Maarten van Ham · David Manley Nick Bailey · Ludi Simpson Duncan Maclennan *Editors* 

# Neighbourhood Effects Research: New Perspectives



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Editors
Maarten van Ham
OTB Research Institute for the Built
Environment
Delft University of Technology
P.O. Box 5030
2600 GA Delft
The Netherlands
m.vanham@tudelft.nl

Nick Bailey Urban Studies University of Glasgow Glasgow G12 8RS United Kingdom nick.bailey@glasgow.ac.uk

Duncan Maclennan Centre for Housing Research School of Geography and Geosciences University of St. Andrews Fife KY16 9AL United Kingdom dm103@st-andrews.ac.uk David Manley Centre for Housing Research School of Geography and Geosciences University of St. Andrews Fife KY16 9AL United Kingdom d.manley@st-andrews.ac.uk

Ludi Simpson
The Cathie Marsh Centre for Census
and Survey Research
University of Manchester
Manchester M13 9PL
United Kingdom
ludi.simpson@manchester.ac.uk

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## **Preface**

There is little doubt that neighbourhood effects exist, but after decades of research we seem no closer to knowing how important they are. Neighbourhood effects research is academically intriguing, but also has high policy relevance. Area-based policies, and especially mixed communities policies, are a direct response to the idea that the neighbourhood where you live can have a negative effect on your well-being. It is therefore important to establish how influential such effects really are, what causal mechanisms produce them, and under which circumstances and in which places neighbourhood effects are most significant. Answering these questions helps to develop more effective policy interventions.

The research that is reported in the chapters of this book addresses many of the key issues in the neighbourhood effects debate. The book reviews theories about how neighbourhoods might shape individual lives, exploring the potential causal pathways between neighbourhood context and individual outcomes. Given that one of the main challenges in neighbourhood effects research is the identification of true causal neighbourhood effects, special attention is paid to causality. The book also presents new empirical research on neighbourhood effects, highlighting various methodological problems associated with investigating these effects. Finally, the book increases our understanding of data and methods suitable to analyse neighbourhood effects.

Collectively, the chapters in this book offer new perspectives on this field of research, and refocus the academic debate. It enriches the neighbourhood effects literature with insights from a wide range of disciplines and countries. The introduction of the book summarises seven ways forward for neighbourhood effects research: development of clear hypotheses; empirically testing explicit hypotheses; investigating neighbourhood selection; integrate models of neighbourhood selection and models of neighbourhood effects; investigate various spatial scales; development of better longitudinal data; and the use of mixed methods research.

Many of the contributions in this book were presented at the seminar *Neighbourhood effects: theory and evidence* on 4 and 5 February 2010 at the University of St. Andrews. The seminar was part of a wider ESRC Seminar Series: *Challenges in neighbourhood effects research: does it really matter where you live* 

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and what are the implications for policy (RES-451-26-0704). The seminar series was a collaboration between the Centre for Housing Research (CHR) at the University of St Andrews (lead), Urban Studies at the University of Glasgow, and the Cathie Marsh Centre for Census and Survey Research (CCSR) at the University of Manchester.

Delft, NL St. Andrews, UK Glasgow, UK Manchester, UK St. Andrews, UK Maarten van Ham David Manley Nick Bailey Ludi Simpson Duncan Maclennan

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## **Contributors**

**Kathy Arthurson** Faculty of Health Sciences, Southgate Institute for Health, Society and Equity, Flinders University, Bedford Park, SA, Australia, kathy.arthurson@flinders.edu.au

**Nick Bailey** Urban Studies, School of Social and Political Sciences, University of Glasgow, Glasgow, Scotland, UK, nick.bailey@glasgow.ac.uk

**Venla Bernelius** Department of Geosciences and Geography, University of Helsinki, Helsinki, Finland, venla.bernelius@helsinki.fi

**Paul Cheshire** Department of Geography and Environment, London School of Economics, London, UK, p.cheshire@lse.ac.uk

**Michael Darcy** School of Social Sciences, University of Western Sydney, Penrith, NSW, Australia, m.darcy@uws.edu.au

Stefanie DeLuca Johns Hopkins University, Baltimore, MD, USA, sdeluca@jhu.edu

**Greg J. Duncan** Department of Education, University of California, Irvine, CA, USA, gduncan@uci.edu

**Jessica Feldman** Department of Sociology, The University of Chicago, Chicago, IL, USA, jessicaf@uchicago.edu

**George C. Galster** Department of Urban Studies and Planning, Wayne State University, Detroit, MI, USA, aa3571@wayne.edu

**Gabrielle Gwyther** School of Social Sciences, University of Western Sydney, Penrith, NSW, Australia, g.gwyther@bigpond.com

Lina Hedman Institute for Housing and Urban Research, Uppsala University, Gävle, Sweden, lina.hedman@ibf.uu.se

**Timo M. Kauppinen** Department of Social Research, University of Turku, Turku, Finland, timo.kauppinen@utu.fi

xii Contributors

**Micere Keels** Department of Comparative Human Development, University of Chicago, Chicago, IL, USA, micere@uchicago.edu

Dylan Kneale International Longevity Centre, London, UK

Centre for Longitudinal Studies, Institute of Education, London, UK, dylankneale@ilcuk.org.uk

**Ruth Lupton** Centre for Analysis of Social Exclusion (CASE), London School of Economics and Political Science, London, UK, r.lupton@lse.ac.uk

**Duncan Maclennan** Centre for Housing Research, School of Geography and Geosciences, University of St Andrews, Fife, Scotland, UK, dm103@st-andrews.ac.uk

**David Manley** Centre for Housing Research, School of Geography and Geosciences, University of St Andrews, Fife, Scotland, UK, d.manley@st-andrews.ac.uk

**Ruby Mendenhall** African American Studies and Sociology, University of Illinois, Urbana, IL, USA, rubymen@illinois.edu

**Ludi Simpson** The Cathie Marsh Centre for Census and Survey Research (CCSR), School of Social Sciences, University of Manchester, Manchester, UK, Ludi.Simpson@manchester.ac.uk

Mario Luis Small Department of Sociology, The University of Chicago, Chicago, IL, USA, mariosmall@uchicago.edu

**Gindo Tampubolon** Institute for Social Change, The University of Manchester, Manchester, UK, tampubolon@manchester.ac.uk

