EDITED BY BINTI SINGH,
TANIA BERGER,
AND MANOJ PARMAR

NEGOTIATING RESILIENCE WITH HARD AND SOFT CITY

Routledge

"The expert-driven knowledge systems that have been dominating urban design and planning are increasingly falling short of providing sustainable solutions to the crises posed by climate change. The book *Negotiating Resilience with Hard and Soft City* captures the nerves of people's knowledge that guides judgements and actions to cope with uncertainties in their everyday city lives. The book challenges the notion of a singular knowledge system in an urban ecosystem and staunchly advocates for the recognition of multiple micro-knowledge systems that cohabit and shape the city."

Dr Rajesh Tandon, *Founder President, PRIA*
Dr Kaustuv Kanti Bandyopadhyay, *Director, PRIA*

"*Negotiating Resilience with Hard and Soft City* is cutting edge and is of high value for everyone who wants to gain more insight of some of the key frontiers of contemporary cities. Such a demarcation line is the book's underlying proposition that we urgently need a better understanding of the 'survival' strategies of the most marginalised and poor to tackle our vast planetary challenges. In this vein the authors focus on the livelihoods and experiences of displacement of migrants and informal settlement dwellers from the global north and global south and expand urban concepts such as resilience, vulnerability, urban justice, and the 'people as infrastructure'. The result is a timely, relevant and inspiring anthology."

Peter Gotsch, *Professor in Sustainable Urban Development,*
Norwegian University of Science and Technology

"The book *Negotiating Resilience with Hard and Soft City* is a timely contribution to understanding why intangible aspects of city life, such as civil society activities and a sense of community, are as relevant as the 'hard infrastructure'. The editors and authors of the book have extensive knowledge of how this duality affects the life of urban dwellers in the Global North and South. The book is a source of critical reflection for scholars and students of Urban Planning, Urban Geography, Urban Studies and disciplines engaged with understanding the problems of contemporary cities. It will also inform those questioning current narratives around the resilience concept, its complexity and challenges. To that knowledge, the book draws on several case studies and focuses on urban residents and the micro level, those spaces that shape the city. The different contributions

show how the 'hard city' conditions the livelihood of urban dwellers, the 'soft city', and how people, in turn, cope with those imposed challenges."

Javier Martinez, *Associate Professor – Coordinator of the*
Urban Planning and Management
Specialization, Department of Urban and Regional Planning and Geo-Information
Management, University of Twente

NEGOTIATING RESILIENCE WITH HARD AND SOFT CITY

This book explores how cities are shaped by the lived experiences of inhabitants and examines the ways they develop strategies to cope with daily and unexpected challenges. It argues that migration, livelihood, and public health challenges result from inadequacies in the hard city—urban assets, such as land, infrastructure, and housing, and asserts that these challenges and escalating vulnerabilities are best negotiated using the soft city—social capital and community networks. In so doing, the authors criticise a singular knowledge system and argue for a granular, nuanced understanding of cities—of the interrelations between people in places, everyday urbanisms, social relationships, cultural practices, and histories. The volume presents perspectives from the Global South and the Global North and engages with city-specific cases from Africa, India, and Europe for a deeper understanding of resilience.

Part of the Urban Futures series, it will be of great interest to students and researchers of urban studies, urban planning, urban management, architecture, urban sociology, urban design, ecology, conservation, and urban sustainability. It will also be useful for urbanists, architects, urban sociologists, city and town planners, policy makers, and those interested in a deeper understanding of the contemporary and future city.

Binti Singh is an urban sociologist and holds a PhD (in urban studies) and an MPhil (in planning and development) from the Indian Institute of Technology (IIT Bombay), Mumbai, India. She is currently Dean (Research and Academic Development) at KRVIA, Mumbai, India. She is engaged in diverse international research programmes with universities like the Cambridge Centre for Smart Infrastructure and Construction, University of Cambridge, UK. She also supervises Masters' and PhD students in various international universities including

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Urban Futures

Series Editor: **Binti Singh**, PhD. *Dean, Research and Academic Development, KRVIA, Mumbai, India*

Uncertainty is the "new normal" for cities of the future. At this juncture our cities (both in the developed global North and in the developing and rapidly urbanizing Global South) are at the crossroads of unprecedented challenges and cautious choices. Cities worldwide are also bound by the general guidelines of the Sustainable Development Goals guiding our collective urban futures. No matter how much we think of our urban futures as a "collective", questions of structural inequalities in economic opportunities, access to basic services, escalating vulnerabilities to climate change risks and justice compel us to look for grassroots, local responses and solutions. **Somewhere, cities seemed to have lost the plot while traversing their soft and hard boundaries.** The *Urban Futures* series attempts to draw the contours of our collective urban futures, identifies and articulates the pressing challenges cities face globally. It provides a starting point to some of the responses that we could adopt for a better and a more inclusive future.

The series covers a wide range of interdisciplinary themes including urban design, urban digitization, governance and data city, technology, social inclusion, social infrastructure and public health, city life and public spaces, consumption and culture, urban planning, mobility, environment, public infrastructure, sustainable development, localization of SDGs, women and urban development, urban economy and work, and peri–urban development.

Emerging Work Trends in Urban India
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Nidhi Tandon, Pratyusha Basu, Omkumar Krishnan, and Bhavani R.V.

Resilience and Southern Urbanism
Towards a New Paradigm
Edited by Binti Singh and Manoj Parmar

Negotiating Resilience with Hard and Soft City
Edited by Binti Singh, Tania Berger, and Manoj Parmar

For more information about this series, please visit: https://www.routledge.com/Urban–Futures/book-series/UBF

NEGOTIATING RESILIENCE WITH HARD AND SOFT CITY

Edited by Binti Singh, Tania Berger, and Manoj Parmar

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This book is dedicated to those who are working relentlessly towards our better urban futures.

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FOREWORD

Adapt or Die

Sheela Patel[1]

Just before the UN Climate Change Conference COP26 in Glasgow, there circulated a clarion call saying "adapt or die." Those of us who set our focus on adaptation, resilience and the loss and damage elements of the climate change debate believe that every choice made by each of us, our families, our neighbourhoods and our nations will determine if we can maintain the earth's temperature to 1.5 degrees centigrade. These choices can and must drive what we do in research, science and mitigation and adaptation actions.

First, we must acknowledge that climate change does not operate in many different silos and has to do with every consumption choice we make. Every aspect of your day-to-day life comes from our voluntary or involuntary choices. The other side of this coin is the reality that many conditions and frameworks and policies and resource structures compel us to make choices, and they often do not align with what is good for the planet and good for our habitat and ourselves. So how do we develop a universal knowledge of the cause and effect of our choices that will help heal the planet?

Concept of the Climate Lens in Day-to-Day Life

All of us refrain from examining our choices and treat climate change and all its elements as having nothing to do with us. Both globally and locally, modern life teaches us to create different sections and systems to address decisions made globally by our governments and us. Our education and our research, on the basis of which we justify choices, are all similarly segmented. However, these last few years, global reflections are advancing the assertion that climate change, the impact of a carbon-driven economic growth model, is raising the earth's temperature beyond sustainable limits. As we read this and other reflections on

climate change, our weather patterns are changing worldwide, causing violent storms, hurricanes, incessant rain, extreme heat and cold.

In the discussions on the adaptation aspect of development, the ability to put a climate lens on every action that is taken is for me the most powerful and valuable perspective. It helps us in every aspect of our day-to-day life by making us conscious of the links between what we choose and its impact and outcome on us and the planet.

As global and local actors, it can also compel us to make choices in whatever we do. We look at the climate implication of our decisions because we are making a huge transition from an economy based on carbon consumption to a reduction of carbon emissions to change the health of our planet. So how we work; what we eat; how it is produced, packaged, and transported; and how the economy works, all must make the transition.

All nations of the United Nations have agreed to the Sustainable Development Goals and the Climate Compact. Yet both are two sides of the same coin: seeking a universal commitment to social justice and those who are vulnerable and seeking change in the ways we achieve planetary health and well-being with target years that match.

In the lives of poor people, these choices are very difficult, though, and often an ideal choice is unavailable, inaccessible, and financially not possible. Why is that? Most vulnerable urban and rural communities operate in an environment of survival within very scarce and narrow options. Most of the choices they make are choices they are compelled to take rather than choices that will improve the quality of their lives in ways that will impact the planet's health. The rationale for choosing to focus on these vulnerable communities, households and individuals is because they represent the real test of civilization. If all of us can take care of the ones in the worst conditions, the chances are that solutions for the better off become easier to undertake.

Today, we live in a world where wealth generation and access and growth work for only 15% of the world's population, the extremely wealthy, and the volume of people living in terrible conditions is growing exponentially. Therefore, keeping a focus on the most vulnerable is critical if you want to deal with universal solutions.

The Culture of Conventional Practices and New Scientific Information

When people talk about the challenges of cultural practices both in SDGs and in climate change, the value and focus of cultural impacts, what we do daily, is important. Many traditional practices that are good for the community are also good for the climate and can promote the SDGs. At the same time, some practices expand carbon emissions that are harmful to people's lives and livelihood. How do we balance the assessment of cultural practices to focus on enhancing

actions that improve the quality of climate change? How do we look at scientific advancements and the pursuit of knowledge and science that contradict the traditions and cultures? And how do we assist and inform community practices to enable a constant dialogue between research and practice, both locally and globally?

The capacity and ability of global and local stakeholders to weigh the value of practices and explore how to balance these aspects that inform our choices are critical before any serious scalable transformation can occur. Not all cultural practices are good, and not all scientific advancement benefits everybody. So how do you assign a value to each? Science and research that seeks to see science in local cultural practices is vital in this fast-changing world. Today's scientists do not communicate to communities in the sense that ordinary people can read scientific papers, and their practices are reviewed by research and science.

How Can You Be the Change That You Want to Need

As educational institutions and researchers, the role of producing knowledge that examines your scientific understanding and the practices on the ground that can make a difference is very important for researchers and universities and educational institutions to play. In this context, the research that has been done as part of the BREUCOM project is important and the contribution must be seen from this framework. The best city-environment reduces the challenges of climate and carbon emissions in the city itself and the city's consumption and its systems: be it for water, be it for energy, be it for construction, be it for the consumption of food. These things impact the locations in rural areas where these things are produced. Therefore, understanding the science of climate change is important, and its implications for the educational curriculum, the practice of planners and architects and the consumers are critical for the transition that we are looking for. When we learn to deal with existing and anticipated disasters, we will not allow vulnerable people to be harmed or destroyed. We learn more about ways by which we can produce solutions that reduce the loss and damage and increase the resilience to the devastation which we know will happen before we truly put into action the challenge of transforming our habits and practices.

So, in the end, whether you are a vulnerable community of poor people or are an NGO and an activist working to link the challenges of the poor with policies and resource providers, whether you are an educator, a researcher, or a scientist, each of us in our world that is changing so fast. Whether in a formal setting or informal, as educators or students or practitioners, it is our collective individual aspiration for change that will help us enter this new space where we review what we do, how we do it and the knowledge base on which we make choices look at them from a climate lens.

