such as Richard Florida (2017) now concedes that the promises of cities have failed too many people and that their 'winner-take-all' measure of success plants the seeds of more inequality and segregation. Moreover, 'the larger, denser and more knowledge-intensive and tech-based a city or metro is, the more unequal it tends to be' (Florida, 2017: 82). In developed countries, this is partly explained by the combination of the availability of high-end jobs for the most skilled workers and the high levels of competition between them, increasing the risk of failure (Behrens and Robert-Nicoud, 2014). In much of the developing world, this is aggravated by poor urban governance, derelict infrastructure and lack of legal and social protection for citizens, especially migrants (IOM, 2015). Overall, cities provide high rewards for the most able workers and privileged groups, but may be a source of disappointment for the less talented or less privileged.

While cities have historically been magnets for people, a scalar shift happened after the industrial age. In previous economic regimes, most people were bounded to specific places (by feudalist relations, agriculture, or lack of connective infrastructure). Industrialisation marked the end of place-boundedness, and its uneven geographic distribution caused massive migration. Rural–urban migration in Britain following early industrialisation has been studied in detail by Long (2005). He found that the move to urban areas was generally not triggered by famine or poverty, but by an expectation of opportunities for socioeconomic improvement, thereby escaping an inherited intergenerational trajectory with little promise in the countryside. This migration was selective, in the sense that urban migrants were the most skilled and entrepreneurial of the rural labour pool. As a result, those who migrated to cities fared better: 'On average, people from all socio-economic strata who moved to the city were substantially more successful in improving their socio-economic status than they would have been had they remained in rural areas' (Long, 2005: 29).

And yet, Long's statistics are limited to those who managed to survive the 30-year period between the 1851 and 1881 censuses, which he used for comparison. In reality, urban mortality rates were up to 50% higher than in rural areas, and urban life expectancy was about 10 years lower, and even worse in the largest cities, which kept growing only because of massive inward migration (Haines, 2001). This state of affairs persisted until the 1930s. The costs of living in cities were high, as famously illustrated by Friedrich Engels, describing Manchester's squalor as 'hell upon earth'. But while social scientists and activists worked to mitigate the problems of urban living, stressing the economic opportunity argument was in the interest of an urban elite who fuelled the narrative of promise to attract more labour

force (Ross, 2013). The emerging picture is one of contrast between the economic opportunity offered by cities to some and the negative social and health impacts that made the urban experience troublesome for many.

Escalators up … and down (and with limited capacity)

The upward mobility effect of moving to cities is known as the 'escalator effect', and 'escalator regions' (Fielding, 1992) are those that propel the careers of migrants upward, with the associated benefit of higher wages leading to a higher socioeconomic status. There is a beneficial impact on wages of moving into cities, although partially offset by higher living costs (Glaeser and Maré, 2001). This premium also relates to the fact that people with higher skills tend to sort into big cities, a cohort that would have experienced a rapid increase in income or occupational attainment in the first years anyway (van Ham, 2001; van Ham et al., 2012).

Talented migrants may indeed advance faster in an urban environment that lets them develop their human and social capital, by having access to learning opportunities, acquiring tacit knowledge and frequently changing jobs, enabling even more and more diversified tacit knowledge. Nevertheless, Gordon (2015) emphasises that this is not an 'effortless ride up': ambition and learning skills are key intermediating variables determining whether one exploits the potential gains of an escalator region. Moreover, the link between long-term economic status and urbanisation has been contested in some cases: in a spatial analysis of the odds of intergenerational economic mobility in the USA, Chetty et al. write that 'urban areas tend to exhibit lower levels of intergenerational mobility than rural areas' (Chetty et al., 2014: 1593). Finally, a large part of urban migration comes from abroad, in

which case other hurdles exist, even for the young and educated: language and barriers to employment lead to initial jobs below their skill level and allow a relatively slow progression (Parutis, 2011). It follows that the urban escalator has limited capacity and is often inaccessible. Furthermore, it cannot be found everywhere: only a select class of metropolitan area functions as an escalator region (Champion et al., 2014).

The quality of life in cities has improved considerably over the past decades, certainly in developed countries. But other problems persist: residents of large cities compared with small towns and rural areas experience more traffic congestion (Broersma and Van Dijk, 2008) and pollution (Burgalassi and Luzzati, 2015), are more exposed to infectious diseases (Alirol et al., 2011), suffer greater social isolation (Scharf and DeJong Gierveld, 2008), and, especially in Western Europe and North America, report lower levels of subjective wellbeing, despite greater material wealth (Berry and Okulicz-Kozaryn, 2011; Lenzi and Perucca, 2018).

Foreign-born urban migrants may additionally experience exclusion and social vulnerability. The World Migration Report states that 'migrants, and in particular recent migrants, [...] tend to be disproportionately represented among the poor and vulnerable of urban populations in both developed and developing countries' (IOM, 2015: 79). This is not limited to fast-growing cities in low- or middle-income countries: Eurostat statistics (2017) show that foreign urban migrants in the EU are more likely than natives to live in overcrowded lodgings and be overburdened by housing costs. OECD (2016) data for Sweden show that employment rates of foreign-born migrants are lower than those of natives at all skill levels, partly because the largest cities with more work opportunities also face housing shortages and affordability crises, which affect migrants to a greater degree.

