

Seeing the City

Seeing the City

Interdisciplinary Perspectives on the Study of the Urban

Edited by:

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1 Introduction

Nanke Verloo and Luca Bertolini



Figure 1.1: Amsterdam streetscape.

I see a man on a bike pulling up his legs to avoid the water staining his pants. He is not using the bike lane, but instead takes the risk of cycling over the rather slippery tram track. Behind him, a tram stops at a station near the Waterloo square in the city center of Amsterdam. I see the historic architecture of the Zuiderkerk that was built in 1611 as the first reformed church. The green trees reveal that this picture must have been made in spring or summertime, when Amsterdam is usually crowded with tourists, but none are portrayed in this picture. The biker's aesthetics - the skinny tie, low but colored socks, vintage glasses and a nonchalant beard - remind me of what some would call a 'hipster'. The crate on his bike is a typical Amsterdam artifact. The picture also hints at a world that cannot be observed with the naked eye: the network of pipes and cables that supply the city's population with water and electricity, or

the pollution in the air threatening biodiversity. The same picture also awakens more critical considerations: is this a representative picture of the Amsterdam population? Who belongs in Amsterdam? May the detour from the bike lane reveal a lack of cycling infrastructure? How does the local government maintain its infrastructure and balance between trams, bikes, boats, pedestrians, and cars? And what about the historic architecture in the back - who is able to afford the city center since the rise in tourism and property developments? Which species are inhabiting those leafy trees? Are they threatened?

These observations and subsequent questions could be asked by urban researchers from a wide variety of fields. The field of urban studies is an **interdisciplinary** field by nature. Cities around the globe are dealing with complex challenges like rapid expansion, increasing crowdedness, intersecting forms of diversity, and staggering inequality between the rich and the poor. These processes take shape in the context of a climate emergency, biodiversity loss, globalization, and unprecedented urbanization. These multifaceted and complex challenges require researchers to move beyond disciplinary boundaries and approach urban problems and solutions via interdisciplinary approaches.

An interdisciplinary approach is uniquely positioned to inform urban governments who are up to the complex task of developing policies and designing interventions that are inclusive, multifaceted, intelligent, and sustainable, but also resilient and adaptable to unexpected change. Urban scholars can contribute to these tasks by unravelling complexity, revealing unequal power relations, or identifying potential solutions using technological or social innovations. Such cooperation with governments and other societal stakeholders pushes the interdisciplinary nature of the field to a **transdisciplinary** approach that urges scientists to take responsibility for contributing to societally relevant questions, to step outside of academic boundaries and engage professionals and citizens in their research projects.

The persistent and urgent problems cities currently face demand both scholars and practitioners to make better sense of what is going on in the city. To do so, they need methodologies that help them to collect and analyze a diversity of urban data in a diversity of ways, and to integrate and combine these different analyses. This book offers a wide variety of quintessential urban methodologies developed, used, and reflected on by Amsterdam-based researchers. As the editors of this volume, we curated a selection of methodological approaches that we believe will help urban researchers but also practitioners to better understand the multifaceted problems and opportunities of the urban environment.¹

¹ This book includes a selection of methodologies that we believe provide a broad and multidisciplinary overview of the dominant methodologies used in urban studies. We realize that the book is by no means exhaustive of all urban methodologies, and indeed that it cannot be. In the concluding chapter, we return to this point.

Some research starts with a theory or concept that provides a possible explanation or a hypothesis. Other research starts with a methodology. Often, researchers use a combination of these things: they have a certain methodological and theoretical expertise and observe what is going on in the city, they see real-world problems that they care about and start imagining a research project based on those observations and their specific background. To structure the process of setting up a research project, we propose four central questions:

- 1 What do I see?
- 2 How can I understand?
- 3 What do I miss?
- 4 Why does it matter?

The first and last questions are highly interrelated, since what we see is usually strongly related to what we care about. The text box above gives a range of possible answers to the first question. Starting with figure 1.1, the question ‘What do I see?’ moves the viewer through various disciplinary avenues that all provide a different view and observe different aspects of an urban streetscape. The final question could be answered personally – why do you care about this topic? But a good research proposal also includes a broader discussion of the societal and academic relevance of a certain research question. The academic relevance of a question is related to other research in and beyond the field. What does the research add to the current state of knowledge? The societal relevance of a given project is highly dependent on contextual factors. How does the research distinctively contribute to making that place, process, or socio-economic or political dynamic – and perhaps other places, processes, or dynamics – better? In the conclusion to this volume we reflect more on the relevance of various forms of urban research.