**Maarten van Ham** OTB Research Institute for the Built Environment, Delft University of Technology, Delft, The Netherlands, m.vanham@tudelft.nl

# Chapter 1 Neighbourhood Effects Research: New Perspectives

Maarten van Ham, David Manley, Nick Bailey, Ludi Simpson, and Duncan Maclennan

#### Introduction

Over the last 25 years a vast body of literature has been published on neighbourhood effects: the idea that living in deprived neighbourhoods has a negative effect on residents' life chances over and above the effect of their individual characteristics (van Ham and Manley 2010). Neighbourhood effects have been reported on outcomes such as educational achievement, school dropout rates, deviant behaviour, social exclusion, health, transition rates from welfare to work, and social and occupational mobility (see for a review Ellen and Turner 1997; Galster 2002; Dietz 2002; Durlauf 2004). The concept of neighbourhood effects – as an independent residential and social environment effect – is academically intriguing, but has also been embraced by policy makers. Area-based policies aimed at socially mixing neighbourhood populations through mixed tenure policies are seen as a solution to create a more diverse socio-economic mix in neighbourhoods, removing the

M. van Ham (⊠)

OTB Research Institute for the Built Environment, Delft University of Technology, Delft, The Netherlands e-mail: m.vanham@tudelft.nl

D. Manley • D. Maclennan

Centre for Housing Research, School of Geography and Geosciences, University of St Andrews, Fife, Scotland, UK e-mail: d.manley@st-andrews.ac.uk; dm103@st-andrews.ac.uk

N. Bailey

Urban Studies, School of Social and Political Sciences, University of Glasgow, Glasgow, Scotland, UK e-mail: nick.bailey@glasgow.ac.uk

L. Simpson

The Cathie Marsh Centre for Census and Survey Research, School of Social Sciences, University of Manchester, Manchester, UK e-mail: Ludi.Simpson@manchester.ac.uk

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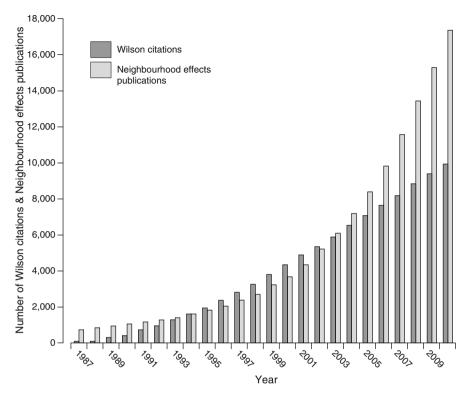


Fig. 1.1 Number of hits in Google Scholar including the words "neighbo(u)rhood effects" by year and the number of hits including the words "The Truly Disadvantaged" combined with "Wilson"

potential of negative neighbourhood effects (Musterd and Andersson 2005). Mixed housing strategies are stated explicitly by many governments including those in the Netherlands, the United Kingdom, Germany, France, Finland and Sweden (Atkinson and Kintrea 2002; Kearns 2002; Musterd 2002).

To illustrate the popularity of the neighbourhood effects discourse we performed a simple Google search on the term "neighbourhood effects" which yielded 203,100 hits (on 24 Feb. 2011). To get more insight in the academic literature we performed a similar search in Google Scholar (on 24 Feb. 2011). Figure 1.1 gives a breakdown of these Google Scholar hits since 1987.<sup>2</sup> In the first year, Google Scholar returned

<sup>&</sup>lt;sup>1</sup> In our search we used both the UK and US spelling of "neighbo(u)rhood effect", excluding the pluaral "neighbo(u)rhood effects" to avoid double counting documents which mention both singular and plural forms (we found a total of 27,500 hits on "neighbo(u)rhood effect"). Counting both hits in UK and US spelling will potentially also result in some double counts as both spellings can occur in the same document as reference lists typically use the original spelling of a title, regardless the spelling of the document.

<sup>&</sup>lt;sup>2</sup> 1987 was chosen because this was the year Julius Wilson published his famous book The Truly Disadvantaged. Google Scholar also returned publications containing the words "neighbo(u)rhood effects" from before 1987, since Wilson's book was by no means the starting point of the debate.

772 documents (books, journal articles and reports) that included the words "neighbo(u)rhood effects". In 2010, 23 years later, the number had increased to 17,420 documents. Figure 1.1 clearly shows that measured in publications, the interest in neighbourhood effects has accelerated over the years and is still growing fast.

Although the neighbourhood effects literature can be traced back to the work of the American sociologist Herbert Gans (1968) in the 1960s, the current popularity of the concept is largely driven by the work of William Julius Wilson and his book "The Truly Disadvantaged: The Inner City, the Underclass and Public Policy" (Wilson 1987). In this book Wilson used ethnographic research to provide an in-depth and detailed account of the effects of living in concentrations of poverty in Chicago and he concluded that the "local conditions and the social practices of residents of poor areas cannot be understood independently of the macro social and economic forces which shape them" (Darcy and Gwyther 2011). The popularity of the book by Wilson can be illustrated by a Google Scholar search on a combination of "The truly disadvantaged" and "Wilson". A breakdown by year shows a steady and growing interest in the book, starting with 33 references in 1987, and growing to 9,880 references (on 24 Feb. 2011) in 2010. The very high volume of references to Wilson's book illustrates the impact of the work on the neighbourhood effects discourse. It is interesting to note that since 2004 the volume of work on neighbourhood effects is growing faster than the number of references to Wilson's book, which suggests that many more recent publications on these effects are moving away from Wilson' original work.

The large volume of work on neighbourhood effects not only reflects the interest in the topic, but possibly also reflects the fact that we are still a long way from answering the question how important these effects actually are (see also Small and Feldman 2011, in this volume). Sampson and colleagues have described the search for neighbourhood effects as the "cottage industry in the social sciences" (Sampson, et al. 2002 p. 444). There is little doubt that these effects exist, but we do not know enough about the causal mechanisms which produce them, their relative importance compared to individual characteristics such as education, and under which circumstances and where these effects are important.