All these risks are poorly anticipated when making a residential location decision, and may offset the benefits of moving to and living in cities. Interestingly, the data set by Chetty et al. (2014) mentioned earlier also shows no positive correlation between greater odds of intergenerational mobility and recent population changes (based on US Census 2000–2010 data), meaning that people are not necessarily migrating 'rationally' to the places where economic opportunities (at least for their children) are better. Motives for migration vary, and economic factors are filtered by individual perceptions and intertwined with non-economic issues, such as family, amenities, lifestyle and housing needs (Clark and Maas, 2015). It follows that transitory interests, errors of judgement and irrational decisions play a role in spatial location outcomes, and this is where cognitive biases may give the urban narrative its competitive advantage. Indeed, any historical overview of the rapid growth of the largest cities suggests that they were experienced as dirty, crowded and poor, but also expected to be rich in opportunity (Williams and Donald, 2011). In this gap between the *expected* and the *experienced* lies the strength of urban promises, but also their pitfalls, as the downsides of urban life are neglected. This paper offers a new interpretation of this asymmetry by examining what psychological mechanisms individuals deploy to anticipate the future, choose between scenarios, perceive ongoing experiences and report on past trajectories.

Understanding the psychology of urban promises

As Okulicz-Kozaryn and Valente (2018) write, '[A]lthough in many ways the city provides many freedoms to urbanites, it also entraps them in city dreams and illusions' (2018: 1). The powerful attractive force of cities and their associated rhetoric is based

not only on what cities can actually offer but also on what people *believe* they can offer. As many psychological studies have shown, most decisions in life are actually made according to the latter (Kahneman, 2011). In complex environments, the fact that outcomes do not mirror initial expectations is unremarkable, and in many situations of daily life such discrepancies go unnoticed. What turns the case of urban promises into more than a trivial matter is that it seems to be an especially strong manifestation of this phenomenon, in its persistence over time, geographical scope and impact on human life. Indeed, Mulchany and Kollamparambil (2016) write that the significant decrease of subjective wellbeing among many rural–urban migrants may be a result of overoptimistic expectations which failed to realise. Morrison and Clark (2016) use psychological theories on loss aversion and risk assessment to argue that the preferred state in humans is staying in familiar settings, not moving. The incentive to alter that state must be more than trivial and involve the expectation of substantial relative advantages, otherwise migration would be less common.

Cognitive biases and the attractiveness of the uncertain

To understand the mental processes through which urban promises are perceived and acted upon by individuals, we build on theories about decision-making under uncertainty, pioneered by Herbert Simon, Amos Tversky, Daniel Kahneman, and others. These authors expand the notion of bounded rationality to investigate how individuals interact with the social world around them. The nature of their assessments and decisions is shaped by several consistent biases, which, for the purposes of our argument, we organise in two categories: (1) unrealistic perceptions of risk, the self and the environment, and (2) rationalisations of failure. We will refer to the biases emerging from these categories, illustrate them from the perspective of urban experiences, and then go over the ways in which they can be advertently or inadvertently induced. Figure 1 presents a scheme of the relevant cognitive mechanisms. It differentiates between, first, the basic cognitive biases we experience, and then the heuristics, or mental shortcuts, that primarily enable them. We include some arrows in the scheme to highlight this interaction.

Unrealistic perceptions of risk, environment and the self. Unrealistic expectations and poor perception of risk often conflate to influence decisions in a variety of areas. For instance, Simon et al. (2000) have demonstrated that what drives so many individuals to start business ventures with little chances of success (the so-called 'entrepreneurs') is not their propensity to accept high risks but their lack of perception of risk. At the initial stages, they base their decisions on the 'law of small numbers' (Kahneman, 2003; Taylor and Brown, 1988; Tversky and Kahneman, 1971), a tendency to fallaciously generalise from sparse data and to be insensitive to sample size – we tend to find patterns and stories, especially those that confirm our values and desires, in very small samples, neglecting randomness and representativeness.

If migration to cities is similarly seen as a life-changing venture of uncertain outcome, the adherence to that endeavour is also likely to be explained by a law of small numbers. Despite positive aggregate effects, the fact that urban migration is risky for individuals has been extensively documented. However, anecdotal evidence about a distant acquaintance who achieved success after moving to the city may be enough to send others down the same path, in an expanded version of chain migration not restricted to
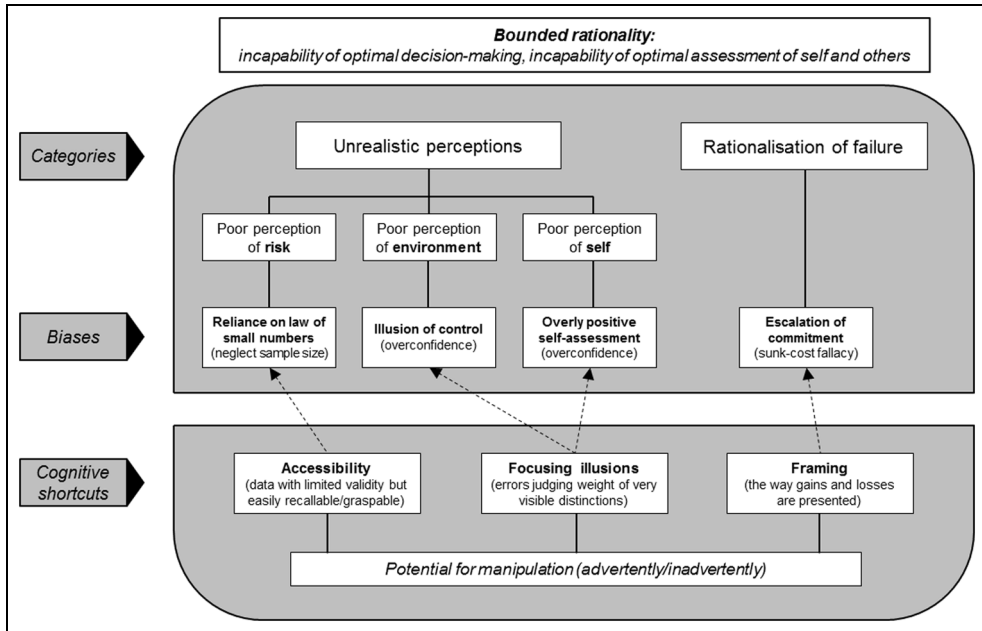
Figure 1. Unrealistic perceptions of risk, environment and the self.