The first section of this volume answers the question ‘What do I see?’ by providing various methodologies to gather data. It offers ways to decide which methodologies are most suitable for collecting the data that you need to answer your questions. The second section of the volume answers the question, ‘How can I understand?’ Here you’ll find methodologies for analyzing your data in the context of the city. We distinguish between methodologies for data collection and methodologies for data analyses, to prevent repetition. The same methodologies for data collection – statistical data, ethnographic data, interview transcripts, archival data, sensory data – can be used for various methodologies of data analyses. The distinction, however, is not so easy to make in reality because the processes of collecting data and analyzing data overlap and go hand in hand as the research progresses.

The third question, and third section of the volume, requires researchers and professionals to critically reflect on their approach and data. It asks to reflect on what it is that you do *not see* when you use a certain methodology. Any methodology is a tool that helps to see something in detail but will also and inevitably overlook something else. The clearest example of this is between qualitative and quantitative

studies. Qualitative research aims at detailed insights into the *why* and *how* of processes. A qualitative study could, for example, help develop deep understanding of the everyday experiences and unintended practices of institutional racism. This could make visible why and how institutional racism still jeopardizes the full participation of other ethnic or racial groups in a society or organization. The same study, however, would be missing the actual numbers of instances of institutional racism. These numbers might be necessary to convince leaders that racism is taking place in their organization at a significant scale. Quantitative analysis can provide those numbers. Quantitative research aims at statistically identifying relationships. Quantitative data analysts could provide the necessary numbers and may even prove a relationship between the number of colleagues of color and the lack of promotions among them. Those statistics alone, however, do not explain how and why this is the case. Qualitative analysis can help here. Although it often occurs in a more nuanced way than in this example, all methodologies focus on something and leave out something else. We therefore asked each author of the volume to reflect with us on the question ‘What do I miss?’ when applying their methodology. Next, we invited them to think how their different approaches could complement each other and be integrated towards new forms of knowledge. Section three is the result of that journey and offers practical guidelines for researchers and practitioners who are willing to cross disciplinary boundaries, and boundaries between academic disciplines and non-academic knowledge.

Seeing the city

Before we can proceed to the methodologies discussed in this volume, we must reflect on the way we see – that is, that crucial first question. First, because the kinds of observations we make as researchers are closely related to the disciplines in which we are educated. Second, because the way we see the city and formulate problems and methodological solutions is closely related to the paradigm we employ. Being aware of those is key for being able to position and value a particular view relative to other possible views.

Seeing the city through different disciplines

A discipline could be explained as a pair of glasses. If the shades are red, they emphasize the red tones in the picture and the viewer would have more difficulties seeing the yellow or the blue, and the other way around. If we put on these metaphorical glasses to view the image above as urban anthropologists, we see a man employing a tacit cycling practice; it could tell us something about the unwritten rules of cycling culture in Amsterdam. Such observations are usually the product of ethnographic research that builds on in-depth and real-time experiences. If the ethnographer did not research infrastructure management, her uninformed eye might believe that the image portrays a flood. It might make her wonder whether Amsterdam is the victim of quickly rising water levels and climate change. To understand the picture better she needs to include the knowledge of an infrastructure planner who knows that, in the summer, local infrastructure management pumps water out of the canals onto the bridges so that they do not

expand due to the heat. Infrastructure planners, however, might not notice the tactics of the biker pulling up his legs and instead focus only on the streetscape and interconnection of bike lanes, water ducts, tram tracks, street markings, and traffic signs. Triggered by the peculiar tactics of the biker, a data analyst would critically wonder why and how often people detour from the bike lane, and employ sensory data to calculate how many accidents might be avoided with a better street design.

Looking at the same picture from a historical perspective would reveal the story of the first Protestant church in the city, the burial of Rembrandt van Rijn's first child and the baptism of his fourth, or the church's relevance to the care for orphans mid-seventeenth century. A cultural heritage expert might research its architectural value, an economist the increase in surrounding properties after the investment in cultural heritage. Geographers might use similar quantitative data to analyze the more general process of **gentrification** these areas of Amsterdam underwent in the past few decades. The eyes of cultural studies experts would be drawn to the aesthetics of the man and his bike, which may be used to critically read the discourse of this picture. Meanwhile, the biologist would sharpen her eyes and ears to observe and listen to the variety of birds singing in the trees. Action researchers and designers might be drawn to this rather confusing site to engage in a **streetlab** or experiment with municipal actors and citizens using this space to learn about effective and inclusive interventions.

As this carousel of viewpoints suggests, the discipline in which researchers and practitioners are educated shape their way of seeing the city and the problems they identify. Seeing something beyond your discipline is a challenge – usually it does not come naturally and thus requires work and perseverance. That challenge is even stronger if you try to look from the perspective of a discipline that uses a different paradigm to make sense of the world.