Note

1 Sheela Patel is the founder and Director of the Society for Promotion of Area Resource Centres (SPARC) since 1984 to support community organisations of the urban poor in their efforts to access secure housing, basic amenities, and seek their right to the city. She is widely recognised—nationally and internationally—for seeking urgent attention to the issues of urban poverty, housing and infrastructure onto the radar of governments, bilateral and international agencies, foundations, and other organisations. SPARC works closely with two community-based organisations— National Slum Dwellers Federation (NSDF) and Mahila Milan (women's collectives in slums)—that are active in 70 cities in India. Sheela is a founder member of Slum/Shack Dwellers International (SDI), an international network of poor people's organisations that support them in Asia, Africa, and Latin America. Sheela was a Commissioner of the Commission for Adaptation to Climate Change between 2018 and 2020 and is currently a trustee of the International Institute of Environment and Development (IIED) and a Global Ambassador for Race to Zero and Race to Resilience.

ACKNOWLEDGEMENTS

1

NEGOTIATING RESILIENCE WITH HARD AND SOFT CITY

Binti Singh, Tania Berger, and Manoj Pamar

Cities worldwide heavily rely on hard infrastructure. However, experiences in instances of disaster have shown time and again that soft aspects of city life may be equally important not just for well-being but also for mere survival. In this respect, the global COVID-19 pandemic is undoubtedly not the first, nor the only example, and both Global North and South have seen unprecedented civil society activities—what we term "soft city"—during lockdowns induced to halt the spread of COVID-19. Cities in the developed North have faced enormous economic pressures, loss of revenue from tourism, and restricted air travel. They have, at the same time, witnessed a revival of the sense of community—a dimension of the soft city. We continue to design and plan our cities excessively, focusing on the hard city. The entire edifice of current urban design and planning stands on the logic that the city is transforming into hard infrastructure (with attendant oil-era priorities of roads and car ownership) while people—those, who can afford it—are relegating to privatised, resource-intensive, highly consumptive private spaces and—especially in the Global South—to gated communities.

Modern urban design and planning paradigms (standing on the sociological principles of structural functionalism, which create segregated use of land and spaces) that have been critiqued in the past (Jacobs, 1961; Gehl,1987) are now being questioned again (Sim, 2019). When new development plans are presented, the broader public is often confronted with and puzzled by the visual representation of schemes, terminology, range of colours in a palette, and many catchy yet vague professional terms without clear definitions. Master Plans, cities built from scratch, dehumanising of spaces like the office cubicle, single-use office spaces, cities layered with flyovers and expressways, business districts filled with buildings that are vertically beyond human scale, and the horizontal distances of planned suburbs are being rethought (see Singh & Unhale, 2020). Therefore, it is no wonder that many scholars and practitioners have urged us to change

the methods of learning about urban space because existing ones conceal injustices embedded in them (see Simone, 2004; Zelinsky & Lee, 1998; Frisch, 1990; Klinenberg, 2018; Wolfe, 2016; Wolfe & Haas, 2021).

Situating Resilience in the Hard and Soft City Narrative

Cities worldwide are called upon to consider the general guidelines of the Sustainable Development Goals (SDGs) guiding our collective urban futures. No matter how much we think of our urban futures as "collective," questions of structural inequalities in access to economic opportunities, basic services, and justice compel us to think again. It is imminent to look at the term "resilience" more closely and question it. The choices that we make will greatly impact the narrative of resilience. We are faced with difficult choices that, in turn, are dependent on our capabilities and resource availability and deeply embedded in our social structures and cultural practices. Climate change risks are impending upon all human settlements in different ways. It is also established that cities in underdeveloped and precarious geographies are most vulnerable to climate risks. More so the poor citizens of these cities. Environmental degradation, inadequate housing, lack of supply of water, sanitation, and transportation, decreasing access to public spaces and natural environment, social segregation, and congestion are listed as factors that negatively impact human health and the sustainability of cities. These, in turn, erode the resilience of cities to bounce back once hit by natural disasters and severely jeopardise their capacity to adapt to long-term climate risks. Scholars argue that the resilience of socio–ecological systems is their ability to absorb changes without losing their integrity in system form or function (Folke et al., 2002; Leichenko, 2011). Scholars like Folke et al. (2002) and Ernstson et al. (2010), therefore, explain that the ability of the system to maintain, adapt, and nurture its innate strengths without losing out on the opportunity for reorganisation and memory is proof of resilience.

As Durosaiye and Hadjri (2022) explain:

> For the most marginalized people living in urban areas where the formal grid systems are not available, and when they are, are often not affordable, people make do with what is immediately within reach in order to sustain their livelihoods. However, restricted access to urban infrastructures can contribute to poor public health, affecting low-income groups with greater severity. Hence, when people's livelihood is threatened by ill-health or a lack of economic opportunities, their dependence on "informal safety nets" and off-grid systems increases—social networks, familial relationships, and community support to maintain daily living.[1]

Theories of justice in urban climate adaptation build on existing understandings of justice as the fair distribution of social and material advantages among people over time and space (Rawls, 1971). However, ideas of what is fair or just are

deeply contested and context-dependent (for details, see Shi et al., 2016). The authors explain that

> Rawls' classic definition of justice—that of allocating resources so that they provide the greatest benefits to the most disadvantaged—does not go far enough. Rather, the pursuit of justice first requires acknowledging that societal institutions disproportionately benefit some while denying rights and resources to others, and that the cumulative history of institutionalized oppression creates a highly uneven playing field. Justice therefore entails not only the fair distribution of goods, but also recognizing cultural differences and removing procedural obstacles that prevent marginalized groups from meaningfully participating in decisions that affect their property, wellbeing and risk.
>
> *(Shi et al., 2016, p. 132)*

Building on this, we argue that resilience is constantly negotiated by residents traversing multiple aspects of the hard city (urban assets, such as land, infrastructure and housing; planning and governance) and soft city (social capital and community networks). This book explicitly looks at the micro level to see how cities are shaped by the lived experiences of inhabitants and how they develop strategies to cope with daily and unexpected challenges. Herein, a variety of intricately interlinked aspects come into play, from culture to demographics to gender-related issues.

Each of the chapters in this volume establishes how migration, livelihood, and public health challenges result from inadequacies in the hard city and how these challenges and escalating vulnerabilities are best negotiated using the soft city. In so doing, we also further our critique of a singular knowledge system and argue
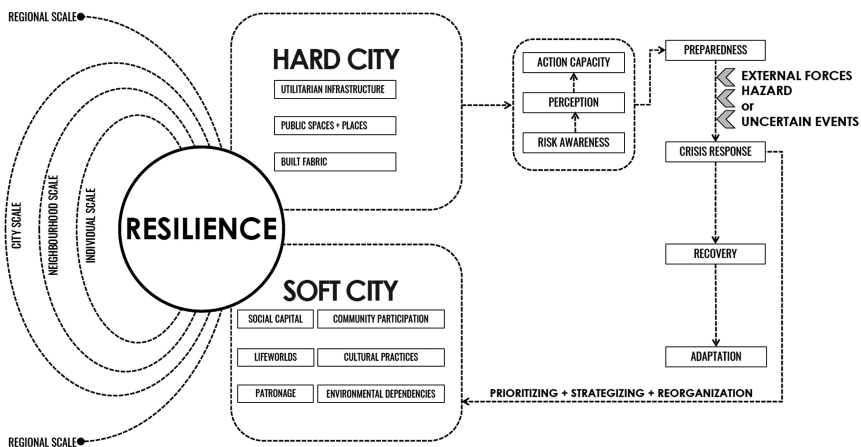
FIGURE 1.1 Conceptual framework. Source: Authors.

for a granular, nuanced understanding of cities—of the interrelations between people in places, everyday urbanisms, social relationships, cultural practices, and histories. We have already explored this theme in the earlier volume *Resilience and Southern Urbanism* (2022), where we argued that resilience is embedded in the particularities of the urbanisms of cities and developed a resilience typology based on empirical research in medium historical cities of India. The rationale was to contribute to a more nuanced understanding of crucial interrelationships between ecologies, culture, and people that could then contribute to the growing scholarship on Southern Urbanism. This volume expands that research to include perspectives from both Global South and Global North and to engage with city-specific cases for a deeper understanding of resilience.

Goh (2021) identifies the politics embedded in the narrative of resilience. She shows various examples of how top-down climate action plans are often resisted by marginalised urban residents. Other scholars (Moser & Satterwaite, 2010; Moser & Felton, 2007) maintain that poor urban communities depend more on social capital (soft city dimension) to address climate change and disaster risks; that itself is dependent on an array of factors—nature, length of tenure, and pattern of occupation in a given geography (hard city dimensions). Goh (2021) also draws our attention to the urbanisation patterns of the last centuries that have brought us to the brink of a climate crisis and how marginalised urban residents in vulnerable geographies of developing economies are paying the price for this—a process that the latter were not historically responsible for and have hardly benefited from, which is therefore unjust.

Significance of the Book

In this way, we carry forward the work that we began in an earlier volume, *Resilience and Southern Urbanism: Towards a New Paradigm* (2022), based on detailed ground research in medium historic towns of India. Working on the research for that volume, we had first-hand exposure to the rapidly urbanising landscape of India, especially the medium historical cities of India. Recent urban programmes like the Smart City Mission in India launched in 2015 have subjected these cities to massive and rapid transformations. An academic reflection to examine the gaps and challenges was imminent. Working on the Building Resilient Urban Communities (BReUCom) research programme supported by the European Union brought us to the point of a deeper understanding of resilience primarily anchored to the experience of vulnerable cities in the Global South. The volume argued on centring culture in the narrative of resilience, arrived at a typology of resilience based on detailed city-specific case studies and also provided a Resilience Index.

In this volume, we expand that scholarship to include many more cases from both North and South of the hemisphere to understand how resilience is negotiated between hard and soft cities every day. The rationale is to develop a narrative around "just" resilience. This we propose to do by revisiting

classical ideas of justice and social contract theory and how these could find new meaning in the narrative around resilience. We also carry forward our earlier research work *Resilience and Southern Urbanism* (2022) and build on the Resilience Index that we conceptualised in that volume into a broader one that we call as Resilience Equity Index. The following research questions form the bedrock of this book:

- What are the main daily and unexpected challenges that people face in the "hard" city (be these induced by climate change, environmental risks, resettlement, etc.) and to which the poor are particularly vulnerable?
- How do people cope with these challenges (as a kind of "soft" city approach)?
- How can this "soft" city be harnessed, strengthened, and supported by cities' "hard" infrastructure?
- What's the way forward?