family and close friends. Taleb (2005) points out our 'survivorship bias', the tendency to select the stories of winners to inspire our actions but disregard the vast number of losers. Narratives about urban opportunity cherry-pick examples of success with 'no particular care for audit by numbers, or more accurately, behind the statistics of absolute and relative poverty, it finds context-specific place biographies and complex ethnographies of being and becoming' (Amin, 2013: 480). Cities with a substantial density of such stories associated with them can benefit from an 'attractiveness bonus', even if they are the most saturated and competitive places where the chances for individual success may actually be lower.

The poor measurement of risk coming from weak statistical intuition coexists with a tendency for overconfidence, which relies on two further biases: the illusion of control and overly positive self-assessments. Simon

et al. (2000) also argue that individuals venturing into business assume they have much greater control over their environment than they actually do, neglecting the role of chance and the impact of unexpected events (Taleb, 2007; Taylor and Brown, 1988). The illusion of control adds causality to random events and retrospectively explains outcomes by reconstructing the actions which apparently led to them, overestimating the instrumental role of agents (Miller and Ross, 1975) or fetishising a specific event which people believe to have controlled for their benefit. According to McGee (2005), this is the strategy of self-help books: readers who achieved a desired outcome reconstruct the choices they made in such a way that they can attribute their success to their actions in response to the book, thus justifying their investment.

Similarly, in an environment saturated with positive messages about urban

opportunity and individual empowerment (which often remind us of the rhetoric of self-help books) it is easy to reconstruct past or ongoing life stories to reflect the illusion of control over external events, and recognise causalities that confirm the 'natural powers' of cities to improve our lives – another form of (spatial) fetishism. Forces emanating from the spatial opportunity structure of cities (Galster and Killen, 1995) are thus overweighed, assuming our ability to control them in our favour, while the uneven distribution of personal skills and social safety nets, or simple luck, are neglected. These deterministic assumptions often appear in the urban triumphalism narrative (Gleeson, 2012), suggesting that enabling the illusion of control may partly support its attractiveness and penetration.

The overly optimistic self-assessment bias plays a role in this imbalance. Surveys show that *most* people believe they have better qualities and future prospects than *most* other people, a tendency known as the 'better-than-average' effect (Alicke and Govorun, 2005). Despite the logical inconsistency of these assessments, they are seen as adaptive strategies that improve mental health, strengthening motivation and protecting us from pessimism (Taylor and Brown, 1988). For psychologists, the overestimation of the likelihood of success in spite of contrary signals follows the 'smoke detector' principle, which posits that the cost of responding to a false alarm is low compared with not acting on a real threat. Haselton and Nettle (2006) explain that if the cost of failure is low compared with the cost of missing a real opportunity of gain, people taking decisions under uncertainty will embark on potentially promising endeavours even if the chances of success are low.

If the attractiveness of urban migration can be framed partly as an outcome of overly optimistic self-assessments, then we should consider whether something akin to this smoke detector principle applies there: is the cost of failure low in comparison with the potential opportunity? How much does the sheer increase of competitive actors and the unevenness of the playing field affect the level of opportunity? How much is the emotional and social cost of migration compensated for by economic benefits?

The interesting point is that, later, the judgement of outcomes may indeed confirm the initial expectations: Engelhardt and Wagener (2014) have studied the gaps between actual and perceived upward economic mobility in 26 OECD countries, in terms of job status and material wellbeing, to find that the perceived mobility of individuals is higher than reality in every case. Surveys by Hagerty (2003) stress this positive bias: *most* people believe their lives have improved over time, but think that the life of the *average* person has not. Overoptimistic self-assessments may embolden us and lead to positive outcomes but they also introduce great unreliability in self-reported life situations. As to the potential benefits of urban migration, this means that the urban escalator may be only available for some, but everyone tends to believe it *will include* or *has included* them. And yet, despite the popularisation of optimistic views, this discussion is far from settled. In many cases, urban migration replaces one set of risks with another. People are right about the unmatched opportunity of cities, but poor perception of risk, overconfidence and the illusion of control might make them disregard the unrelenting competition and injustice embedded in it.

Rationalisations of failure. Cognitive biases strongly influence the expectations and decisions of individuals considering urban migration. But why do people stay even in the face of negative experiences and failed expectations? The costs of failure are difficult to measure because they are often rationalised in a self-illusory way, to protect self-

esteem and motivate us to try again (Polivy and Herman, 2002). This cognitive bias is known as sunk-cost fallacy, or escalation of commitment. Several competing theories explain it (see a review in Brockner, 1992; also Kahneman, 2011), but the basic idea is that people are unwilling to change a failing course of action if they have already invested substantial resources in it (financial, emotional, timewise), either because of the need of self-justification or because of the anticipation of substantial losses. The rationalisation of failure, shifting responsibility to external events, serves as a motivation to keep the commitment.