Seeing the city through different paradigms

All research projects and questions are embedded in a certain paradigm. A **paradigm** is a set of beliefs that shape the way you make sense of the world. It represents a worldview that defines, for its holder, the nature of the 'world' (Guba & Lincoln, 1994, p. 107). Guba and Lincoln (1994) distinguish between four basic paradigms in the sciences: **positivism**, **post-positivism**, **critical theory**, and **constructivism**. These paradigms, albeit often unconsciously, shape the way researchers understand the nature of the world (**ontology**), how we think we can know that world (**epistemology**), and finally the way we formulate questions and organize to research the world via methodologies, the purpose of the project, and the relationship between the researcher and the field. (For further reading on ontology, epistemology, and methodology see Guba & Lincoln, 1994). The main tension between these four paradigms exists between positivism or post-positivism on one side, and critical theory or constructivism on the other.

In a nutshell, positivist or post-positivist paradigms present a worldview that assumes that the world is an external objective reality that is apprehensible via objective findings that explain how things ‘really work’. The difference between positivism and post-positivism is that the latter still assumes an objective reality, but grants that the understanding and study of that reality is always imperfect and approximate. The methodologies used by positivist and post-positivist researchers are often, but not always, quantitative. In this paradigm, the researcher is seen as independent from what is researched, and it is assumed that the researcher does not influence the field of research. The outcomes of this type of research usually verify or falsify a hypothesis in order to prove, predict, or control something. Chapters 2 and 4 provide a more in-depth discussion about quantitative data collection.

Researchers employing a critical or constructivist paradigm, on the other hand, see the world as inseparable from themselves: they refuse an ‘objective’ truth, and assume that our world is constantly subject to change. For critical theorists, that change is shaped by historically situated structures, while for constructivists the world and all its related meanings or structures are a product of human intellect, and thus always under construction and often contested. They assume that there is no single truth that can be known and that knowledge itself is value-mediated and therefore dependent on the researcher, the historical context, or the interactions among researchers and the field. They often, but not always, use qualitative methodologies that represent conflicting interpretations, dialogical and dialectical constructions. The goal of this type of research is not to prove or predict something, but to critique and transform (in critical theory) or to understand and reconstruct (in constructivism) a given process or phenomenon. Chapters 3 and 5 delve deeper into the collection of qualitative data, and chapter 6 into collecting historical data.

Paradigms also shape the ways in which the quality of research findings ought to be assessed. The main criteria for determining the quality of findings are objectivity, reliability, and validity, as derived from experimental-statistical hypothesis testing (Flick, Kardorff & Steinke, 2004, p. 183). There is much debate about whether or not these positivist, quantitative criteria should be transferred to critical, qualitative research. Positivist, quantitative research is based on the premise that there is one objective reality (developing objectivity), the relationship between the researcher and the object is independent (strengthening reliability), and the nature of truth to a finding can be assessed (validity of findings). On the other hand, critical, constructivist, qualitative research rejects the idea of an objective reality and thus does not aim at developing objectivity. The relationship between the researcher and the object can never be objective since data is developed in close interaction with the field and the people in the field. Finally, the outcomes are oriented to providing descriptions, analyses of processes or behavior, or critical reflections, rather than one truth. To assess the trustworthiness of qualitative research, some qualitative scholars use **triangulation**. Some propose using criteria such as the credibility of the findings and argumentation; transferability (to rethink how the findings hold in some other context); and dependability and confirmability (by auditing the research process

via fieldnotes, interview transcripts, data analysis decisions) (Anney, 2014; Flick, Kardorff & Steinke, 2004). Because paradigms are so radically different, researchers should rethink which quality criteria can best be applied to their projects. They argue that a misuse of criteria or the application of quantitative criteria to qualitative research – or the other way around – poses critical problems and curtails the development of credible and valid outcomes (Leininger, 1994, p. 96).

In this volume we do not favor one paradigm over another: the methodologies discussed in section two have qualitative and quantitative roots and employ all paradigms discussed by Guba and Lincoln. We also do not take a stance in the debate on which quality criteria to use, but we urge all researchers to reflect on this issue and actively choose which criteria you will apply to your findings. Quality criteria, trustworthiness, and limitations of each methodology are discussed in the context of each methodological chapter. For a more general discussion of how quantitative data is verified you can continue reading chapter 2, and for qualitative data you can read chapter 3. For further reading on this debate see Anney (2014); Flick, Kardorff and Steinke (2004); van de Port (2017).

Paradigms and research questions

The paradigm a researcher or practitioner adopts also shapes the way they ask questions. From the description above it might be clear that positivists and post-positivists usually ask questions that allow them to test a hypothesis. That means that they often formulate research questions that aim to generate an objective and often statistical outcome. Common formulations of such research question start with ‘To what extent...?’ or ‘What share of ... leads to ...?’ or ‘What is the impact of ... on ...?’ Chapters 2, 4, 9, 11, and 12 of this volume provide examples of methodologies using these kinds of research questions.