One of the main challenges in neighbourhood effects research is the identification of true causal effects (Durlauf 2004) and many existing studies fail to do this convincingly. This leaves the impression that neighbourhood effects are important, while in reality many studies just show correlations between individual outcomes and neighbourhood characteristics (Cheshire 2007; van Ham and Manley 2010). Critics<sup>3</sup> have even stated that "there is surprisingly little evidence that living in poor

<sup>&</sup>lt;sup>3</sup> Some go a lot further in criticizing the neighbourhood effects literature and reject the whole concept of neighbourhood effects by suggesting that they are the product of an ideological discourse. Bauder (2002) presents a strong critique of the neighbourhood effects literature, and notes that "neighbourhood effects are implicit in the culture-of-poverty and underclass concepts" (2002, p.88) through the pathologising of unwed pregnancies, high school dropouts, number of female headed households as de facto societal ills. Bauder argues that "the idea of neighbourhood effects can be interpreted as yet another episode in the on-going discourse of inner-city marginality that blames marginal communities for their own misery" (ibid). Bauder accuses those who research neighbourhood effects of reproducing the very notions of marginality that they seek to understand.

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neighbourhoods makes people poorer and erodes their life chances, independently of those factors that contribute to their poverty in the first place" (Cheshire 2007, p. 2). It is in the interest of those involved in the neighbourhood effects discourse and in policy development, to develop a better understanding of the current evidence base for neighbourhood effects, the problems associated with the empirical testing of the neighbourhood effects hypothesis, and to explore new directions for future research.

This book is specifically designed to offer new perspectives on neighbourhood effects research with the aim to further the academic debate on neighbourhood effects and to aid the development of effective policies. It will enrich the neighbourhood effects literature with views from various disciplines and countries. The book will address three key issues. First, it will review theories about how neighbourhoods might shape individual lives, exploring the potential causal pathways between neighbourhood context and individual behaviour. Specific attention will be paid to the issue of causality. Surprisingly, given the awareness of (self) selection processes, the neighbourhood effects literature pays scant attention to the literature on selective residential mobility into and out of neighbourhoods. Second, the book will provide new empirical research on neighbourhood effects. Subsequent chapters will explore various problems associated with investigating neighbourhood effects. Third, the book will increase our understanding of data and methods suitable to analyse neighbourhood effects – free of bias – and the limitations of these methods.

## **Identifying Causal Neighbourhood Effects**

There is a substantial divide in the neighbourhood effects literature between evidence from studies that use qualitative methodologies and the evidence from those studies using quantitative techniques. Studies using qualitative methods, which focus on the experiences and perceptions of residents, have tended to report stronger and more consistent evidence of neighbourhood effects than those that use quantitative methodologies. For instance, using qualitative techniques, neighbourhood effects of poor reputations of neighbourhoods have been repeatedly identified on employment outcomes (see Atkinson and Kintrea 2001), and on social processes, including social networks, acting on other socio-economic outcomes of residents living in deprived neighbourhoods (Pinkster 2009).

This is in stark contrast to the quantitative literature where there has been much less clarity in outcomes. Taking as an example work on labour market outcomes and the effects of the neighbourhood context, there are some papers that claim they have identified causal neighbourhood effects (see for instance Musterd and Andersson 2005; Galster et al. 2008; Overman 2002), while other studies conclude that there may be other mechanisms (such as neighbourhood selection) driving the apparent correlations between poor individual labour market outcomes and neighbourhood context variables (see for instance Oreopoulos 2003; Bolster et al. 2007;

Van Ham and Manley 2010). This critical literature argues that policies designed to tackle poverty should target individuals rather than the areas within which they live (see also Cheshire 2007), without dismissing the importance of area-based policies to direct funding to those individuals who most need it.

The divide in evidence between methodologies is not overly surprising given the epistemological differences between qualitative and quantitative approaches. Qualitative work explicitly draws on real world experiences, while quantitative studies require "abstractions of the world [...] and thus are inherently once-removed from empirical reality" (Small 2008, p. 170). Ideally quantitative research aims to identify independent generalizable causal mechanisms, although it has to be acknowledged that many quantitative studies operate within a 'black box' approach without explicitly identifying specific causal mechanisms. Qualitative studies ideally aim to identify plausible causal mechanism (from residents' perceptions or from other sources) and then investigate what evidence there is that they are operating. Many qualitative studies seek to give voice to individuals and their perceptions, and if an individual *perceives* that they have experienced negative outcomes because of their neighbourhood situation, such as difficulty getting employment because of neighbourhood stigma, then this is of interest in itself.

The qualitative literature emphasises richness and depth of participants' life courses and can use theoretical constructions to move from the one to the many and to generalise findings. Conversely, generalizability in the quantitative literature is gained through the use of samples that reflect the structures of the wider population. In this literature (ideally), proof of a causal neighbourhood effect can only be accepted once a set of analytical and econometric principles have been met and all other possibilities have been controlled for in the modelling approach. Small and Feldman (2011, in this volume) argue that for neighbourhood effects research to move on, qualitative and quantitative methods should meet within one and the same research design (see also Galster 2011, in this volume). Deluca and colleagues (2011, in this volume) offer an empirical exemplar using such a mixed method approach. They use qualitative methods to help to understand some of the unexpected findings of quantitative work from the Moving to Opportunity program.

The main challenge in the quantitative literature is the econometric identification of real causal neighbourhood effects (Moffitt 1998; Durlauf 2004). Sceptics could argue that using quantitative methods it is not possible to identify real causal effects, as there will always be the potential of omitted variable bias and selection bias. A lot can be done to reduce such biases, but many studies do not make an effort to do so. Maybe even more importantly, many studies do not discuss how bias can affect their modelling results, and what the potential implications of bias are for the interpretation of the study outcomes. As a result, many studies which claim to have found causal neighbourhood effects cannot rule out the possibility that some or all of the results are actually a consequence of omitted variables or selection effects. The most obvious examples of quantitative studies which cannot make any claims about causality are ecological studies (see Graham et al. 2009). Such studies can only show correlations between area characteristics and have the potential to fall foul

of the ecological fallacy (Robinson 1950). Also quantitative studies using individual level data suffer from a number of problems which may inhibit the identification of causal effects. The most noticeable are omitted (context) variable bias, the simultaneity problem and the endogenous membership problem (Moffitt 1998; Durlauf 2004).