The paradox is that overly ambitious purposes demand overly ambitious investments, becoming simultaneously more difficult to attain and less likely to be abandoned. Similarly, the great promises of cities, as shaped collectively by generations of migrants, make them seem more attractive than an unbiased account of urban life. But the greater the magnitude of these promises, the more unattainable they become for most; and rather than giving up, this actually makes people more likely to rationalise failure and try again.

Can this mechanism be behind the visible capacity of cities not only to attract people, but also to retain those who were left at the lower steps of the urban escalator? There are numerous examples of resilient communities staying and persevering in decaying city economies, such as in Detroit. Probable explanations for this involve the natural tendency to remain in familiar contexts and loyalty to place (King, 2004). However, the cognitive biases perspective offers another interpretation. It suggests that successive failures are prone to escalate commitment and retain people in cycles of motivation and frustration as they keep trying, rather than to make them abandon their investment. The implication is that people may decide against their own economic best interest.

Haartsen and Thissen (2014: 89) write that the alternative, return migration, is often perceived as failure, and 'because they failed in the destination, failure returnees are thought to have inferior human and social capital and will therefore not be able to have any (positive) impact on the development of the region of origin'. Many returns are planned and socially well-regarded (Newbold and Bell, 2001), and intended 'successful' return justifies keeping close ties with the location of origin (Stark, 1991). However, there is evidence for a negative selection bias in return migration, namely when purely economic factors are considered (Niedomysl and Amcoff, 2011). In those cases, those who do not step up the escalator but stay and insist, even if objectively worse off, keep their condition hidden from social disdain and can hope for their own lucky moment.

(Self-)inducing cognitive biases

Psychologists and behavioural economists see the biases of poor perception of risk, illusions of control, overly optimistic self-assessments, and rationalisation of failure as design features of human cognition rather than flaws that can be corrected (Haselton and Nettle, 2006). However, Kahneman (2011) argues that we can mitigate the negative consequences of these cognitive limitations by becoming more aware of the ways in which they can be induced and exploited. We will refer to three main 'cognitive short-cuts' used as heuristics to support decision-making: framing, the way that gains and losses are presented; accessibility, the ease with which thoughts are recalled; and focusing illusions, the errors in judging the weight of especially visible distinctions (see Figure 1 for their connection with cognitive biases). All these enablers of biases can be recognised, explicitly or implicitly, in current understandings of cities.

Framing. Framing effects (Tversky and Kahneman, 1981) violate the rationalist assumption that the addition of irrelevant features or outcome differences does not affect decision-making. In fact, logically equivalent assertions result in very different perceptions depending on how they are presented (a treatment presented as having a 10% mortality rate is likely to be less favoured than one with 90% survival rate; see Kahneman, 2003). This not only lets individuals reinvent their own narratives about urban promises to better confirm their desires and beliefs, but also allows city authorities and opinion-makers to frame information in different ways according to the effect they wish to create. For instance, investment agencies highlight the numbers that show the positives of their cities, but not those that may reveal negative features; municipalities frame gentrification as 'regeneration' to create a positive response in visitors and investors.

Cities have used framing techniques to position themselves under a positive light for centuries, a common trend known as urban boosterism. But framing can have a more pervasive use, namely to make claims about urban life in general rather than particular cities. Leaving aside the discussion about supporting evidence, see how Glaeser (2011) *reframes* the problem of concentrated urban poverty by implying that cities are 'good places to be poor' and thus attract more poor people (Peck, 2016). Amin adds that popular urban imaginaries *reframe* slums as 'another kind of creative/resilient Schumpeterian space' (Amin, 2013: 479), full of opportunity and empowerment, while implicitly endorsing the neglect of public intervention in the city. This use of framing helps create generalisable stories, regardless of context. Later they become accessible simplifications, which we value more than evidence for decision-making. That is how the next heuristic, accessibility, works.

Accessibility. Urban imaginaries often rely on very rich descriptions, visually striking images and memorable concepts. From the first suburbs and Garden Cities to present urban regeneration projects, developers advertise their new ventures with detailed imagery and descriptions to trigger strong reactions and easily recallable memories. The reason why they do this illustrates the phenomenon of accessibility: when confronted with a question about which we do not have sufficient information – such as what will life in the city be like? – we tend to replace it with a secondary question to which we can respond easily – such as do I feel attracted to this promise? In decision-making, the ease of recollection and salience of the data are more important than their statistical representativeness (Kahneman, 2011; recall the law of small numbers).

The capacities to surprise, alter moods and evoke familiar stereotypes are attributes that enhance accessibility (Higgins, 1996; Kahneman, 2003). Therefore, rhetorically effective discourses about the promises of cities, rich in imagery and resorting to specific anecdotes, are likely to override other, eventually more balanced, sources of information. Urban promises have been present in films, popular music and other forms of art and media, and this is likely to have helped the accumulation of simplified, salient and biased messages which are part of our cognitive associations with the idea of the city: in some sense, successive replications and modernisations of the *Stadtluft macht frei* motto turn it into a 'meme', a carrier of cultural ideas which transmits across generations (Dawkins, 1976). And yet, to be fair, the reliance on accessibility works both ways, as the literature about the negative side of urban life, which occupied part of the 20th century, resorted perhaps even more to highly recallable and strong imagery about dystopia and conflict to make its points.