Researchers using a critical or constructivist paradigm are more prone to ask questions that generate an analysis of the reasons behind a certain process or phenomena, formulated as a ‘why’ question. They may also try to understand the unfolding of or the dynamics within a process using ‘how’ questions. Or, when they seek to understand things that are rather uncommon or unknown, they might use descriptive questions that are often formulated as ‘what’ questions. Chapters 3, 5, 6, 7, and 8 describe research projects that used these kinds of questions.

Finally, there are research questions that are oriented to making an intervention and creating change. These applied questions often include a certain normativity of what could or should be improved and the projects are focused on researching how these interventions can take place, and to what effect. Chapters 4, 13, and 14 in this volume illustrate such change-oriented research projects.

Seeing Amsterdam

The city of Amsterdam is the case study that runs through this volume to illustrate the way researchers execute their methods, make choices, and develop insights. The

choice of Amsterdam has practical as well as more principled reasons. First of all, the Center of Urban Studies (CUS) at the University of Amsterdam brings together a broad group of interdisciplinary scholars using a wide variety of methodologies to study the city. We wanted to tap into this existing network and make use of the knowledge and practices that these scholars have to offer to the field of urban studies. Second, we set out to establish more cooperation between CUS and an even larger group of scholars and professionals from related universities, research institutes, and the municipality of Amsterdam. Our search led to a transdisciplinary collection of authors who are at the forefront of urban research, theory and practice. The authors are all situated in Amsterdam for either work, life, research, or a combination of these things, and know the city by heart. By seeking local contributors, we were able to facilitate a process of workshops in which authors developed a transdisciplinary community of urban research.

We believe that seeing and understanding the city can never take place through only one perspective. The main purpose of the volume is to provide hands-on practices to view the city and its real-world problems from various points of view. The book offers 15 unique ways of seeing and understanding the city and each chapter offers another perspective on the city of Amsterdam. That way, the added value of seeing one city through a multitude of perspectives becomes visible and tangible in the case of Amsterdam.

We hope that these reflections on Amsterdam inspire both urban scholars and practitioners to apply these methodologies to their own urban context.

Seeing this volume

The four main questions that structure this volume – ‘What do I see?’, ‘How can I understand?’, ‘What do I miss?’, and ‘Why does it matter?’ – also provide an approach to setting up a problem-based urban research project. Section one includes chapters on quantitative data gathering (via **census**, **survey**, or **big data**), **ethnography**, **sensory data**, **interviewing**, and **archival research**. Section two provides chapters on **cultural analysis**, **institutional analysis**, **economic analysis**, **historical simulation**, spatial analysis using **Geographic Information Science and Systems**), analysis of **urban biodiversity**, **action research**, and **research through design**. All these chapters explain the goals, techniques, choices, and limitations for gathering data or analyzing those data. Each chapter in the volume provides two types of text; the main text explains the respective methodology in general terms and the textboxes discuss how the researcher has applied these methods to the case study of Amsterdam.

While developing this volume we became aware of the multiple audiences this book might have. We did our very best to cater to these different audiences and devise a volume that could function as a work of reference for readers with different needs. Therefore, we offer our various readers a guide for how to use this book.

If you are an urban scholar or professional looking for methodological avenues to study the city, we invite you to carefully think through what it is you see, consider how you approach what you see through paradigms, and start imagining a research question about what you see. Sequentially, you can read all relevant methodological chapters and the textboxes to learn how the various methods are applied, how choices were made, and what results came out of these studies.

If you are a professional from the municipality of Amsterdam, another local organization, or a citizen and you are mostly interested in the outcomes of various research projects that took place in Amsterdam, you could decide to focus your reading on the textboxes that illustrate each methodology and provide an array of findings, ranging from studies of gentrification (chapters 2 and 6), to the question of **ownership** (chapters 3, 5, 7, 8, 11, and 12), and the analyses of **spatial flows** and designs (chapters 4, 11, 13, 14, and 16).

If you are a scholar of interdisciplinary studies and your key interest is to understand the process of developing such an interdisciplinary book, we propose you start reading chapter 15, in which myriad possible forms of integration between methodologies are discussed. This discussion reveals the possibilities and difficulties of interdisciplinary processes but also offers hands-on practices to successfully mediate such process. Based on your interest, you can work your way back to the various methodological chapters in the volume. And finally, you could read our own reflections on establishing this volume and the missing methods in the conclusion.

If you are an urban professional or citizen and you would like to better understand how the city, the municipality, and other organizations can work together in a transdisciplinary team, we propose that you start by reading chapter 16, which discusses the potential and difficulties of such an endeavor. After that, you might be interested in reading chapters 13 and 14, which also provide engaging examples and practical strategies for transdisciplinary research.

For all other readers who do not fit in one of these categories, we hope that this introduction has provided you with some ways to navigate our volume. We wish you much inspiration and welcome you in the ongoing dialogue about the complex but endlessly engaging environment that we call the city.

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