Research Methods

This book builds primarily, though not exclusively, on the comparative framework of several case studies undertaken within the framework of three international cooperation projects, funded under the EU Erasmus+ programme on "Capacity Building in Higher Education":

- Building Inclusive Urban Communities (BInUCom—https://mdl.donau -uni.ac.at/binucom/)
- Social Inclusion and Energy Management for Informal Urban Settlements (SES—https://mdl.donau-uni.ac.at/ses/)
- Building Resilient Urban Communities (BReUCom—https://www.breu-com.eu/)

Each chapter in this volume draws from city-specific cases from Africa, India, and Europe, examining the vulnerabilities to impending climate risks using mixed research methods. Secondary-level research comprised a thorough review of existing literature, including scholarly articles, policy documents, website materials, and other sources. Primary-level research included both quantitative methods, such as surveys, energy, and temperature assessments, and qualitative methods, such as in-depth interviews and observations.

Overview of Chapters

The book is divided into two main parts: "City and Its Vulnerabilities" and "Relocation, Resettlement, and Resilience." Based on this discussion, the editors seek to arrive at a way forward in the conclusion chapter titled "Towards 'Just' Resilience."

Part I, "City and Its Vulnerabilities," contains five chapters.

Chapter 2, "Ethnically Diverse Neighbourhoods and the New Meaning of 'Community' in the Global North," regards migration as *the* grand strategy for millions of people worldwide to adapt to adverse living conditions. It demonstrates how migrants, when crossing borders and becoming "international," must cope with similar issues of exclusion and precariousness yet again, even in cities of the Global North. They form the bulk of the low- to medium-skilled workforce in these cities, often with limited knowledge of local languages and systems. Therefore they are frequently marginalised in terms of income and civic participation. Layered rights tied to citizenship exclude those of foreign origins from access to affordable housing in many countries of the West. They often find themselves restricted to a narrow, low-quality segment of the rental market.

Chapter 3, "Resilient Tactics and Everyday Lives in the Textile Mill Areas of Mumbai," discusses the issues of migrant integration in the urban realm threadbare in the context of the megacity of Mumbai, the commercial capital of India, and attracting migrants from everywhere.

Chapter 4, "Informal Housing of Migrants in Italy," explains why eviction and even deportation pose a constant threat to newly arrived migrants in developed countries, as illustrated in the case of Italy.

Furthermore, homelessness is a reality for a growing number of foreign nationals in the North, and the global COVID-19 pandemic has undoubtedly made things worse for these most vulnerable. At the same time, new strategies to prevent homelessness and support those living on the streets have been devised and tested in these tumultuous times and first conclusions can be drawn from these experiences in Chapter 5, "Cities, Housing Exclusion, and Homelessness from a European Perspective."

Chapter 6, "Just and Healthy Cities in Times of Global Threats: Perspectives from the Global North," looks at concepts evolved so far in the nascent sphere of environmental justice, which is first concerned with assessing spatial inequalities in ambient burdens, risks, and resources. Environmental justice—the strive to ease inequalities in the spatial distribution of risks and resources within cities—is a concept that has turned prominent during COVID-19 lockdowns. Stark differences had been made visible during the pandemic in both exposure to infection risk, economic hardship and access to means of relief such as safe and green open spaces for different strata of society. Concepts evolved so far in Europe in the nascent environmental justice sphere are first concerned with assessing spatial inequalities in ambient burdens, risks, and resources. Based on data gained by such a thorough assessment, local and regional authorities are thus enabled to support the most affected districts and areas in a targeted manner.

Two case studies serve to illustrate issues of environmental (in)justice in an exemplary manner:

The explorative case study of the Deonar dump yard site, Mumbai, India, looks at informal settlements from a health point of view and, through this lens, tries to understand how spatial planning is perpetuating unhealthy conditions. It takes the case of an informal settlement located adjacent to the city's biggest

dump yard to understand the mutual influences between the development of the city (and the growing amount of garbage it produces) and hazards to the health of residents.

The case study of Kibera in Nairobi, Kenya, explores how the internet can act as a critical infrastructure that enhances epistemic, distributive, and procedural justice in marginalised settlements and if it can help to address inequitable harms of air pollution through community-based data empowerment.

Part II, "Relocation, Resettlement, and Resilience," contains Chapters 7–11, which—from different perspectives and cases—demonstrate how and why resettlement from slums and informal settlements to mass housing colonies on the urban fringes can come as a calamity for countless low-income residents in the Global South: distance to jobs in the city centre and, consequently, time poverty due to long and costly daily travels to their new residential locations combined with a lack of affordable and reliable public transport constitute substantial challenges for residents. Simultaneously, residents' social networks, livelihoods, living habits, and culture may be affected by eviction from their accustomed areas.

The lack of affordable and adequate housing for substantial parts of the population and its associated implications for public health and the broader societal realm constitutes one of the biggest challenges faced by cities of the Global South—and increasingly also in solidifying, often spatially confined pockets of poverty in the Global North. Therefore, this part analytically looks at cases in India, Ethiopia, and Europe to assess similarities and discrepancies alike in the daily lived experiences of affected residents. It uses vulnerability as a tool of analysis, as vulnerability is a broader and integrated concept encompassing various components of capabilities and entitlements. Therein, we understand vulnerability in its social, economic, and physical dimensions. We demonstrate the need for a comprehensive multidimensional assessment of vulnerability in slums to comprehend the actual conditions before implementing improvement strategies as development interventions in slums need to be multidimensional and not only of physical nature.

Chapter 7, "Resilience at the City Margins: Roma Settlements in Bulgaria," looks at Europe's largest minority, the Roma people, and their living conditions in Bulgaria, which are characterised by stigmatisation, solidified poverty, and (often spatial) exclusion. While their living quarters may not always be informal, they are nevertheless primarily bereft of most modern-day amenities such as adequate building stock and basic infrastructure.

Chapter 8, "Tolerance to Heat as a Coping Strategy of Low-Income Households in India and Austria," looks at how low-cost mass housing makes inhabitants more vulnerable to impacts of climate change such as extreme heat. The chapter, therefore, specifically aims to establish an interlinkage between climate change and public health. Rising temperatures due to climate change and urban heat island effects will generally lead to heat stress and need remedial actions at all city planning scales. The design of built spaces strongly influences residents' exposure to heat risks. However, practices that increase communities'

resilience to heat are not yet influencing decision-making in urban planning. Low-income households in mass housing generally lack agency over their housing situation and have little means to adapt to heat. While buildings constitute their single most important and effective means of protection against heat stress, for most low-income households, design restrictions and the appliance of cheap building materials strongly limit this protection's effectiveness.

Chapter 9, "Home-Based Income Generation in Addis Ababa, Ethiopia," examines the implications of using domestic spaces for home-based work in slums in Ethiopia. The findings reveal that home-based work is not spatially confined only to the dwelling itself, and scarcity of space does not prevent residents from accommodating business activities in the domestic sphere. Home-based workers use domestic spaces from the dwelling to the courtyard and neighbourhood street. This chapter thus highlights how home-based businesses are indispensable income sources for slum residents, enabling them to cover their daily expenses.

Chapter 10 is titled "'Nothing Is to Be Gained by Involving Them': Exploring Residents' Lived Experiences of Resettlement in a Medium-Sized City in India." While abundant data is available on the impacts of resettlement in large metropolitan cities, this chapter advances knowledge by looking at how local governments in second-tier cities in India—arguably more bereft of resources and capacities than their much bigger counterparts—handle these resettlement programmes and which fundamental problems they face during projects' implementation and completion. In so doing, perspectives of local authorities are triangulated with national policy as well as residents' views on the ground.

Chapter 11 is titled "The Vertical versus Horizontal City." Replacing horizontal slums with multi-storey vertical resettlement is found not to work efficiently for several reasons, as demonstrated in this chapter, especially but not exclusively for the case of mass condominium construction.

The fact that the costs of vertical living are generally too high for low-income earners represents another constraint for the vertical city. In Ethiopia, this leads low-income condominium owners to sublet or sell their units to members of the middle class while they themselves return to slums where housing is more affordable to them. Overall, the lack of agency vested in residents during the planning and implementation of the vertical resettlement colonies and condominiums gravely contributes to the described deficiencies as housing policies continue to fall short in acknowledging residents' expertise in handling their daily needs and challenges regarding housing. Given abundant, well-documented evidence of mass housing's failures, one may wonder why resettlement colonies continue being built around the globe. The scientific community focused on housing research thus needs to critically assess its relevance in contributing to policy changes for practical improvements on the ground, as even a substantial body of scientific literature documenting severe shortcomings of the resettlement housing approach could not keep policymakers and local authorities from further applying it.

Chapter 12 concludes the discussion with final comments. Titled "Towards 'Just' Resilience," it attempts to contribute to the global discourse on resilience, drawing from classical ideas on justice and social contract. In the endeavour to draw the contours of "just" resilience, this chapter highlights the crucial role of academic institutions in bridging the gap between resilience thinking and practice. It discusses how international cooperation on capacity building in higher education like the above-mentioned projects, BINuCom, SES, and BReCom that formed the basis of this book, can enable strong academic and community partnerships for co-creation of knowledge, its dissemination, and awareness generation on this subject in different parts of the world. The chapter constructs a Resilience Equity Index drawing from the Equity Index discussed in *The Divided City* (Singh & Sethi, 2018) and the Resilience Index discussed in *Resilience and Southern Urbanism* (2022).

Note

1 Isaiah Durosaiye and Karim Hadjri, 2022, Housing and Living Off the Grid in an Era of Urbanization, Academia Letters preprint. ©2022 by the authors—Open Access—Distributed under CC BY 4.0.

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PART I

City and Its Vulnerabilities

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2

ETHNICALLY DIVERSE NEIGHBORHOODS AND THE NEW MEANING OF "COMMUNITY" IN THE GLOBAL NORTH

Tania Berger

Introduction

To the backdrop of unabated international migration to the Global North, aspects of diversity in housing policy primarily concern the question of how low-income families with migrant backgrounds can be provided with affordable housing. From a European perspective, this chapter investigates the question of how residential segregation of ethnic groups arises and whether the ideal of ethically and socially mixed housing, on the other hand, can promote the integration of immigrants into a host society.

In this context, the importance of "neighbourhood" and "community" in increasingly diverse residential districts also comes into the picture. While it seems as if some (intercultural) conflicts almost inevitably come up in residential estates due to the coexistence of people with different lifestyles, there are also ways these can be countered.

Access to the Housing Market for People with a Migrant Background

Article 25 of the 1948 United Nations Universal Declaration of Human Rights states: "Everyone has the right to a standard of living that ensures the health and well-being of his and her family, including food, clothing, housing, medical care and necessary social services."

This human right to housing is an indivisible one and therefore does not depend on specific citizenship. Nevertheless, the daily reality of life, especially for migrants in many countries of the European Union, including Austria, is often characterised by the difficulty of coping with unsuitable, too small, or too expensive housing.

Throughout Europe, families with migration backgrounds disproportionately often belong to groups of socially disadvantaged households according to local standards—even while they may be regarded as relatively well off in their countries of origin and may still be able to send remittances to their extended families there. Therefore, when it comes to diversity and housing policy in the context of migration, questions primarily arise about how these low-income, disadvantaged groups can be provided with affordable housing.