Omitted variable bias occurs when a key explanatory variable is not available in the data used and other variables in the model, which serve as statistical proxies for the missing variable, pick up the effect. A well-known example of an omitted context variable problem is the racial proxy hypothesis (Harris 1999), where race serves as a proxy for economic deprivation (see van Ham and Feijten 2008; Feijten and van Ham 2009). One way to avoid omitted variable bias is to decide which data to collect on the basis of explicit theory and hypotheses (see Galster 2011 in this volume for an example), although it has to be acknowledged that there will always be relevant factors not included in data. The simultaneity problem (also known as the reflection problem, see Manski 1993) is concerned with the fact that measures of neighbourhood characteristics are not independent from the individuals living in neighbourhoods. When testing the hypothesis that the level of unemployment in a neighbourhood has a negative effect on individual unemployment, the individuals in the model should not simultaneously be included in the neighbourhood level measure. An empirical solution is to use longitudinal data and to associate neighbourhood characteristics from a previous point in time to current outcomes. The endogenous group membership problem mainly refers to the issue that households do not select their neighbourhood at random. This is a problem in neighbourhood effects research when the selection mechanism is related to the outcome under study, which is often the case. Pinkster (2009) argues that selection bias is less of a problem in qualitative studies as such investigations focus on the mechanisms through which the neighbourhood context may mediate individual outcomes. Neighbourhood selection is highly structured by demographic and socio-economic characteristics of household, and characteristics of the local housing market (see Hedman et al. 2011). As a result, many quantitative studies of neighbourhood effects suffer from selection bias. The literature offers several econometric techniques aimed at overcoming selection bias, but it is probably realistic to say that selection bias can never be fully ruled out in observational studies.

An approach which can potentially overcome the problem of selection bias is the use of experimental data instead of observational data. Prime examples of such an approach are derived from the poverty deconcentration programs in the US including the Gautreaux project in Chicago and the Moving to Opportunity (MTO) and HOPE VI programs (see Deluca et al. 2011 in this volume). However, although the experimental research design is often seen as the gold standard within the social sciences, in reality many experimental settings still suffer from selection bias. Participation in the deconcentration programs was never completely random as households had to nominate themselves for inclusion in the programs. Often strict selection criteria were used, and there is also some evidence, especially in the Gautreaux project, that some of the allocations were based on judgements of whether or not households were considered as deserving (Rosebaum 1995).

Interestingly, the outcomes of the experimental data analyses are as mixed as those from the observational data. Durlauf (2004) reports that quasi-experimental studies, such as Gautreaux and the Moving to Opportunity program (Rosebaum 1995; Ludwig et al. 2001; Goering et al. 2002) or randomised education studies (see Leventhal and Brooks-Gunn 2004) find little impact on adults' outcomes. Conversely, work by Popkin and Cunningham (2009) reported that, following the HOPE VI program, there were dramatic improvements in social wellbeing for residents who had been moved into neighbourhoods with lower levels of poverty. Clark (2008) reported that many of the studies that had reported an advantage for movers were poorly conceived or failed to take into account the appropriate populations for comparison. Clark concluded that the gains attributed to the deconcentration programs were more likely to be the result of structural improvements, for instance through economic conditions improving, rather than effects directly relating to changes in the neighbourhood and the social environment.

### **Neighbourhood Effects Research at a Crossroads?**

According to Small and Feldman (2011, this volume), neighbourhood effects research is at a crossroads since current empirical and theoretical approaches to the topic do not seem to be moving the debate forward. The body of research is increasing at such a rate that it has become impossible for anyone to gain an overview of the whole literature, and to systematically assess where and under which circumstances neighbourhood effects are important or not, and how important they are compared to individual characteristics. Many studies suffer from a lack of clarity about causality and fail to set out clear hypotheses on the causal mechanisms under investigation.

One of the problems in the quantitative neighbourhood effects literature is that progress has almost exclusively focussed on statistical techniques to overcome selection bias. While these techniques are important, they will never be able to overcome these, or other econometric problems, completely. Moreover, as observed by Rubin (2008), there are potentially greater gains in terms of casual inference to be made through good study design rather than through complex statistical modelling techniques. The emphasis on statistical techniques has also hampered our understanding of why certain households move to certain neighbourhoods and how this is related to neighbourhood effects. More importantly, the emphasis on technical solutions to solve selection bias has distracted us from a much more important issue: the theoretical and empirical identification of potential causal pathways which may lead to neighbourhood effects (see both Galster 2011 and Small and Feldman 2011 in this volume). Many studies simply search for correlations between neighbourhood characteristics and individual outcomes, control for a range of econometric problems (if at all) and, when some correlation remains, conclude that they have (most likely) found a neighbourhood effect. There is a lack of research that starts from a clear theoretical framework, and searches for robust and defensible causal mechanisms.

Jencks and Mayer (1990) concluded that in many studies neighbourhood effects are essentially treated as a "black-box" term identifying a set of unexplained relationship(s) to be further investigated rather than an entity that can be used to explain a set of outcomes. Over 20 years later, that criticism is still relevant.

It is apparent that there is a real need for a re-evaluation of the way in which we research neighbourhood effects. The chapters in this book offer multiple ways forward. First of all, future work should concentrate on deriving and testing clear hypotheses on causal neighbourhood effect mechanisms. Small and Feldman (2011) in this volume identify a need to integrate ethnography more effectively in neighbourhood effects research to generate explicit, testable hypotheses that guide quantitative research. Second, studies should explicitly investigate the relationship between neighbourhood context and individual outcomes. Are there duration effects? Are there thresholds? (see Galster 2011 in this volume). Third, future work should also concentrate on understanding mechanisms behind neighbourhood selection. Simply controlling for selection is not enough as selection is at the heart of understanding why certain households end up in certain neighbourhoods (Hedman and van Ham 2011 in this volume). Fourth, instead of treating neighbourhood selection as a nuisance which needs to be controlled away, future work should attempt to incorporate models of neighbourhood selection in models of neighbourhood effects (Manley and van Ham 2011 in this volume). Fifth, future work should acknowledge that neighbourhood effects might operate at various spatial scales and include multiple scales in the empirical investigation of neighbourhood effects (Lupton and Kneale 2011. in this volume). A specification of scale should be incorporated in the hypotheses set out. Sixth, better data are needed to test neighbourhood effects hypotheses. Longitudinal data are crucial in investigating causal mechanisms, but such data should also contain a richer array of individual level and spatial context variables than is now the case. The seventh and final way forward as identified in this volume is mixed methods research. Ethnographic research is crucial in exploring and identifying potential causal mechanisms. Quantitative analysis of large scale longitudinal data enriched with contextual data are crucial in testing the generalisability of causal mechanisms, but the combination of qualitative and quantitative work is very powerful when it comes to understanding the unexpected (see Deluca et al. 2011 in this volume).