Focusing illusions. A well-known illustration of the final bias, the focusing illusion, involves precisely the perceived distinction between two spatial locations, which relates nicely to the argument about how people judge the promises of urban life. Schkade and Kahneman (1998) compared how people living in the Midwest (USA) judged their own life satisfaction and that of people living in California, and vice versa. While the average satisfaction was similar in both places, Midwesterners assumed that life satisfaction in California was higher, based on the better weather as a highly salient distinction, which they overweighed relative to the rest. The authors write that the correlation between subjective wellbeing factors and objective life circumstances is very low, but 'judgements of life satisfaction in a different location are susceptible to a focusing illusion: easily observed and distinctive differences between locations are given more weight in such judgements than they will have in reality' (Schkade and Kahneman, 1998: 340). Under this perception, people might indeed move to California 'in the mistaken belief that this would make them happier' (Schkade and Kahneman, 1998: 345).

While the weather is a secondary factor, what counts is how much it sets a *difference* from the present situation of the observer. Messages highlighting salient distinctions between alternative places can exploit the focusing illusion to induce life-changing decisions. Urban promises thrive on such illusions: visible differences between large cities and the original settings of migrants – whether they focus on access to amenities and jobs, finding potential love partners, or enjoying the cultural milieu – will be greatly overweighed as to their potential for change and role in future life satisfaction. The greater the difference, the greater the error of judgement, meaning that the focusing illusion is more likely to affect people choosing between very distinct environments (say, London and a village in southern Italy), than those opting between two more similar places.

The point that what counts is not the actual factor of satisfaction but the change it implies in comparison with current conditions suggests that cognitive biases can produce similar discrepancies between expectations and outcomes across all types of social groups. There is a whole spectrum of urban migrants, from underprivileged populations going to cities in search of a better life to skilled professionals looking for the next career move. But, excluding situations of absolute *need* to migrate, whatever the odds, the differences in the mental processes used by these groups to perceive and act upon urban promises may be in degree rather than nature. Kahneman and Tversky (1979) developed prospect theory around the notion that the actual carriers of utility are not expected states of wealth but the potential gains and losses *in relation to a point of reference*. This reference dependence suggests that people in all kinds of initial states may fall for the same type of judgement errors and similarly overrate urban promises. All will require the anticipation of a significant amount of relative change to current conditions to overcome loss aversion and engage in the risky enterprise of urban migration (Morrison and Clark, 2016).

Nevertheless, qualified professionals are likely to have more measurable expectations, such as education or a new job. For underprivileged people, on the other hand, not only will the lower reference point facilitate the illusion of greater relative changes, but the move to the city may also be more clouded with uncertainty about the future, adding difficulty to their decisions and exacerbating the potentially negative impacts of wrong choices.

Summary and discussion

Urban promises have fuelled the imagination of generations of hopeful migrants, who have often exaggerated the potential benefits and neglected the drawbacks of cities. The way this tendency has endured throughout history, in many different contexts, makes an explanation deeply embedded in the human psyche quite likely. This paper used insights from cognitive science to better understand why people tend to have strong and positive expectations about cities, even in the face of uncertain odds, contradicting facts and negative experiences. It discussed urban migration as a form of decision-making under uncertainty and provided a novel contribution by using the framework of cognitive biases and heuristics, popularised by Daniel Kahneman and others in various fields of sociology and economics, to explore the psychological mechanisms affecting how we understand and act upon urban promises. In parallel, the paper aimed to elucidate some of the reasons for the attractiveness of the 'urban triumphalism' discourse and provide further directions for its critique. More broadly, it argued the importance of a behavioural approach to urban studies to diversify current debates around migration and urban agglomeration.

Cognitive biases provide, indeed, clues to explore relevant urban research concerns: (1) the poor perception of risk (law of small numbers) explaining the exaggerated value given to previous individual urban migration stories; (2) the illusion of control providing fertile ground for the rhetoric of urban triumphalism and the belief in the 'natural powers' of cities; (3) overoptimistic self-assessments inducing individual trust in the urban escalator, the neglect of playing fields tilted by embedded injustice and competition, and making us misevaluate success; and (4) the escalation of commitment as a factor for the ability of cities to retain even those to whom urban life was not yet generous.

All these biases feature prominently in how we anticipate and perceive life in cities. They can be strengthened by a variety of heuristics, or cognitive shortcuts. Framing and accessibility are common strategies to convey positive messages about urban life and dispel its downsides. Focusing illusions overweigh the importance of future changes but always relate to a point of reference, meaning that the tendency to overrate such changes to one's current situation may affect all kinds of socioeconomic groups.

Policy implications: The city as a self-help book? Several implications of how cognitive biases affect individuals are relevant for policy. Recent literature has even proposed that public policies should be formulated in a way that builds on those biases to improve our 'choice architecture' and nudge us towards healthier, more responsible and more sensible behaviours (Thaler and Sunstein, 2008). However, acknowledging cognitive biases is also important to mitigate their negative impacts, namely in the case of urban migration and urban life in general. For instance, while ICT and social media can help support migration decisions by providing better information about the destination (Cooke and Shuttleworth, 2018), thus reducing the risk of failure, it is also true that digital connectivity often amounts to personal information bubbles which restrict access to balanced information. Considering that the levels of risk coming from acting on inaccurate information and the potential impact of wrong decisions vary significantly between more and less privileged socioeconomic groups, this implies more attention to how cognitive features can be purposefully exploited by techniques of manipulation of information and affect the most vulnerable.