This chapter discusses how residential segregation of migrants arises in the first place and to which extent (socially) mixed neighbourhoods—an ideal often cherished in public opinion and academic debate in the European Union—can promote the integration of immigrants into a host society.

For migrants with low levels of education and correspondingly low earning potential, it is often difficult to find housing on the formal rental markets, even in the Global North. In the Austrian case, municipal housing and housing cooperatives jointly form the country's social housing sector. While housing cooperatives tend to be too expensive for low-income groups in general, municipal housing is often not available, or people with migrant backgrounds are partly excluded from access as there may be requirements in place regarding a minimum length of stay and/or local citizenship.

As a result, private rental apartments of low quality frequently remain the only housing option for newcomers and non-citizens. However, a wide range of discriminatory practices against people with migratory backgrounds is observed in the private rental housing sector (Berger et al., 2014, p. 51). Disproportionately high numbers of socio-economically weak households often live locally concentrated in private rental apartments of low quality—this is less due to their desire to live together within their ethnic groups but rather follows the housing market structures. Consequently, due to a lack of income, people with a migration background are found to have fewer square meters of living area at their disposal than the average Austrian. This tendency prevails even in second- and third-generation immigrants and often even despite naturalisation (Berger et al.; 2014, p. 21). Such segregation tendencies can also be exacerbated by out-migration of the autochthonous population if locals feel uncomfortable with the increasingly high share of foreigners in their area (ibid., p.42).

Ethnic Mix of Resident Population

Regarding potential residential conflicts in mixed neighbourhoods, Beckhoven and Kempen (2006) see residential districts with a socio-economically homogenous population as relatively unproblematic; conflicts occur most frequently in areas with populations that are very heterogeneous in terms of status and ethnicity.

With major cultural differences in place, a heterogeneity of standards, morals, and values is to be expected. Harming the other for one's own benefit may likely be considered more probable in such an environment, and, in consequence, trust

dwindles among neighbours. Thus, an ethnic mix can reduce social trust in a neighbourhood. If many different ethnic groups live in the same area, uncertainty is to be expected between these groups (Gundelach & Freitag, 2014).

People, in general, tend to prefer what they know. The so-called "homogeneity hypothesis" assumes that people in a homogeneous social context of common norms are more likely to agree on what they consider appropriate. Rules are considered universal; there is no uncertainty in social interaction. This allows for trust to be developed (Öberg et al., 2011).

Furthermore, aspects of cultural identity, such as ethnicity, shared values, and age of residents, are important influencing factors, as are the prevailing tenure modes—rent or property—and the way in which residents come to live in an apartment in a particular district: if, for example, they are assigned a flat by the social welfare office—as is the case in the highly residual social housing system of Great Britain—their attachment to the neighbourhood may differ from what it would be like in case they had deliberately chosen their own residential area (Morrison, 2003).

Morrison (2003) further observes that cultural identity seems to be more strongly based on age and ethnicity than on class; the commonality of the experience of difficult living conditions, therefore, does not have a connecting effect between different groups. As an example, Morrison cites frequent conflicts in low-income neighbourhoods between kids and teens with a migration background on the one hand and elderly, long-established autochthone residents on the other: age difference and generational conflict, as well as ethnic differences, outweigh a similar social status. In addition, socio-economic variables such as income, job position, and educational level also determine one's willingness and ability to get involved locally to establish and maintain social contacts (Beckhoven & Kempen, 2005).

Social Mix of Resident Population

So, when it comes to aspects of diversity and housing policy, these primarily touch upon how socially disadvantaged households—these disproportionately often include families with a migration background—can be provided with affordable housing. To which extent can the ideal of a (social) mix promote the integration of immigrants into a host society? And how segregation of ethnic groups in spatially demarcated areas be limited or avoided in the first place?

Hogg et al. (2004; quoted in: Guest et al., 2008) point out that the "contact hypothesis"—the assumption that intergroup contact can effectively reduce prejudice between members of majority and minority groups—can only be valid if an official and institutional climate strongly supports integration and at the same time the exchange takes place in the socially and ethnically mixed neighbourhoods between groups of equal status.

Contrary to the "contact hypothesis," the "conflict hypothesis" claims its exact opposite: the spatially close coexistence of people with different ways of life

offers potential for a variety of friction and conflict. In a similar vein, Bourdieu (1991, p. 31) states: "In fact, nothing is further away from you and is less tolerable than people who are socially distant, but with whom you come into close spatial contact." Overall, there is little consistency in the literature, and few definitive statements are made about the effects that resident segregation can produce both in terms of socio-economic factors and the integration of immigrants.

In this context, the question of neighbourhood and community comes into the picture; it turns out that, nowadays, for most people homogeneity in status with people who might be living outside their own neighbourhood is more important for personal relationships and social ties than the spatial proximity to the neighbours living in the same house or district (Münch, 2010).

People's social networks strongly influence their opinion on social mix: those who live in mixed neighbourhoods and have strong social connections in their immediate environment prefer this social mix. If, on the other hand, people have negative opinions about their socially mixed neighbourhood, they are hostile to this social mix, especially if they are homeowners and are afraid of the loss of value of their property due to a deteriorating image of their residential area (Musterd, 2008). People with strong social connections in homogeneous neighbourhoods, on the other hand, tend to prefer homogeneous neighbourhoods.

New Meanings of Community

We live in an increasingly ethnically diverse but also individualised society today—which constitutes an achievement as we were able to get rid of personal dependencies which historically had often severely restricted the development of individuals. At the same time, however, we must explore and test new forms of coexistence in the urban realm, for which often there are no templates yet. The redefinition of what is to be understood by the term "community" thus becomes a social task.

Community in a neighbourhood as a term is still quite positively connotated in Europe today and is often regarded as desirable. But for many, this community should be as non-compulsory as possible; it should not request residents to commit themselves to anything and not take too much of their time.

In general, scientific literature understands "community" as a collection of overlapping networks (Beckhoven et al., 2005). It has long been observed that local networks are losing importance in favour of networks that extend far beyond local boundaries (Bridge et al., 2004). In urban environments with a majority of small households, many city dwellers (especially if they do not belong to underprivileged, marginalised groups) are strongly externally oriented (Wirth, 1938) and are increasingly building spatially diffuse social networks (Beckhoven et al., 2005).

Nevertheless, local neighbourhood communities remain essential even in the urban environment, but they play a distinct role in people's lives and exist parallel with strengthened, extra-neighbourhood connections. Their homes

are important for most people, especially for spending their leisure time—their home increasingly becomes a statement of their identity, for who they are.

Many authors also refer to the close relationship that exists between civil engagement in specific localities and democratic participation: committed communities produce cohesive societies of active citizens; such active communities are also more likely to effectuate changes towards improved education and health, reduced poverty, unemployment, crime, and drug use (Putnam et al., 1993).

Nevertheless, "social cohesion" does not necessarily have exclusively positive connotations; social ties can also have an exclusionary effect both internally and externally—strongly connected groups hardly have any contacts outside their community—internal cooperation exists here at the expense of external relationships. At the same time, outsiders may have a hard time trying to enter such groups. If several groups of this type meet, strong conflicts can arise (Beckhoven et al., 2005).

Neighbourhood effects are strongly dependent upon phases of life: for example, physical environments are significantly less formative for small children, whose most important caregivers are their parents, than for teenagers and adolescents who are beginning to orient themselves towards their peers. For adults, local social networks can offer important support in everyday life. However, it is difficult to clearly separate neighbourhood effects from those of the respective family circumstances, such as household income and educational level (Ellen & Turner, 1997).

Children and Young People

Overall, neighbourhood and community remain essential, especially for those groups who spend much time in their immediate neighbourhood: young children and their parents—primarily mothers—the elderly, the disabled. Beckhoven et al. (2005) also note that the local arena is more important for workers than for employees—for members of the middle classes, it usually is only one of several spheres in which they spend time.

If residents experience community in their own residential district as a safe haven, social cohesion—mutual, internal obligation—can arise. Beckhoven and Kempen (2006) account for numerous factors on which such social cohesion depends: for households with children, there is usually an increased willingness to make social contacts in the district, be it in kindergartens or schools. By contrast, childless, young couples and students are often less interested in their own neighbourhood—not least because they often only live in a particular area for a comparatively short period of time.

High concentrations of children with non-local mother tongues in kindergartens and primary schools are not only the result of residential segregation but also arise due to the tendency of autochthone parents to enrol their children in institutions, which are mainly attended by children of local mother tongue—even if

these are located outside the immediate neighbourhood. For pupils and students with non-local colloquial languages, chances and motivation to learn, speak, and play with their peers of local mother tongue are thereby reduced.

For teenagers in youth groups, social cohesion—otherwise generally regarded as desirable—is often perceived as antisocial (Forrest & Kearns, 2001). In such groups, the effect of strong social cohesion, both internally and externally, can be observed: their internal cohesion may exist at the expense of external relations. At the same time, others have difficulties in fitting into such groups.

Areas of Conflict in Everyday Life of Local Communities

Residents of multi-storey residential buildings and large residential complexes daily depend upon numerous infrastructure facilities that are used by many other people, such as lifts, stair cases, or garbage collection containers. This shared-use demands a minimum degree of adaptability, which can be seen as a daily "exercise in tolerance" (Power, 1997). Thus, often unnoticed, with considerable friction, citizenship is learned, tested, and practised at this local level in everyday life (Wolman, 1995).

Children and young people with a migrant background often use outdoor play areas in the immediate neighbourhood due to the cramped living situation in their homes. This often causes complaints about noise. In residential areas with an ageing autochthonous population, generational conflicts between seniors in need of rest and children and adolescents with a corresponding intrinsic motivation for movement are additionally overloaded with stereotypical prejudices about ethnic and cultural patterns of conduct.

In general, complaints about noise are the most common cause of conflict in many multi-storey residential complexes (see Cser in: Berger et al., 2014, pp. 41–45). This subject is often associated with the lack of adequate playgrounds and leisure facilities, especially for older children and adolescents. By and large, urban conglomerates of estates built at different times by different developers often lack overarching coordination for the creation of leisure and exercise opportunities close to home.

Another frequent field of conflict in the immediate living environment is pollution and a lack of garbage separation by some residents. Like noise, this topic can be tackled by individual and small-scale mediation and conflict resolution. It, therefore, makes sense to provide overarching structures that offer such selective assistance in residential areas.

Support for Socially Burdened Districts

Not every neighbourhood needs support; in most residential neighbourhoods, this is not required. However, in districts that must be described as "burdened" due to the unbalanced composition of their population—such as the presence of a

disproportionately large share of economically weak, marginalised households—support through active neighbourhood management is necessary. Where homes are mainly allocated via social welfare, involuntary neighbourhoods emerge, often characterised by few resources but high potential for conflict. This is where local counselling services are in demand.

To what extent can the structural form of residential buildings support and promote neighbourly cooperation? Closeness may be built-in, but social relationships cannot! Wanting to create a community through construction is usually not successful in the long term. Spaces for encounters can be offered, but whether they are accepted and utilised depends on many individual factors on site—and strongly on the people acting there.