#### **Book Structure and Contents**

The remainder of this book is organised around 11 chapters by researchers from Australia, Finland, Sweden, the United Kingdom and the United States of America. The first three chapters by George Galster, Mario Small and Jessica Feldman, and Lina Hedman and Maarten van Ham offer theoretical contributions to the literature. The next five chapters by Kathy Arthurson, Ruth Lupton and Dylan Kneale, David Manley and Maarten van Ham, Gindo Tampubolon, and Stefanie DeLuca, Greg Duncan, Micere Keels, and Ruby Mendenhall report empirical work using case

studies from five different national contexts. In the third part of the book, Venla Bernelius and Timo Kauppinen, and Michael Darcy and Gabrielle Gwyther present data collection proposals aimed at overcoming some of the challenges mentioned earlier in this introduction, from a quantitative and qualitative perspective. In the final chapter, Paul Cheshire provides a critique of mixed communities policies through analyzing the evidence base for neighbourhood effects.

There are several important links between chapters in different sections of the book. For example, both Galster and Small and Feldman call for more mixed methods research where qualitative techniques are used to interrogate the broad findings produced by quantitative neighbourhood effects studies. In Chap. 9, Deluca and colleagues provide an exemplar of how such research should be undertaken. In a similar vein, the chapters by Galster, Bernelius and Kauppinen, and Darcy and Gwyther all present designs of new data collection projects. The work of Darcy and Gwyther also has links with the work of Arthurson, as both highlight the lack of voices from individuals living in deprived neighbourhoods in the majority of neighbourhood effects work. Finally, the work of Hedman and van Ham points to the importance of considering selective mobility in neighbourhood effects research, a theme picked up again in the chapter by Manley and van Ham. The remainder of this introduction provides a detailed overview and summary of all the book chapters.

In Chapter 2 George Galster posits the idea that although there is now a large body of empirical research on neighbourhood effects, we know relatively little about the causal mechanisms responsible for relationships between neighbourhood attributes and individual outcomes. Without an in-depth understanding of these mechanisms and an understanding of the circumstances under which neighbourhood effects matter, scholarship on neighbourhood effects cannot advance, and public policy cannot be adequately directed (see Small and Feldman 2011 in this volume). Galster offers a list of 15 potential causal pathways which may lead to neighbourhood effects, grouped into four categories: social-interactive mechanisms, environmental mechanisms, geographical mechanisms, and institutional mechanisms. Social-interactive mechanisms refer to social processes endogenous to neighbourhoods, which are generally seen as the core of the neighbourhood effects argument (social contagion, collective socialisation, social networks, social cohesion and control, competition, relative deprivation, and parental mediation). Environmental mechanisms operate through natural and human-made attributes of neighbourhoods that may affect directly the mental and/or physical health of residents without affecting their behaviours (exposure to violence; physical surroundings; and toxic exposure). Geographical mechanisms refer to effects of the relative location of neighbourhoods (spatial mismatch of jobs and workers and a lack of quality public services). And finally institutional mechanisms which are related to the behaviour of actors external to neighbourhoods, who control the resources available and access to housing, services and markets for neighbourhood residents (stigmatisation, local institutional resources, and local market actors).

Galster continues his argument by stating that the ultimate goal of neighbourhood effects research is not only to identify which mechanisms are responsible for neighbourhood effects, but also to ascertain quantitatively their relative contributions to

the outcome of interest. He uses the pharmacological metaphor of "dosage-response" to understand how the theoretical mechanisms could be causally linked to individual outcomes. He formulates 17 questions regarding the composition of the neighbourhood dosage, the administration of the neighbourhood dosage, and the neighbourhood dosage-response relationship which need to be answered to fully understand how the neighbourhood context affects residents. Neighbourhood residents can be exposed to a certain composition of mechanisms, over a certain time, with a certain frequency, and intensity. The relationship between the "dosage" of neighbourhood to an individual and certain outcomes may be nonlinear (thresholds), be temporary or long-lasting, take time to have an effect, and only have an effect in combination with other factors.

Existing qualitative and quantitative studies have not been able to adequately answer the 17 questions and uncover the dominant neighbourhood effect mechanisms at work. There is no definitive, comprehensive study of neighbourhood effect mechanisms. No study examines more than one or two of the 17 questions for an array of potential causal mechanisms and many of the questions have not been addressed explicitly in the theoretical or empirical literature. Field studies have yielded important insights on potential mechanisms, but are often limited in their ability to discern the relative contributions of alternative causes. Multivariate statistical studies often look for average effects (see also Small and Feldman 2011 in this volume) and are very limited in their ability to distinguish multiple mechanisms and dosage-response relationships for a variety of cities, neighbourhoods and groups of individuals.

Galster concludes by stating that, despite the ever growing literature on neighbourhood effects, there is far too little scholarship to make many claims about which causal links dominate for which outcomes for which people in which national contexts and any conclusions on the existence of neighbourhood effects should be treated as provisional at best. Galster calls for more, but especially different research (see also Small and Feldman 2011). Mixed method strategies should be embedded within the same study design; studies should explore residential histories; studies should consider a wider range of neighbourhood conditions and characteristics; and studies should collect more data on social interactions and mobility within neighbourhoods. Those developing public policy on health, employment and housing are urged to be careful when basing public policy responses on neighbourhood effects research as the causal pathways are not yet not clear.

In Chapter 3 Small and Feldman begin with the observation that research on neighbourhood effects is at a crossroads. After decades of qualitative and quantitative empirical studies (including Moving To Opportunity) aiming to ascertain how much neighbourhoods affect life chances, we seem nowhere near a coherent answer. They identify three concerns from the literature on neighbourhood effects.