Indeed, when it comes to the promised triumph of the urban, there is much self-help book-styled rhetoric promised by city marketing gurus. But the logic behind self-help books is often dangerous – they fetishise single actions, provide immoderate hopes, neglect that choice sets are severely limited, and spread the idea that being poor, unsuccessful, unattractive or depressed is one's own responsibility and can be changed by one's own reinvention (McGee, 2005). In a curious analogy, much contemporary urban policy frames the withdrawal of public intervention and the neglect of collective responsibility for spatial and social justice as a 'bottom-up' empowerment of free-choosing citizens (Amin, 2013), similarly seen as well-informed, resourceful and free from social or choice constraints. Research in the USA shows that especially the poorest individuals are indeed willing to accept vast amounts of inequality, as long as they *believe* in the opportunity to succeed, overestimating the likelihood of upward mobility against the risk of downward mobility (Davidai and Gilovich, 2015).

The exploitation of these tendencies is patent in the futurology of some urban triumphalists, announcing the natural powers of cities to make us *all* happier, wealthier and healthier. Highlighting the biases through which we perceive the world may help to tone down some of these celebratory, but paralysing narratives that have spread to policymaking and media.

Theoretical implications and limitations. We illustrated the discrepancy between the *expected* and the *experienced* life in cities through notions of bounded rationality when anticipating the future. However, alongside that gap, we must consider another one between the *experienced* and the *perceived*: even in the presence of results, we tend to misrepresent and overrate our successes, meaning that individual idiosyncrasies and values

distort not only future expectations but also the perceived outcomes of urban life. Misguided perceptions even apply to 'hard' factors such as economic mobility (Engelhardt and Wagener, 2014), stressing that 'factual' realities are also contingent and are apprehended through filters of emotion, affect, personality, age, relative change, among others. It is not just that our cognitive abilities are limited when we are anticipating and deciding, but also that our (non-cognitive) experience of reality is not objective but interpretative (Oishi, 2010).

And yet, these imperfect tools are all we have to decide, perceive and judge life. When it comes to assessing expectations, experiences and perceptions about urban life, they make individuals more likely to constantly realign their reference points (Kahneman, 2011). This makes them likely to accommodate to disappointing but misperceived life conditions, mitigated by constantly deferred expectations, especially in large urban areas where opportunities are diffuse and possibilities abundant.

This presents a problem for research interested in applying behavioural methods to urban studies. With no objectively reported outcomes to test our hopes and dreams against, we end up comparing two levels of subjectivity. The complex wash of filters affecting the perception of experiences introduces unreliability in typical methods of assessment such as individual surveys or life story interviews. Better approaches are probably long-term longitudinal studies comparing large data sets, which could dilute the impact of individual unreliability, and studies testing for differences (age, skills, nationality, socioeconomic background, etc.) where the issue is not how people report on their experiences but how much subjective reports by different groups vary on average.

Anyway, behavioural urban geography would not be a positivist discipline able to

generate postulates, as Harvey wondered decades ago (1970). Its strengths are in illuminating *differences* between individuals, times and contexts and adopting a critical realism approach. In other words, taking the individuality and fragmentation of explanations as an assumption, the behavioural approach operates through a retroductive method, which, unlike other approaches, explores not the *logical* or the *general* conclusion of the analysis but the realistically *adequate* explanation, ever provisional, mainly asking what qualities *should exist* for something to be possible (Danermark et al., 2002; Meyer and Lunnay, 2013).

The positive aspects of cities should not be downplayed. Cities are engines of socio-economic mobility, freedom, innovation and quality of life. Agglomeration benefits are evident and people looking for greater life opportunities are right to consider moving to larger cities. Advertising their positive sides, believing in unlikely promises and following uncertain paths may have productive effects, reinforcing motivation and helping overcome reluctance to change (Berliant, 2010). However, the question of how the 'comparative advantage' of cities emerges can be asked by future research. We consider two possibilities: first, there are actors with an incentive to *frame* cities as more attractive than they actually are. Second, there is a systematic information asymmetry, related to the scale of cities and the density of stories and events that take place there, which develops into a commonly accepted form of spatial fetishism – things are not just *in* the city, they become *of* the city (Saunders, 1986). This process shifts the focus from purposeful framing to the accessibility and focusing illusion heuristics which unfold in our minds regardless of intentions (e.g. positive stories will have greater salience, despite representativeness; potential changes are excessively valued).

Considering the historical persistency of 'urban promises', the second possibility seems likely: the features of human cognition process information asymmetrically and provide a comparative advantage to the urban narrative. The question then is to make people more aware of these features so that they are able to critically judge the benefits and costs of urban life, avoid one-sided or biased discourses, and make more informed decisions about their future. When it comes to developing policies that improve urban life for a majority of people, the belief in better urban futures should not be appropriated as a pretext to perpetuate spatial and socio-economic injustices.

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References

Alicke MD and Govorun O (2005) The better-than-average effect. In: Alicke MD, Dunning DA and Krueger JI (eds) *The Self in Social Judgment*. New York: Psychology Press, pp. 85–106.

Alirol E, Getaz L, Stoll B, et al. (2011) Urbanisation and infectious diseases in a globalised world. *The Lancet Infectious Diseases* 11(2): 131–141.

Amin A (2013) Telescopic urbanism and the poor. *City* 17(4): 476–492.

Behrens K and Robert-Nicoud F (2014) Survival of the fittest in cities: Urbanisation and

inequality. *The Economic Journal* 124(581): 1371–1400.