Counselling, conflict management, and neighbourhood work are effective methods and instruments for rendering coexistence in neighbourhoods tolerable to all and as conflict-free as possible, developing and shaping new forms of communities in an increasingly diverse society. This is a way to ensure social sustainability in residential estates (Berger et al., 2014, p. 108 ff.). Therefore, communities should not be overburdened as a kind of miracle cure for social conflicts. It cannot be forced upon residents, but it is definitely worth being promoted!

Soft City versus Hard City Aspects

Architects and planners often adhere to the ambition of "creating" communities and social cohesion by built structures—in offering well-lit, spacious communal areas, allies, and corridors; for instance, they intend to encourage exchange and interaction amongst neighbours. However, those in charge of upkeeping and maintenance of housing estates frequently report that these "hard" physical structures often remain un/underused, prone to vandalism, contention, and even conflict over who is allowed to use them, how and when—and who does not. The built environment in itself thus cannot guarantee fruitful social interaction; it even fails to promote it in many instances.

The "soft" social structure evolving within the built environment is a constantly changing process which is influenced by many factors besides the mere physical space. As professionals geared towards creating the hard city, planners, designers, and architects thus need to focus on this process rather than the physical building as a finite product which is established at the end of the designing and construction process. Once inauguration parties are over and pictures of the pristine spaces have been taken for architectural magazines, these design professionals' job tends to be over. However, the actual habitation process only starts there and then. It continues for many decades, encompassing possible refurbishments and adaptations in later years.

"Soft" social interactions of residents—be these autochthones, of migratory background, middle class or low income—are daily woven anew within these

spatial containers and have to adapt to the built form; they reversely may try to adapt the physical environment to their respective and changing needs on micro scales—by positioning furniture, changing floor layouts, encasing balconies, obstructing windows, etc., and thereby appropriating the space for themselves, using it as a display of who they are and how they want to be seen—at least by their neighbours. Architects may be wary of such changes, perceiving them as unduly changes to their original design. However, for residents, these adaptations represent a way of carving out a space of their own.

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3

RESILIENT TACTICS AND EVERYDAY LIVES IN THE TEXTILE MILL AREAS OF MUMBAI

Dwiparna Chatterjee

Introduction

Mumbai paved its way to becoming a global city (Sassen, 2000) like Shanghai, Hong Kong, Singapore and Bangkok. Mumbai was once the land of flourishing cotton textile mills located in the central part of the city. Huge areas, known as Girangaon or the land of the mills, possessed a historical significance with their mills and indigenous culture. They were considered the birthplace of the working class, migrant labourers, and their culture in the city. The huge mill lands with magnificent mill structures, tall chimneys, the sounds of the machines, sirens during the change of shifts formed a milieu of the mills. Presently, this area is in the process of gentrification.[1]

   This chapter is based on the author's fieldwork, including 35 in-depth interviews, 15 expert interviews, field observation on-site, and repeat interviews conducted from 2011 to 2017, which focused on the neighbourhood of Sitaram Yadav Marg in the Lower Parel area of Mumbai. It attempts to highlight the vulnerable state of these ex-mill workers and other migrant labourers who still inhabit many working-class areas and working-class chawls in Mumbai and their everyday coping tactics (soft city dimensions) in the built environment of neighbourhoods (hard city).

   The chapter argues that when gentrification unfolds at residents' doorstep, the attendant processes of redevelopment seep into their everyday lives with escalating economic disparity, social exclusions, and large-scale informality; these processes, in turn, result in a counterforce that gets produced in the city space from below which helps build resilience in diverse ways.

   The process of deindustrialisation, followed by the prolonged textile mill strike that lasted for two years (1982–1983), led to an eventual but gradual closure of the textile mills (Krishnan, 2000; D'Monte, 2002). This was followed by

large-scale unemployment as the labourers were retrenched from their respective mills. Some turned into marginal and informal workers.

A large number of workers were displaced to the northern part of the city, having empty lands with cheaper residences. Due to poverty, some went back to their villages, and some remained within the city (Whitehead & More, 2007, p.2432). Without having any interest in making the textile mills operational, the mill owners looked for profit-making investments through real-estate development.

The role of the state also became very crucial here. Through different policy formulations like the DC Regulations,[2] much of the mill lands went into the hands of the real-estate builders, which the mill owners found more profitable. With much speculation over the land, the mill owners, along with the state, delved into the redevelopment of the mill lands with a profit-making motive. They wanted to bring a building boom to the locality through the process of TDR.[3] In 1991, there were networks of "building boomers" (D'Monte, 2002; Correa, 2006).

The redevelopment processes did not remain restricted to the mill lands but also entered the residential areas through the redevelopment of working-class chawls. The increasing market rent of the one-room tenement in slums, chawls, or other apartments brings out the crucial role played by the real-estate builders in the city. The increasing housing crisis in the city space and the rising number of slums within the city made the marginalised more vulnerable. Currently, redevelopment and regeneration of the built environment are the main mantras, and the city space transformed into a space of three Cs: contrast, conflict, and contestations. The resultant new built environment is dotted with service sectors, firms, IT sectors, creative sectors, high-end restaurants, pubs, cheek-by-jowl shopping malls and gated communities, all juxtaposed with long rows of chawls in the old working-class neighbourhoods of Parel, Lower Parel, Chinchpokli, and other mill land areas.

This transformation led to an exorbitant land value and reproduced the space as a "space of contrast, contestation, negotiation and aspirations" (Harvey, 1995). The transformation from "Fordism to flexible accumulation" (ibid.) is accompanied by spatial changes in the city space. Modern architecture, world-class designs, along with the functionless cold chimneys and eroded mill structures, are standing as palimpsests on the mill lands. Ninety- to hundred-year-old chawls, gated communities surrounding slums, slum redevelopment buildings, the sale components of real-estate builders, small-scale surrounding slums, and small-scale manufacturing industries in erstwhile textile mill compounds brought extreme heterogeneity. What was initially a mill land has transformed into a space of plurality.

The arrival of the upwardly mobile middle class and the spillover effect of bourgeoisie culture deeply disturb the older urban rhythms related to space, place, work, and life. The presence of different classes of people in the same arena without complete displacement or substitution of one by the other transforms

urban space and processes. The working-class houses getting ghettoised and entrapped by the high walls of emerging gated communities on the mill lands create a sense of discontent and ignite a process of negotiation in the process of redevelopment.

The large-scale unemployment of the mill workers, the rising rent of the rooms in the slums and chawls, forced migration within and outside the city, and continuous pressure of the real-estate developers push them into a state of vulnerability. Social exclusions, space crisis, and economic marginalisation on an everyday basis generate a strong counterforce leading to various kinds of housing struggles, demands, and negotiations with the planners and real-estate developers and alterations at the planning and policy levels.

History of Migration to Mumbai, Formation of Working-Class Chawls and Slums

Girangaon, or the mill land area of Mumbai, were created over a century and a half by migrant labourers. In 1660, the British East India Company leased seven islands from King Charles II and the development of the port town began. Gerald Aungier, the then Governor-General of Bombay, encouraged the mercantile communities from the west coast to migrate to the island city by assuring them freedom of trade. The cotton boom started with the American Civil War in 1861, and by 1865, there were 10 textile mills and over 6,500 mill workers in the city that was still called Bombay. Industrialists engaged in cotton textile dreamt that the textile industry's progress would last forever with the help of port facilities, and it would shape the economy of India. Therefore, mill owners engaged the best architects and engineers to design their mills (Dwivedi, 2006; Chandavarkar, 2009; D'Monte, 2002; Dossal, 2010).

Textile mills were most important during this time as they were the most prominent means of earning a livelihood for the inhabitants. People from the "impoverished" districts of Maharashtra flocked to the then Bombay. The first wave of migration was from the Konkan belt, a narrow coastal belt between the Sahyadri and Arabian Sea (Dossal, 2010). A large number of labourers started coming to the city for work.

The Narratives of Migration

The lack of resources in their area of origin made the migrant workers dependent on the urban labour market. The patterns of labour use were conditioned by the structure of Bombay's economy. As Chandavarkar (1994, p.124) noted, these are not solely a function of "attitudes, mentality and culture of the work force, but irregular and uncertain conditions of work in the city made it essential for the workers to maintain a rural connection." The village always remained an integral part of the city, and with the decreasing rural base, there was an increase in rural–urban ties. Chandavarkar (1994) further mentions that Ratnagiri and

Konkan are rugged and dryland areas where crop cultivation is very limited. Therefore, a large junk of population from these two districts, especially the men, moved to Bombay to join the textile mills.

In this context, my respondent late Jayant Pawar once mentioned about his father and his family, who were from the Konkan region. He narrated that his father was a farmer. When the textile industry started in the 19th century, all the workers came from the Konkan region. The soil fertility of Konkan was very limited. Only some rice would grow there. Wheat did not grow in the region, so poverty in Konkan was substantial. Crops entirely depended on rainfall. Konkan is not flat; it is rugged. So, every portion of the land does not grow crops. As family size increased, people started to come into the city searching for work.

Other respondents recalled: "Whenever someone came from the village to the city, he/she brought number of other villagers along with him. Either they were family members, cousins, distant relatives or fellow villagers."

According to Chandavarkar (1994, 2009), after coming to the city, the workers settled in the chawl. This demonstrates that migration to the city has always been supported by a network of ties based on the framework of caste and kinship.

However, the irregular conditions of work and the low wages in the city drove the workers to build and maintain social connections in multiple layers in both the village and the city. A relationship developed between clients and patrons, which helped them obtain moral and financial support. It was not only the rural–urban connections that helped build the neighbourhood of Girangaon, the village of the mills, or the wadis as it is called locally, but the intricate relationship between the workplace, the place of living, and the streets. The mechanism of the labour market tied the labour to a particular neighbourhood.

The growth of the city of Bombay was a segregated one, beginning from the southern European enclave, the elite Indian merchants on the margins of the European enclave, and the formation of the middle-class locality in the areas beyond the European enclave. Here the city space ends, and the villages of Parel and Lower Parel begin, which were considered to be the northern part of the city.

Mill owners found it profitable to establish their mills in the northern part of the city, and subsequently, the village of the mills, or Girangaon, was formed. Mill workers, who reached the city from different parts of the state and from all over India, initially settled in the town area. But gradually, they found a much cheaper place and settled in the Lower Parel area near the mills. With the growth of the textile mills, the houses of the working class, known as chawls, came into being (Dossal, 2010; Dwivedi & Mehotra, 1995; Chandavarkar, 1994, 2009; Kidambi, 2007; Kosambi, 1995; Hazareesingh, 2007). Unfortunately, the need for houses for such a large number of migrant workers was addressed neither by the colonial authorities nor by the mill owners. Therefore, the newly arrived labour had to initially live in huts, sheds, and even in the open spaces outside the gates of the mills. In 1890, when the city had 70 textile mills, it was estimated

that around 100,000 people slept on roads or footpaths. Housing was a big issue from the beginning.