The first concern is that most quantitative empirical studies into neighbourhood effects most likely suffer from selection bias (see also the chapters by Hedman and van Ham 2011; Cheshire 2011; and Manley and van Ham 2011 in this volume). The second is that much of the neighbourhood effects literature is searching for average effects: a single answer to the question whether neighbourhood effects exist, for any

given outcome, regardless of location, context, or other conditions. They argue that "an entire generation of researchers concerned themselves with answering either a yes-or-no question (do neighbourhoods matter?) or a question of degree (how much do they matter?)—rather than a conditional question (under what circumstances do they matter?)." The third concern is that it is unclear how much progress has been made on the question of which mechanisms potentially causing neighbourhood effects matter (see also Galster 2011 in this volume). Small and Feldman use the three concerns to evaluate the Moving to Opportunity (MTO) randomized trials, which are generally seen as a turning point in neighbourhood effects studies. Despite MTO's claim of providing a solution to the selection bias problems, it failed to do so convincingly. Small and Feldman draw two important lessons from the MTO work, which will guide future work on neighbourhood effects.

The first is that it is often assumed that neighbourhood effects operate homogeneously across subpopulations and across treatment settings. Small and Feldman argue that future work on neighbourhood effects should move away from a perspective focused on average effects to one that expects and explains heterogeneity: whether neighbourhoods matter is conditional on the characteristics of individuals, neighbourhoods, and cities. To illustrate this point they test the de-institutionalization hypotheses that concentrated poverty undermines organizational density. This hypothesis is derived from work primarily done in Chicago, which is generally seen as a laboratory where phenomena occurring in the average large city can be observed. Small and Feldman show that Chicago's poor neighbourhoods are substantially less organizationally dense than not only the average poor neighbourhood in U.S. cities and but also the average for Rustbelt cities. So Chicago cannot be seen as a representative city and hypotheses derived from Chicago might be place-specific rather than general. This is not to say that neighbourhoods do not matter, but that whether and how they matter may depend on the context.

The second lesson from the MTO work is that future work should better integrate ethnographic research into the quantitative empirical research program. Ethnographic research has the capacity to help explain the often contradictory results of previous neighbourhood effect studies, and to generate hypotheses for future studies. Many findings from previous work cannot be understood without talking to residents of poor neighbourhoods to find out how they make decisions under their circumstances. Neighbourhood effects research would benefit from ethnographic research specifically designed to generate explicit, testable hypotheses that guide quantitative research. Such research should study neighbourhood effects for different cities, neighbourhoods, and types of individuals to explain heterogeneity. Study sites should be selected in cities other than the conventional locations, particularly Chicago.

To conclude, Small and Feldman call for integrating ethnography more effectively in neighbourhood effects research, accompanied by a reorientation of practical and theoretical assumptions behind the work, and a reorientation from homogeneity and average effects toward heterogeneity and conditional relationships.

Chapter 4 by Hedman and van Ham argues that the most severe problem in the identification of causal neighbourhood effects is selection bias as a result of selective sorting into neighbourhoods. People sort themselves into and out of 12 M. van Ham et al.

neighbourhoods and selection bias occurs when the selection mechanism into neighbourhoods is not independent from the outcome studied. Many studies do not control their models of neighbourhood effects for selection bias. As a result it is impossible to say whether correlations between neighbourhood characteristics and individual outcomes are causal effects, or the result of neighbourhood selection. For example, unemployed people are more likely to move into deprived neighbourhoods than employed people. If this selection mechanism is not adequately controlled for in modelling the effect of living in a deprived neighbourhood on unemployment, a correlation between unemployment and neighbourhood deprivation might be mistaken for a neighbourhood effect. The chapter argues that to better understand mechanisms behind neighbourhood effects, more knowledge is needed about residential mobility and the selective sorting into and out of neighbourhoods.

Using data from three neighbourhoods in Stockholm, Sweden, Hedman and van Ham show that selective mobility of neighbourhood residents can either change the neighbourhood population or reproduce existing patterns. If, in a neighbourhood with relatively low employment levels, those who get a job leave the neighbourhood, and are replaced by others without a job, it is not the neighbourhood which causes unemployment, but the neighbourhood housing stock which attracts unemployed people who cannot afford to live elsewhere. This is not the same as concluding that neighbourhood effects do not exist. Instead, the conclusion is that the selection mechanisms outlined above must be accounted for in empirical models. The chapter proposes a conceptual model linking neighbourhood choices made by individuals and households with individual level outcomes. Both real causal effects and selection effects are featured in the model.

The chapter continues to argue that in order to further our understanding of neighbourhood effects we should incorporate neighbourhood sorting into our models of neighbourhood effects. Many approaches to deal with selection bias treat neighbourhood sorting as a statistical nuisance and reveal nothing about the processes behind the potential bias. Neighbourhood sorting is of interest in its own right and surprisingly few studies focus on why certain households 'choose' certain neighbourhoods. A better understanding of neighbourhood sorting is also central in understanding residential segregation and the production and reproduction of neighbourhoods of different characteristics and status. Neighbourhood effect studies are thus in the situation where the processes behind one of its key methodological problems (selection bias) are also critical to fully understand the neighbourhood context itself.

Moving the focus towards empirical investigations, Chapter 5 by Kathy Arthurson explores some of the debates about poor reputations and stigmatisation of neighbourhoods in which social housing is concentrated. She argues that living in a neighbourhood with a poor reputation can have a negative effect on individual outcomes, over and above other neighbourhood characteristics. For example, employers may discriminate against neighbourhood residents based on the postcode area in which they live. Residents of neighbourhoods with a poor reputation can also adopt self-defeating behaviours linked to the place in which

they live. The reputation of a neighbourhood is not necessarily based on current attributes, but can be rooted in the history of a place. Neighbourhood regeneration programs often have as one of their aims changing the reputation of a neighbourhood. Despite the debates about the potentially harmful effects of living in a neighbourhood with a poor reputation, in-depth knowledge and understandings of the dynamics of stigma and whether the situations are improved post-neighbourhood regeneration with changes to social mix are limited, especially from residents' perspectives. Arthurson's chapter aims to get more insight in how neighbourhood residents see their neighbourhood and how they think others see their neighbourhood. Data are collected from three neighbourhoods across the city of Adelaide, Australia, using a questionnaire and in-depth interviews. Results are presented on four neighbourhood dimensions - house condition, attractiveness, safety and density. Overall, when analysing the differences between internal and external ratings within four housing tenure groups, on all four measures respondents' internal (self) ratings from their own perspectives, were more favourable than their judgements of how they felt that people from outside the area would view the neighbourhoods. It is hypothesised that this negative external perception might influence the behaviour of neighbourhood residents. The interview results show that interviewees overall expressed the view that, postregeneration, their neighbourhoods were more attractive and the condition of housing was much improved. In general, the findings support those of other studies, which suggest that introducing homeowners onto social housing estates as part of regeneration initiatives to some extent improves the external reputation of the neighbourhoods.