Berliant M (2010) Misbehavioral urban economics. *Journal of Regional Science* 50(1): 93–101.

Berry BJ and Okulicz-Kozaryn A (2011) An urban–rural happiness gradient. *Urban Geography* 32(6): 871–883.

Brockner J (1992) The escalation of commitment to a failing course of action: Toward theoretical progress. *Academy of Management Review* 17(1): 39–61.

Broersma L and Van Dijk J (2008) The effect of congestion and agglomeration on multi-factor productivity growth in Dutch regions. *Journal of Economic Geography* 8(2): 181–209.

Burgalassi D and Luzzati T (2015) Urban spatial structure and environmental emissions: A survey of the literature and some empirical evidence for Italian NUTS 3 regions. *Cities* 49: 134–148.

Champion T, Coombes M and Gordon I (2014) How far do England's second-order cities emulate London as human-capital 'escalators'? *Population, Space and Place* 20(5): 421–433.

Chetty R, Hendren N, Kline P, et al. (2014) Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics* 129(4): 1553–1623.

Clark W and Maas R (2015) Interpreting migration through the prism of reasons for moves. *Population, Space and Place* 21(1): 54–67.

Cooke TJ and Shuttleworth I (2018) The effects of information and communication technologies on residential mobility and migration. *Population, Space and Place* 24(3): e2111.

Dahl R (1989) *Rhyme Stew*. London: Jonathan Cape.

Danermark B, Ekstrom M, Jakobsen L, et al. (2002) *Explaining Society*. *Critical Realism in the Social Sciences*. Abingdon: Routledge.

Davidai S and Gilovich T (2015) Building a more mobile America – One income quintile at a time. *Perspectives on Psychological Science* 10(1): 60–71.

Davis M (2006) *Planet of Slums*. London: Verso.

Dawkins R (1976) *The Selfish Gene*. Oxford: Oxford University Press.

Engelhardt C and Wagener A (2014) *Biased perceptions of income inequality and redistribution*. CESifo Working Paper Series No. 4838. Available at: https://ssrn.com/abstract=2463129.

Eurostat (2017) *Migrant Integration Statistics – Housing*. Luxembourg: Eurostat.

Fielding AJ (1992) Migration and social mobility: South East England as an escalator region. *Regional Studies* 26(1): 1–15.

Florida R (2017) *The New Urban Crisis: How Our Cities Are Increasing Inequality, Deepening Segregation, and Failing the Middle Class – And What We Can Do About It*. New York: Basic Books.

Galster GC and Killen SP (1995) The geography of metropolitan opportunity: A reconnaissance and conceptual framework. *Housing Policy Debate* 6(1): 7–43.

Glaeser EL (2011) *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*. New York: Penguin Press.

Glaeser EL and Maré D (2001) Cities and skills. *Journal of Labor Economics* 19(2): 316–342.

Gleeson B (2012) Critical commentary. The urban age: Paradox and prospect. *Urban Studies* 49(5): 931–943.

Gordon I (2015) Ambition, human capital acquisition and the metropolitan escalator. *Regional Studies* 49(6): 1042–1055.

Gould P and White R (1986) *Mental Maps*. Second edition. London: Routledge.

Haartsen T and Thissen F (2014) The success–failure dichotomy revisited: Young adults' motives to return to their rural home region. *Children's Geographies* 12(1): 87–101.

Hagerty MR (2003) Was life better in the 'good old days'? Intertemporal judgements of life satisfaction. *Journal of Happiness Studies* 4(2): 115–139.

Haines MR (2001) The urban mortality transition in the United States, 1800–1940. *Annales de démographie historique* 2001(1): 33–64.

Harvey D (1970) Behavioural postulates and the construction of theory in human geography. In: Osborne R and Wrobel A (eds) *Geographica Polonica 18*. *Studies in Geographical Methods*. Warsaw: Polish Scientific Publishers, pp. 27–46.

Haselton MG and Nettle D (2006) The paranoid optimist: An integrative evolutionary model of cognitive biases. *Personality and Social Psychology Review* 10(1): 47–66.

Hayter R and Watts HD (1983) The geography of enterprise: A reappraisal. *Progress in Human Geography* 7: 157–181.

Higgins ET (1996) Knowledge activation: Accessibility, applicability, and salience. In: Higgins ET and Kruglanski A (eds) *Social Psychology: Handbook of Basic Principles*. New York: Guilford Press, pp. 133–168.

International Organization for Migration (IOM) (2015) *World Migration Report. Migrants and Cities: New Partnerships to Manage Mobility*. Geneva: International Organization for Migration.

Kahneman D (2003) A perspective on judgment and choice. Mapping bounded rationality. *American Psychologist* 58(9): 697–720.

Kahneman D (2011) *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.

Kahneman D and Tversky A (1979) Prospect theory: An analysis of decisions under risk. *Econometrica* 47(2): 263–291.

King LA (2004) Democratic hopes in the polycentric city. *Journal of Politics* 66(1): 203–223.

King R, Lulle A, Parutis V, et al. (2018) From peripheral region to escalator region in Europe: Young Baltic graduates in London. *European Urban and Regional Studies* 25(3): 284–299.

Knight J and Gunatilaka R (2010) Great expectations? The subjective well-being of rural–urban migrants in China. *World Development* 38(1): 113–124.

Lenzi C and Perucca G (2018) Are urbanized areas source of life satisfaction? Evidence from EU regions. *Papers in Regional Science* 97(S1): 105–122.

Long J (2005) Rural–urban migration and socio-economic mobility in Victorian Britain. *The Journal of Economic History* 65(1): 1–35.