The supply and control of housing became important in the organisation of the neighbourhood. As the population in Girangaon continued to grow, the Bombay Development Directorate (BDD) stepped in to provide industrial housing for 50,000 families, including the textile mill workers. However, the one-room tenement with very little sunlight and poor ventilation turned out to be a disaster for the working class. The question of space for the working class thus begins with their coming to the city.

Chawls, the houses of the working-class people, had their origin during the mid-19th century. During the colonial period, the landlords and the farmers started selling their land in pieces for the migrants to live on and chawls or chaal—as termed locally—started coming up in the city. Chawls are linear horizontal structures similar to the barracks of the British Cantonment area. They do not have more than two or three storeys, and they often look like honeycomb structures where the rooms are either back-to-back with a corridor on either side, or the rooms are arranged in a linear fashion facing each other with a long dark corridor in the middle (Adarkar, 2011).

They were constructed on agricultural plots during the middle of the 19th century as shops, homes, guesthouses, and warehouses came up. Sometimes the bigger houses were converted into homes and shops. The shops and homes were of similar sizes. The rooms were small, with a width of about eight to twelve feet and a length of ten to fifteen feet. Usually, the rooms on the road became shops, and the rest were used as a space for living. Therefore, a chawl, in general, is a combination of private and public spaces connected to the streets (Shetty, 2011; Adarkar, 2011).

There are three kinds of chawls in the city of Bombay, as mentioned by Adarkar (2011). Some chawls were owned directly by the mill owners. These chawls were very convenient but not very popular among workers. As the demands for housing among the workers increased and more chawls were constructed, a small portion of land was left in between for roads. Sometimes small spaces were kept vacant for small temples, and the neighbourhoods of the working-class people grew with its localised culture. These are often known as the "human warehouses" of the people (Burnett-Hurst, as cited in Adarkar, 2011, p.16). Some workers who were much poorer and belonged to the lower castes started living in huts made of thatched roofs and makeshift materials. Mostly they were not allowed to stay in the same chawls with the others. Later, as more migrants started coming to the city for work, the makeshift tenements turned into ghettos of the poor.

Neighbourhood Gentrification, Everyday Tactics, and Negotiations of the Working Class

Hereafter, I attempt to bring out the struggles and negotiations of the working-class chawl dwellers and slum dwellers in their everyday lives. I here argue

that the working-class residents, albeit in a vulnerable position, are not pas-sive onlookers. In fact, they actively participate in the process of bargaining and negotiations with the real-estate developers and the state. This struggle makes them much more resilient, and thus, using their everyday tactics, they cope with their crisis.

Based on fieldwork conducted during the years 2011–2017, this chapter focuses on the neighbourhood of Sitaram Yadav Marg in Lower Parel area. It wants to bring out the internal conflicts and negotiations that go on here on an everyday basis. The land that was solely used for industrial purposes before has become a land coveted by all. Be it slum dwellers, chawl dwellers, chawl own-ers, erstwhile textile mill workers, or real-estate developers—everybody desires a share. Instead of harbouring strong resistance against gentrification, the textile mill land areas became a platform for negotiations.

The area surrounding the Sitaram Yadav Marg encapsulates the essence of the past, i.e., the last 80–100 years approximately. It is also known as Sun Mill Lane locally because the Sun mill was located here. Only later it became Sitaram Yadav Marg. Some of the old shops in the locality still mention Sun Mill Lane as their address. Presently this Sun Mill Lane has rows of chawls—mostly two-storeyed buildings—standing closely packed together. Most of the chawls are 90–100 years old (as mentioned by many of my respondents). Some are also 50–60 years old. Some of the chawls in the area have turned into high rises known locally as buildings,[4] some are in the process of redevelopment, and some are waiting for their makeover.

Because of their low nominal rent of Rs. 50–150 due to the rent control act, the fate of the chawls was sealed. The redevelopment decision is made by soci-ety after seeking the consent of the dwellers and the chawl owners. Real-estate builders wait till the appropriate time approaches. Approximately 15,000 chawls under rent control[5] were in a state of dilapidation due to overuse and ageing. Hence it was decided to demolish and replace those buildings. By 1990 immense pressure had been built up by the real-estate developers seeking a redevelop-ment of the chawls. The government came up with new regulations stipulating that redeveloped buildings not only include the rehabilitation of the tenants but also provide extra floor space, which can be sold in the open market at a much higher rate to compensate for the cost of redevelopment (Shetty, 2011, as cited in Chatterjee & Parthasarathy, 2016, p. 227).

Narratives from the field reveal that the owner of the chawl possesses the primary right to decide on the redevelopment of his/her chawl followed by the tenants. If both the owners and the tenants fail to mobilise the redevelopment, then it goes to the builders. Both big and small builders are leading in this place, forming a nexus with the political leaders, chawl owners, and chawl society members. When the chawl owners want to get into redevelopment, they are supposed to seek the consent of the dwellers.

A chawl can go for redevelopment only when 70% of the dwellers agree to it. In order to vacate a single room in the chawls surrounding the mill land, the

builders typically pay Rs. 5,000,000–6,000,000 (80,000–96,000 USD) to the owners. Acquiring the land from the owner, the builder constructs a structure for the tenants of the chawl, providing all the provisions as per the demands of the chawl society, but the main portion of the land is used for constructing tall residential towers, which are sold at much higher prices, resulting in huge profits (Chatterjee & Parthasarathy 2016).

In the first phase, after the demolition of the chawl, tenants are temporarily shifted to transit accommodation. Alternatively, builders offer tenants a lump sum amount as per the current rent market. Most of the tenants try to invest a portion of that money and live in a cheaper place. Some even try to sell the room at a very high rate and move to a house in the suburban area. However, once the room is sold, one cannot typically afford to return to the city. Therefore, this entire process of chawl redevelopment generates a certain kind of aspiration and anxiety in the minds of the inhabitants while the displacement of the working class takes hold.

One of my respondents, Debraj Balakrishna Ambaokar, was a former textile mill worker who sold his two rooms for Rs. 500,000 (app. 8,000 USD) each in the 1990s and purchased two rooms in Worli Koliwada.[6] By 2015, the value of those rooms had increased to more than 1 crore rupees (160,668,60 USD) each. Therefore, when asked about redevelopment he replied candidly, "Redevelopment is good because we get good amount of money and good price. Now if I had stayed in Prabhadevi, the builder would have given us more than a crore for the same chawl, and the same building." He now hopes that his Koliwada rooms go for redevelopment.

The main intention of the builders is to evict the people from the chawls by offering money and then to occupy the entire area and redevelop it with high-end residential towers, gated communities, and a minimum number of redevelopment buildings. The builders wish to build 45-floor buildings instead of 7-floor buildings. In order to procure the entire chawl, the builders make an estimate and offer a certain amount of money to the dwellers (Chatterjee & Parthasarathy 2016).

Some inhabitants with less bargaining power leave the chawl and the rest negotiates. Respondent Pandurang Harke, during his interview in his chawl, mentioned that

> the chawl has a committee who takes all the decisions. Presently the value of the single room is Rs. 3,500,000 (app. 46,000 USD), but the property will not be in your name. If you want to transfer the property in your name, you have to pay Rs. 200,000 (app. 3,000 USD) to the original owner. This is only to transfer the property in your name. Suppose I have a room here and if I sell, I would be getting Rs. 3,500,000. The owner will take Rs. 2,00,000 only to transfer the name. Often, we don't disclose the original value of the room to the owner so that there can be a scope for bargaining.

> *(Narrative recorded in 2013)*

From the various processes of chawl redevelopments, mill lands redevelopments, and various negotiations attached to it, it is evident that it has caused a heterogeneous built environment. The erstwhile textile mill structures have been demolished in an indiscriminate fashion, and new glass facade corporate offices came into place. The large number of textile mill workers who once used to come to their respective textile mills every day started moving back to the villages.

However, many of them still aspired to live in the city to work. Being unemployed, the ex-textile mill workers started working as informal labourers. Some became street vendors, security guards, housekeepers and sweepers, and drivers in the newly constructed shopping malls, corporate houses, and gated communities on the mill lands.

The chawls that were not demolished have been taken over by different big and small real-estate developers. They play a significant role here. High-end buildings are the sale components and are located in prime locations. Having visited this area and observed the transformation there for a long period of time, I argue that the chawls are on the verge of getting eradicated.

The process of chawl redevelopment is slow, but in about 50 years the old working-class chawls are likely to disappear. Presently from this entire process of redevelopment of the chawls I was able to decipher that this locality or the larger mill lands of Mumbai are gentrifying. It is a market-driven initiative in which every player attempts to seek out his own gain. With a tendency towards homogeneity, the various agents of gentrification like chawl owners, chawl society members, real-estate builders, state, and even chawl dwellers have made the locality more ambiguous, resulting in heterogeneity. This heterogeneity in the neighbourhood had emerged in a very organic way due to the interests of the mill owners, real-estate developers, mill workers, and the state. Heterogeneity might remain even when all the old chawls are demolished because part of the land is also used for building multi-storeyed housing for the mill workers.

The trade union leaders, along with the workers, are demanding houses on the mill lands and employment in the city. The demand gets articulated through protest marches, morchas,[7] and innumerable hunger strikes. As a result of these struggles and negotiations with the state, various new high rises have come up on the mill lands.

Information collected from my fieldwork shows that the mills mostly submitted their lands according to the DC Regulation Act. Eighteen mills had submitted their land to MHADA,[8] and the houses for the workers were constructed and handed over to them based on a lottery system conducted on 28 June 2012. A total of 3,562 houses for the workers of 8 mills were constructed in the New Hind Mill Compound.

In other areas, the process of submission of land to MHADA for the construction of houses for the mill works is still in process. There are different reasons for this delay: in some cases, legal disputes over land hinder the process. Others fall under coastal Regulatory Zone (CRZ) rules, which restrict development in creek and bay areas from 50 m to 100 m from the high-tide line. Yet others are

still functioning as mills after modernisation; therefore, there is no question of surrendering the land.

A total of 6,948 houses have been constructed for the mill workers on the land handed over to MHADA by the 18 mills. The 225-square-feet flats are being given only at construction cost, which is approximately Rs. 750,000 (app. 10,000 USD), whereas the original property costs Rs. 6–7 million (app. 80,000–93,000 USD). The residents of the apartments are not supposed to sell these for ten years—until they return the loan. After ten years, they can sell or rent their apartments. The new houses constructed for the ex-mill workers on the textile mill lands of Mumbai and its surrounding areas are transforming the built environment.

Slum Redevelopment and the Everyday Negotiations of Slum Residents

The other neighbourhood where I have conducted my fieldwork is Indira Nagar, behind the Arthur Road Jail. This locality is also known as Saat Rasta as it was surrounded by seven mills. The narrow winding lanes of the Indira Nagar slum took me to the room of my respondent.