In Chapter 6, Ruth Lupton and Dylan Kneale investigate neighbourhood and place effects on the likelihood of becoming a teenage parent in England. They argue that government policies to reduce teenage parenthood are in part informed by a persistent belief in neighbourhood effects. They also identify that current evidence for neighbourhood effects on teenage parenthood is remarkably weak. The chapter is designed to make a dual contribution to this volume. First, it highlights some of the conceptual problems in much existing neighbourhood effects research around the role of place and the importance of geography. Lupton and Kneale critique the lack of theoretical basis to much of the existing literature on neighbourhood effects. Their critique closely matches some of the points made in the chapters by Galster (2011) and Small and Feldman (2011): many studies search for more general evidence of neighbourhood effects without formulating specific hypotheses on causal mechanisms, and often without detailed knowledge of the dependent variable under study. Lupton and Kneale also critique the lack of attention to what is the most appropriate spatial scale to study specific neighbourhood effects (see also the chapter by Manley and van Ham 2011). Many studies use geographical units without any particular logic or theoretical justification, simply because a certain level of geography is available in the data. They call for a much closer and also a more critical collaboration between quantitative and qualitative researchers so that qualitative understandings of place are better reflected in quantitative models (see also the chapter by Small and Feldman 2011)

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Second, the chapter offers an empirical investigation into neighbourhood effects and adds to the evidence base on teenage parenthood. They use data from the British Cohort Study (BCS70), a longitudinal study of people born in 1970, with unique postcode geo-coding of neighbourhood characteristics. In many studies of neighbourhood effects it is usual that only one neighbourhood geography is tested. To extend their analysis Lupton and Kneale test several geographies (see also chapter by Manley and van Ham 2011 for a study using multiple geographies). They use the standard geographies available in the data in combination with bespoke geographies designed to more closely represent the spatial scales over which they believe the relevant mechanisms operate. The bespoke geographies are based on newly created spatial units, for example around clusters of contiguous similar areas, and on considerations of the characteristics of neighbouring units. They found some evidence of value-related place effects at the neighbourhood level and labour market structural effects at the sub-regional level. The results suggested that place effects on values around fertility operate at a relatively fine spatial scale. The study emphasises the limitation that it did not take into account selection of people into neighbourhoods, which is likely to have lead them to overestimate the propensity to experience a teenage birth in certain types of neighbourhoods. The overall conclusion is that although in principle a theory-driven approach that identifies and tests specific mechanisms is the right one, in practice it may be impossible to separate the social processes leading to early parenthood from one another using quantitative methods and data. A second conclusion is that neighbourhood effects research should move towards more explicit and transparent considerations of geography in order to make a stronger contribution to knowledge of place effects.

In Chapter 7, Manley and van Ham explore labour market outcomes for individuals living in concentrations of unemployment using data from the Scottish Longitudinal Study (SLS). They highlight a number of serious shortcomings in much of the existing literature on neighbourhood effects, which leads them to question the current evidence base for neighbourhood effects. Many existing studies suffer from selection bias in their results as they are not able to control for selective mobility into deprived neighbourhoods. As a result, they are likely to show correlations between individual outcomes and neighbourhood characteristics, instead of real causal effects. They pay special attention to the outcomes of (quasi)-experimental studies, which should (in theory) be able to overcome the selection bias issue.

The empirical section of the chapter investigates whether the level of unemployment in a neighbourhood is related to the employment outcomes of residents. Using logistic regression models they estimate the probability that an unemployed person in 1991 has a job in 2001, and the probability than an employed person in 1991 still has a job in 2001. The models control for a wide variety of individual and household contexts and clearly show a correlation between neighbourhood characteristics and individual employment outcomes. The results suggest that living in a concentration of unemployment is harmful for getting or keeping a job.

Most studies of neighbourhood effects would stop at this point and claim to have found evidence for neighbourhood effects. Manley and van Ham argue that at this point it is important to further explore the data and run models for sub-populations (such as age groups, gender, housing tenure). The only sub-populations to yield interesting results were separate models by housing tenure: the models showed clear "neighbourhood effects" for homeowners, but not for social renters. Manley and van Ham argue that this can be explained by selection bias for homeowners, which was largely absent for social renters. In 1991 most social renters were allocated a dwelling and neighbourhood by housing officers. Although this allocation process was not entirely random, it approximated a random assignment of neighbourhoods to households. Owner-occupiers on the other hand where "free" to choose where to live. For them, neighbourhood selection was closely associated with their earnings and earning potential, affected their ability to get a mortgage. Those with a low income, or without job security selected themselves into the most deprived neighbourhoods, where cheap (affordable) housing could be found. These were also the workers who were most of risk of losing their job.

The main substantive conclusion of the chapter is that (self-) selection should be more fully explored in studies of neighbourhood effects. Wherever possible, models investigating the impact of neighbourhood contexts on individual outcomes should take into account the different routes through which households enter neighbourhoods.

Chapter 8 by Tampubolon is an example of a formal econometric approach to neighbourhood effects research, which uses complex econometric solutions in an attempt to identify causal neighbourhood effects. He identifies a recent and strong interest in neighbourhood effects from within the literature on public health and social epidemiology, which focuses on neighbourhood effects on individual health outcomes such as obesity, mental health, physical health and health-related quality of life. In his chapter Tampubolon focuses on the relationship between neighbourhood social capital and individual mental health. The current empirical evidence on this relationship is divided.