McGee M (2005) *Self Help, Inc. Makeover Culture in American Life*. New York: Oxford University Press.

Meester WJ and Pellenbarg PH (2006) The spatial preference map of Dutch entrepreneurs: Subjective rating of locations, 1983, 1993 and 2003. *Tijdschrift voor Economische en Sociale Geografie* 97(4): 364–376.

Meyer SB and Lunnay B (2013) The application of abductive and retroductive inference for the design and analysis of theory-driven sociological research. *Sociological Research Online* 18(1): 1–11.

Miller DT and Ross M (1975) Self-serving biases in attribution of causality: Fact or fiction? *Psychological Bulletin* 82(2): 213–225.

Morrison PS and Clark W (2016) Loss aversion and duration of residence. *Demographic Research* 35: 1079–1100.

Mulchany K and Kollamparambil U (2016) The impact of rural–urban migration on subjective well-being in South Africa. *The Journal of Development Studies* 52(9): 1357–1371.

Newbold KB and Bell M (2001) Return and onwards migration in Canada and Australia: Evidence from fixed interval data. *International Migration Review* 35(4): 1157–1184.

Nicholls W (2011) Book review: Welcome to the Urban Revolution: How Cities are Changing the World. *Dialogues in Human Geography* 1(2): 265–268.

Niedomysl T and Amcoff J (2011) Why return migrants return: Survey evidence on motives for internal return migration in Sweden. *Population, Space and Place* 17(5): 656–673.

OECD (2016) *Promoting Well-being and Inclusiveness in Sweden*. Better Policies Series. Paris: OECD.

Oishi S (2010) The psychology of residential mobility: Implications for the self, social relationships and well-being. *Perspectives on Psychological Science* 5(1): 5–21.

Okulicz-Kozaryn A (2015) *Happiness and Place: Why Life is Better Outside of the City*. New York: Palgrave Macmillan.

Okulicz-Kozaryn A and Valente RR (2018) City life: Glorification, desire, and the unconscious size fetish. In: Kapoor I (ed.) *Psychoanalysis and the Global*. Lincoln, NE: University of Nebraska Press, pp. 209–232.

Parutis V (2011) 'Economic migrants' or 'middling transnationals'? East European migrants' experiences of work in the UK. *International Migration* 52(1): 36–55.

Peck J (2016) Economic rationality meets celebrity urbanology: Exploring Edward Glaeser's city. *International Journal of Urban and Regional Research* 40(10): 1–30.

Polivy J and Herman CP (2002) If at first you don't succeed. False hopes of self-change. *American Psychologist* 57(9): 677–689.

Pred A (1967) *Behavior and Location: Foundations for a Geographic and Dynamic Location*

Theory, Part I. Lund, Sweden: Department of Geography, University of Lund.

Ross A (2013) 'Nothing gained by overcrowding': The history and politics of urban population control. In: Bridge G and Watson S (eds) *The New Blackwell Companion to the City*. Oxford: Blackwell Publishing, pp. 169–178.

Saunders P (1986) *Social Theory and the Urban Question*. London: Routledge.

Sayer A (1982) Explanation in economic geography: Abstraction versus Generalization. *Progress in Human Geography* 6: 68–89.

Scharf T and DeJong Gierveld J (2008) Loneliness in urban neighbourhoods: An Anglo-Dutch comparison. *European Journal of Ageing* 5(2): 103–115.

Schkade DA and Kahneman D (1998) Does living in California make people happy? A focusing illusion in judgments of life satisfaction. *Psychological Science* 9(5): 340–346.

Simon H (1955) A behavioral model of rational choice. *The Quarterly Journal of Economics* 69(1): 99–118.

Simon H (1957) *Models of Man*. New York: Wiley.

Simon H (1959) Theories of decision-making in economics and behavioral science. *The American Economic Review* 49(3): 253–283.

Simon M, Houghton SM and Aquino K (2000) Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing* 15(2): 113–134.

Stark O (1991) *The Migration of Labor*. Cambridge: Blackwell.

Taleb NN (2005) *Fooled by Randomness. The Hidden Role of Chance in Life and in the Markets*. New York: Random House.

Taleb NN (2007) *The Black Swan. The Impact of the Highly Improbable*. New York: Random House.

Taylor SE and Brown JD (1988) Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin* 103(2): 193–210.

Thaler RH and Sunstein CR (2008) *Nudge: Improving Decisions About Health, Wealth and Happiness*. New Haven, CT: Yale University Press.

Tversky A and Kahneman D (1971) Belief in the law of small numbers. *Psychological Bulletin* 76(2): 105–110.

Tversky A and Kahneman D (1981) The framing of decisions and the psychology of choice. *Science* 211(4481): 453–458.

UN-Habitat (2016) *Urbanization and Development: Emerging Futures. World Cities Report 2016*. Nairobi: United Nations Human Settlements Programme.

van Ham M (2001) Workplace mobility and occupational achievement. *International Journal of Population Geography* 7: 295–306.

van Ham M, Findlay A, Manley D, et al. (2012) Migration, occupational mobility, and regional escalators in Scotland. *Urban Studies Research* 2012: 1–15.

Williams A and Donald A (2011) *The Lure of the City. From Slums to Suburbs*. London: Pluto Press.

Yamagishi T, Hashimoto H, Li Y, et al. (2012) Stadtluft macht frei (City air brings freedom). *Journal of Cross-Cultural Psychology* 43(1): 38–45.