A very small room of approximately six by five feet with a cemented floor and brick walls. Two plastic chairs and some utensils in one corner fill the entire room. The other corner has a staircase which goes to the loft. The loft is a space where my respondent and her son sleep. The room has been rented by them for Rs. 6,000 (78.63 USD). Apart from the room rent, they also must pay the electricity bill. When their slum wanted to go for redevelopment without the interference of the real-estate developers, all the families had to deposit Rs. 25,000 and they started constructing pakka houses. Four buildings were constructed with 7½ floors and 23 rooms on each floor with attached kitchens and bathrooms. But much of the houses remained incomplete due to a dispute with the society, and the construction has been stopped for many years.

What I noticed is that many of the dwellers who could not afford rent in the city shifted to those incomplete buildings. Although there is no electricity and water, they could manage this distressing condition by taking electricity through illegal means. Per fan and light, they have to pay an amount of Rs. 600 (app. 8 USD) monthly to the local slumlord.

According to my respondent, a small room in the slum costs Rs. 3–3.5 million (app. 46,000 USD). There is always a middleman in the slum who makes a huge profit. For the last 30–40 years, this entire area has continuously been encroached on by various people, and gradually, they claim to be the owners of the land. They often transform the makeshift arrangements into pakka houses[9] and add further storeys. Multiple players are associated with this transformation, from slum dwellers to middlemen, police, and the BMC authorities.

Mehotra (2006, p. 60) mentions,

> In Mumbai today, planning is about tactics without necessarily looking for any strategy. The city has clearly moved into an era where laissez faire as

well as large-scale infrastructure development is combining to morph into a peculiar urban landscape. A landscape that is clearly not the result of a discernible strategy or vision for the city, but rather one that has evolved out of a series of incremental moves or tactics by different constituent groups played out independently in the city.

Mehotra (2006) further mentions that these tactics are employed at all levels and at all stages, driven by some aspirations. To fulfil these trivial aspirations, the people have altered the city landscape without any proper planning. The development of the mill lands is a classic example of it. What Mehotra (2006) mentioned as tactics, Roy (2005, 2009) conceptualises as informality.[10] This is the complexity of planning in Indian cities, as Roy describes it (2009). According to her, urban planning in India fails because informality and insurgence together undermine the possibilities of rational planning. Roy (2009, p.80) further states: "Planning in Indian cities cannot be understood as the forecasting and management of growth. Instead, urban planning in India must be understood as the management of resources particularly land, through dynamic processes of informality."

Conclusion

This chapter is about the everyday negotiations and struggles of the vulnerable mill workers and other working class of this city (soft city dimensions) who live in the working-class neighbourhoods of Mumbai. The faulty city planning policies, the proactive process of placemaking, the making of the city as a financial centre with industrial decline and the pushing of the poor to the outskirts of the city, ghettoisation, the housing crisis, and exorbitant house rents created a deep structural imbalance and rendered poor citizens vulnerable. The structural imbalance of the production and consumption within the city space created a crisis in all its resources and unequal access to it, housing being the most significant one. In the upcoming global city like Mumbai, every citizen has the right to live in the city. But a faulty implementation of the policies has become detrimental to the city's growth and development. The current policy of the slum and chawls redevelopment in the city (hard city dimensions) became a failure strategically, making the housing crisis grave. Squatters and working-class chawls are gold mines for real-estate developers. The builders encash the locational advantage of the slums and chawls in the disguise of redevelopment and better living and construct buildings for commercial purposes and high-end living. The developers make the land value rise further, putting the city out of reach for the poor. The poor get marginalised further, thereby leading to further squatting. The poor are not the passive onlookers here. They actively bargain and negotiate with the real-estate developers, politicians, and other actors. In this process of negotiation, they try to cope with the crisis to a certain extent with their bargaining power and tolerance and this makes them resilient to a certain extent.

Notes

1 The term "gentrification" was first coined by sociologist Ruth Glass in 1960 after observing the moving out of the working-class populations from the inner-city neighbourhoods of East London. From then onwards, different debates started regarding the causes and consequences of gentrification and how it had taken place in different cities around the world. The term "gentrification" can be explained in various ways. According to Ley (1986), gentrification happens due to a shift in the industrial structure in cities, from manufacturing to service-based industries, thereby changing the occupational class structure. Secondly, as a result of changes in class composition and occupational structure, there is also cultural transformation (Zukin, 1987; Bridge, 2006). The middle-class colonises the core area instead of the suburban area. Therefore, it is the newly formed middle class which makes gentrification (Smith, 1996). Thirdly, Smith (1987; as cited by Hamnett, 2003) argued that the main force behind gentrification is not the new middle class but the rent gap. Rent gap, according to Smith (1996), is the difference in the land rent or the gap created in the current rent of the area and the optimum rent available when it is in best possible use. With the industrial decline in the core city area, the area goes through a slump in the rent and enters the stage of decay. Such a decaying area or neighbourhood becomes lucrative for gentrification as the real-estate builders begin speculating about it. According to Smith (1996), when the area is under gentrification by the influence of the real-estate developers, many affluent people started moving into the gentrified area from the suburbs as they wanted to reside near to their place of work. This returning back to the city core area of the affluent is known as the "back to the city" movement. The process of gentrification, whether in Europe, in the United States, or in Australia, was sporadic in nature till the neo liberalisation period. Later, with time, it had acquired a wider extent of travelling to small cities and regions of both the Global North and the Global South (Hamnett, 2003; Lees, 2014). So gentrification has become a global phenomenon.

2 In 1991, the Development Control Regulation Board was formed especially for the development and redevelopment of the cotton textile mill lands. It formulated a set of regulations setting framework conditions.

3 TDR is the transferable development rights of a particular piece of land which cannot be realized on the same land because the land and the development on it are protected. The TDR instrument separates the land from the development rights and makes it transferable to another location. "It was first introduced by the municipality because it did not have the funds to acquire properties needed for public gardens, or other public purposes" (see Patel, 2005, p. 3674). Transfer of Development Rights separates the development potential of a plot of land from the land itself and makes it available to the owner of the land in the form of transferable rights. Such an award will entitle the owner of the land to FSI in the form of a Development Rights Certificate, which he may use himself or transfer to any other person.

4 Buildings are the redeveloped chawls.

5 The Maharashtra Rent Control Act, 1999, is an act to unify, consolidate, and amend the law relating to the control of rent and repairs of certain premises and of eviction and for encouraging the construction of new houses by assuring a fair return on the investment by landlords and providing for the matters connected with the purposes aforesaid.

6 Koliwada refers to a colony of Kolis (fishermen); this term is used for urban villages at the former periphery of Bombay/Mumbai which nowadays have become engulfed by the rapidly growing city.

7 Morcha: hostile demonstration against the government.

8 Maharashtra Housing Area Development Authority.

9 Pakka housing (or pukka or pucca) refers to dwellings that are designed to be solid and permanent. In India, this term is applied to housing built of substantial material such as stone, brick, cement, concrete, or timber.

10 By informality, Roy (2009, p. 80) understood through the writings of Berry (1993) and Holston (2007) as "a state of deregulation, one where the ownership use, and purpose of land cannot be fixed and mapped according to any prescribed set of regulations or the law. Indeed, here the law itself is rendered open-ended and subject to multiple interpretations and interests, 'the law as social process' is as idiosyncratic and arbitrary as that which is illegal."

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Acknowledgements

4

INFORMAL HOUSING OF MIGRANTS IN ITALY

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Introduction

This chapter explores some of the main forms of informal housing that migrants experience in Italy, resulting from multiple barriers in accessing the formal public/private housing sector or else in the asylum seeker and refugee reception system.

As of January 2021, there were broadly 5 million migrant residents in Italy, representing 8.5% of the country's population (ISTAT, 2021). This number does not include migrants with irregular legal status, whose number can only be estimated. According to recent studies, they are estimated to be more than 600,000 (Villa, 2020). By "migrants," we refer to all non-nationals settled in the country, including both documented and undocumented migrants, regardless of the reasons underpinning their decision to migrate—economic migrants versus forced migrants. This is because boundaries among categories are always blurred, and informal housing practices are enacted by migrants who may have different legal statuses but experience similar difficulties in accessing adequate housing. Nevertheless, we will show that some dimensions of informality mainly involve long-term residents, while others primarily affect refugees, asylum seekers, newcomers, and/or undocumented people.

Migrants' access to housing in Italy and their settlement conditions are complex and multifaceted. At the outset, it is determined by their legal status. It must be stressed that migrants risk falling into irregularity whenever their residence permit expires. Most residence permits are strictly connected with regular employment, and losing a job often means losing one's regular status.

Moreover, people with foreign origins are generally part of the weakest groups in society. Their social, political, and legal status classifies them as second-class citizens. From a socio-economic point of view, they are widely

recognised as more disadvantaged than other segments of the population (Tosi, 2017). According to 2018 ISTAT data, the incidence of relative poverty is higher within families with members of migrant origins (23.9%) or foreign members only (34.5%), compared to family units including only Italian members (10.5%).

Other factors undermining access to proper and adequate housing are lack of citizens' rights, even for those owning residence permits; limited awareness of one's rights; lack of family—or other kinds of—networks of support; racism and discrimination; and inadequacy of housing policies.

When faced with the impossibility of entering formal housing, migrants are thus forced to rely on DIY (do-it-yourself) solutions (Cremaschi et al., 2020)—informal, illegal, or at the edge of legality. The following sections give an overview of some forms of informal housing experienced by migrants in Italy when public policies and the private real-estate market do not meet their housing needs. These are by no means the only types of informal housing present in the country and must be considered only as an example, pointing at the precarious conditions migrants have been facing in the Italian context. These conditions, in turn, amplify vulnerabilities to environmental disasters and long-term climate risks. Here again, we are faced with a situation when the hard city fails to address questions of environmental justice. Migrants are left to fend for themselves with their own limited resources. This chapter points to yet another case, from the developed North, where soft city is negotiated with the hard city to build on resilience by a particular group of citizens; in this case, migrants.

The examples provided draw from different pieces of research undertaken, including in the most recent years by the SSIIM UNESCO Chair Research Group to which the authors are associated. They also draw from examples building on secondary desktop research. In particular, the authors explore the following forms of informality: informal rent, squatting, encampments, and rural ghettos—all discussed in the sections below.

Informal Rent—How Do Migrants Experience the Rental Market?

The first type of informal housing the authors focus on are the informal practices put in place by migrants in real-estate markets, particularly in rental ones.

It has to be noted that the Italian housing markets fit into the so-called Mediterranean model characterised, not only by high levels of home ownership but also by a structural weakness of the public and social housing sector (Agustoni, 2013). Italy is a country in which ownership has been prevailing over rent. In 2020, only 20% of the population lived in rented apartments, while 80% lived in their own home. For foreigners, the situation is reversed: in 2020, 64% lived in rented apartments, 7.4% in the workplace, and 7.6% lived with relatives or other nationals, while 21% lived in a house they owned (Scenari Immobiliari, 2020).

It must be noted that the conditions of the foreign population in Italy in the first decade of 2000 were very different from what they are today. In those years, some foreign families were in a phase of more permanent settlement in the territory that favoured their access to the real-estate market for purchase. The growth in rents was underway, and it was first halted by the 2008 crisis and then again experienced an ascending phase between 2015 and 2019. In general, however, foreigners who buy are workers who have resided in Italy for at least ten years and have permanent jobs.