Based on the literature, the chapter identifies four mechanisms linking neighbourhood social capital and individual health. First, more cohesive neighbourhoods are better equipped to disseminate information and mobilize collective action. Second, more cohesive neighbourhoods are better equipped to enforce and maintain social norms. Third, collective efficacy and informal control in preventing crime and violence reduce environmental stresses suffered by residents in their day to day activities. Fourth, high levels of neighbourhood social capital enable communities to be more responsive to national and local organisations that seek involvement and engagement at the local level.

Tampubolon contributes to the literature on neighbourhood effects and health outcomes by proposing an extension of the influential Grossman model of health with the explicit inclusion of interactions within the neighbourhood context. He draws upon the Blume-Brock-Durlauf social interaction model to study the effect of neighbourhood social capital on mental health, using data from the Welsh Health Survey 2007 (WHS) and the Living in Wales 2007 (LiW) survey. He proposes various instrumental variables to identify causal effects, uses objective measures of neighbourhood social capital for small geographies, and uses a measure of mental health derived from the SF36 (Short Form Heath Survey). Using his approach, and

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contrary to some other studies, Tampubolon concludes that neighbourhood social capital is generally being benificial to individual mental health.

Chapter 9 by DeLuca, Duncan, Keels, and Mendenhall provides a unique contribution to the neighbourhood effects literature by demonstrating that data from in-depth interviews is capable of revealing some of the mechanisms behind unexpected quantitative findings of how the Moving to Opportunity (MTO) program did and did not affect outcomes for individuals. Such a mixed methods approach is regarded a major step forward in neighbourhood effects research (see the chapters by Galster 2011 and Small and Feldman 2011 in this volume who call for such a mixed methods approach). The study by DeLuca and colleagues was triggered by the observation that whereas the earlier Gautreaux residential mobility program documented dramatic improvements in the lives of people placed in more affluent neighbourhoods, the results of the MTO program were not nearly as positive.

The chapter begins with a review of the process model behind the MTO experiment, which assumes that program participants make rational choices and that neighbourhood improvement would be a sufficient condition to enhance outcomes for children and their families. The MTO program was designed to understand the long-term effects of moving poor families out of subsidized housing in high-poverty communities and into low-poverty neighbourhoods in five cities: Baltimore, Boston, Chicago, Low Angeles, and New York. Families were randomly assigned to three groups to minimize the effects of selection bias.

DeLuca and colleagues highlight how MTO researchers encountered a mixed bag of program effects (using mainly quantitative analysis) and use evidence from mixed methods studies and their own data collection to understand some of the program's outcomes. They subsequently describe and attempt to explain unexpected findings (mental health improvements which were not originally anticipated in the MTO program); a weak 'treatment' effect for many families (initial and subsequent moves to segregated, economically declining areas instead of higher opportunity neighbourhoods); "null" findings where large effects on individual outcomes were expected instead (MTO was primarily designed to enhance the employment prospects of adults and to improve the educational outcomes of children, but no effects on employment and education were found); and a set of conflicting findings (moves to low poverty neighbourhoods were found to be beneficial to girls, but harmful for boys).

The mixed-method approach adopted by DeLuca and colleagues enabled them to extend MTO's original process model to a broader model which is better capable of understanding how individual actions and (historical) social conditions reinforce or limit the effects of neighbourhood interventions on individual outcomes. They conclude that it is too early to label MTO-based policy approaches as ineffective, and that neighbourhood interventions are more likely to be one part of a wider solution for solving the problems of poor families, rather than the ultimate solution *per se*. The use of mixed methods has allowed DeLuca and colleagues to show how the potential of MTO-based policy approaches is limited by structural barriers, and the dynamics of poor families' beliefs, backgrounds and constraints. They showed that some of the assumptions underlying the original MTO process model were off base

and that many families are not able to relocate to higher opportunity neighbourhoods, or to utilise the higher quality services in those communities.

Chapter 10 by Bernelius and Kauppinen investigates neighbourhood effects on educational outcomes in Finland. They critique the common perception that Finland is a country with equal opportunities for education. Studies consistently show that the Finnish educational system is one of the best in the world with only small variations in educational outcomes between pupils and schools. They argue that these observations at the country level hide variation in equality within the country: when educational outcomes are studied for the Helsinki Metropolitan area, large variations can be found between neighbourhoods, schools, and individuals. Recent research suggests that the differences between neighbourhoods and schools are growing, which makes the Helsinki Metropolitan area an attractive "urban laboratory" for research as neighbourhood effects are generally assumed to intensify as socio-spatial segregation increases. The aim of the chapter is to explore the possibility of neighbourhood effects in the Finnish context. The chapter starts a presentation of results from a study on neighbourhood effects and educational outcomes, using data for Finland. It then highlights some of the weaknesses of this study. The chapter ends with the presentation of the design of a new research project funded by the Finnish National Research Council, and the Academy of Finland, which should be able to overcome some of the shortcomings of previous research. The study will collect longitudinal data on a large sample of pupils with detailed information about individuals, households, schools and neighbourhoods. This design will allow the use of multilevel models to estimate neighbourhood effects.

Chapter 11 by Darcy and Gwyther also presents a new approach and research design to study neighbourhood effects, but from a completely different methodological and epistemological angle than the previous chapter. Although the language of the chapter is very different to the language used in many of the other chapters in this book, one of the messages is surprisingly similar: current neighbourhood effects research falls short on delivering convincing evidence of causal neighbourhood effects. They argue that most studies simply show unsurprising correlations between neighbourhood characteristics and individual outcomes, without adding to our understanding of the mechanisms behind these correlations. Many of the mechanisms are assumed rather than discovered. In essence, this argument is similar to the ones made by Galster (2011) and Small and Feldman (2011).

Darcy and Gwyther go one step further and critique what they see as the dominant discourses of place and disadvantage as well as the epistemology underlying this discourse. They see the current attention given to neighbourhood effects as part of a larger 'spatial turn' in social science, which attempts to explain the disadvantage of poor households concentrated in poor neighbourhoods. They critique the 'culture of poverty explanation' of disadvantage and the associated policy response of de-concentrating poverty through the creation of mixed income neighbourhoods. If there is little evidence of neighbourhood effects in the first place, then creating mixed neighbourhoods will lead to little benefit for the neighbourhood residents, a large proportion of who will be displaced as a result of the policy. This argument is very similar to the one made in the chapters by Manley and van Ham (2011) and Cheshire (2011) in this volume.