However, most of the foreigners present in Italy have little (if any) purchasing power. All those who do not have family savings behind them—migrants in the first place but not only them—are indeed experiencing growing difficulties in housing access and affordability. At the same time, relying on public policies is not an option. Since the late 1990s, public investment in housing policies—especially public housing—has drastically reduced (Baldini & Poggio, 2014). Moreover, a large number of public housing units have been sold during the past few decades, and part of the remaining stock is not assignable because it is out of standard.

Many migrants participate in tenders to allocate public housing, but—contrary to what is often reported in the media—the percentage of housing assigned to people of foreign origin is almost always lower (Nomisma, 2017). In addition, some Regions have introduced ad hoc criteria, formally neutral but with the implicit (publicly touted) aim of excluding migrants from the waiting lists for public housing. The only option that often remains is thus the private rental market.

Even whereby rent options are accessible, there are critical issues. The liberalisation and deregulation of the private rental market that took place at the end of the 1990s has led to extraordinary growth in the amounts requested for rents, especially in large cities, weighing on the most disadvantaged families and triggering a significant increase in evictions for arrears.

In addition to the barriers also encountered by Italian families, foreigners experience limited social protection and a series of discrimination and racism processes including institutional ones (Sunia, 2016).

First, we should emphasise that the apartments rented to migrants often have very low-quality standards, both in size and structural characteristics. Unscrupulous owners, indeed, often exploit the needs and precariousness of migrants to make money with poor apartments that otherwise could not be placed on the market (Nomisma, 2016). As in many workplaces, where migrants do the so-called 3D jobs (dirty, dangerous, and difficult), also housing conditions can include dirty and dangerous places (ActionAid, 2019)

Furthermore, rents are often increased for foreigners. According to a 2009 survey, migrants (in addition to being more subject to illegal rents or contracts registered for amounts lower than the one paid) pay a rent increase by 30/50% compared to Italians (Sunia, 2009).

To be able to pay the requested rent, migrants are therefore forced to resort to a DIY solution in conditions of informality and instability.

Cases of forced cohabitation and coexistence in overcrowded apartments with poor sanitary conditions are well known. The pandemic since 2020 has added to the already poor existing conditions. As challenging as it is to measure and report quantitative information on overcrowding in privately owned apartments, the home overcrowding rate, which measures people's perception, highlights a gap between foreigners and Italians, going from 21% for the former to 7.2% for the latter (ISTAT, 2018).

Often "imposed" directly by the owners, overcrowding is sometimes a strategy implemented by migrants themselves to divide the too onerous costs and make them affordable. Often, rental contracts are registered to someone with a valid residence permit to which many speculative sub-rentals are then connected. In fact, not only are single rooms or single beds rented, but sometimes even the same bed is rented to different people, taking advantage of the various work shifts.

These informal housing solutions take hold mainly in decaying neighbourhoods located in peripheral urban areas or the outskirts of metropolitan cities—often along infrastructural axes of public transport.

Nevertheless, housing precariousness for migrants is not only an urban issue. As pointed out by many authors (see research project "Small-Size Cities and Social Cohesion: Policies and Practices for the Social and Spatial Inclusion of International Migrants"; Balbo, 2015), there is an ongoing process of suburbanisation and "ruralisation" that pushes a slice of the foreign population towards the smaller centres in Italy. Regarding DIY practices, it is thus interesting to mention a phenomenon observed in the historical centres of some small municipalities which are experiencing a process of depopulation (Albanese, 2016; Fioretti, 2016). The buildings of historical centres are then occupied (sometimes with regular contracts, but also in an informal way) by immigrant families who are satisfied with dilapidated apartments but often work on them to make improvements, effectively renovating (and revitalising) a housing stock in a state of neglect.

Migrants Squatting

Migrants squatting in vacant buildings—like former residential buildings, disused public ones, and former factories—is now common practice in Italy.

For the reasons already mentioned, like clearance of the public housing stock and growing rental rates, many people in Italy are experiencing housing precariousness. One of the most common strategies to overcome these conditions is to occupy empty or abandoned buildings.

Squatter housing—just like other forms of bottom-up strategies of (re) appropriation of spaces—is often understood as a form of socio–political protest (Cellamare, 2014) and as a practical attempt to fill the gaps of national public policies and local government, in other words, soft city in practice in a situation where hard city fails to deliver.

The phenomenon is widespread in Italy, especially in big cities, first and foremost the Italian capital of Rome (Mudu, 2014). According to a Parliamentary interrogation inquiry, in 2015, there were around 105 housing squats in Rome (reaching up to 500 residents per building). They are in empty and disused buildings; they may be privately or publicly owned, occupied by organised groups of family or individuals (both Italians and migrants), often in cooperation with housing rights movements.

Two examples in the city of Rome underline the peculiarity and the criticality of migrants squatting for housing purposes in Italy and highlight how they have been the first victims of the housing crisis.

One is the so-called "Metropoliz," a former factory squatted in 2009 by housing deprived households with the cooperation of a housing rights movement. In this multiethnic squat located in peripheral neighbourhoods of the city, different realities (Roma people, Italians, and migrants with different origins and legal statuses) coexist, showing strong and horizontal forms of self-management (Grazioli 2021; Grazioli & Caciagli, 2018).

Another interesting case, which highlights the refugees' high precariousness in Italy, is the squatting of a disused public building located in Rome's city centre (Via Curtatone). The building was squatted by refugees from the Horn of Africa (mainly Eritreans) with the support of the Roman Housing Movement in 2013, and roughly evicted in 2017 without adequate accommodation alternatives proposed to the evictees (Annunziata, 2020; Medici Senza Frontiere (MSF), 2016; MSF 2018).

What is important to stress is that the phenomenon of the occupation of buildings for residential purposes deeply intersects with the housing needs of migrants. There is a long history of squatting for housing-related to migration in Europe (Cattaneo & Martinez, 2014). For migrants, squatting has also been thought of as an alternative to dominant anti-immigrant policies (Mudu & Chattopadhyay, 2017).

A quota of migrants—often a significant proportion—can thus be found in many squats. Yet, some buildings are occupied by migrants only.

The high rate of migrants in squats is a sign of their poverty and social disadvantage; however, it also shows that the reception system for refugees and asylum seekers has severe deficiencies.

Informal settlements of refugees and asylum seekers, either squatter buildings or makeshift encampments, are in fact widespread across Italian territory, many of which arose around 2013, right after the closure of the "Emergenza Nord Africa," extraordinary reception project started in 2011.

Camps and Encampments

In this section, makeshift camps and temporary encampments of refugees, asylum seekers, and transit migrants will be described and discussed.

Two typologies of encampments can be distinguished partly based on migrants' status. On the one hand, there are tent camps, barracks, container encampments, populated by people with foreign origins who have lived in Italy for many years, but have never accessed the reception system, or have been expelled without completing their social inclusion path, or have been experiencing difficulties in finding a regular job. We will come back to the specific example of so-called "rural ghettos" in Southern Italy, in the next section.

Alongside there are makeshift settlements where migrants who just arrived in Italy can be found. These are migrants who transit in the attempt to reach North European countries; who arrive by land from the Balkan route and are not "dispersed" through the quotas defined by the EU migrant relocation scheme; asylum seekers who are waiting for the procedure to be processed or whose asylum application is rejected and even refugees exited from reception centres at the end of the asylum process.

For them, to be de facto excluded or run a high risk of being excluded from the institutional reception system, encampments are often the only available solution. The very existence of spontaneous camps is thus a direct consequence of the dysfunctionality of the Italian and European refugee reception systems.

While migrants arriving by sea on Southern Italian shores enter the reception system through the system of dispersal (unless they refuse to do so or flee), migrants arriving by land can face more obstacles in accessing any form of protection.

That is why many makeshift encampments are found in border cities close to the Balkan route, including Northwestern Italian cities such as Trieste, Gorizia, and Udine. They can also be found in the area of Foggia and Crotone, in Southern Italy, where centres of first reception are located, as well as in Trento, Bolzano and Ventimiglia, in Northern Italy (Semprebon & Pelacani, 2020). Informal settlements are widespread throughout the Italian territory. Some temporary encampments are in bigger cities too, such as Rome and Milan, where the largest train stations are located, at relevant crossroads for migrants in transit towards Northern Europe.

However, due to EU internal borders being closed, mid-size cities like Bolzano or even small towns like Ventimiglia have become a sort of hotspot.

Migrants stopped at Brenner Pass, on the border with Austria, are forced to return to Bolzano, the last large city before the frontier. Having no right to a place in a reception facility of the city, they live in extremely precarious conditions, sleeping along the riverbanks and under bridges, from where local police repeatedly turn them out using the excuse of the city's decorum.

The same conditions can be found in the westernmost borders, between Italy and France, where Ventimiglia is located. Here, the closure of the borders resulted in a growth in the number of people stuck in the area, living in informal reception centres and makeshift open-air settlements. There was for a while a reception centre (managed by the Italian Red Cross), but it has been reported to be overcrowded and unhealthy. Moreover, for different reasons (reaching capacity,

exclusion of some categories such as specific nationalities, women, and children), many migrants were refused entry to this centre. For the many people stranded at the border, the only alternative left is sleeping near the railway station or under the overpass at the mouth of a river. There, they rest before their next attempt to cross the borders, hidden in a train or through the mountains. Throughout 2017, the number of migrants at the mouth of the Roja River has rarely been less than 50 people, with peaks of 400 migrants living in inhumane and unsafe conditions, particularly for the most vulnerable, women and minors (MSF, 2018).

Even if the number of migrants who lived in makeshift encampments in Italy is hard to define, according to MSF, in 2017 (right after the pick of arrivals), there were at least 10,000 people excluded from the reception system. Those migrants are thus forced to live in informal settlements with scarce contact with local services and limited access to basic needs and healthcare.

Rural Ghettos[1]

Several scholarly works have looked at the workforce reproduction and workers' housing conditions (Gadea et al., 2014; Torres Perez, 2011) to illustrate how the complexity and variability of migration models and trajectories can be associated with different housing strategies and settlement forms. With reference to the most segregated and ghettoised forms of settlement (Wacquant, 2007), some authors (Perrotta & Sacchetto, 2013) have shown how they constitute the "natural" physical continuum of the agricultural field, whereby work and reproduction activities overlap to concentrate in one place. In such spaces, migrant workers are spatially isolated from native resident areas; hence, they are physically invisible. They are invisible from a temporal perspective, too, as they move across Italy, from one rural area to another, for different seasonal harvests. These settlements are functional to the flexible organisation of labour and are more easily tolerated by natives, who perceive them as temporary arrangements, although they often become cyclical or even permanent (Hellio, 2013; Lara et al., 2014).

In Rosarno, working and living conditions are stratified by geographic origin: EU migrants, particularly Bulgarians and Romanians, both male and female, are employed semi-informally for more extended periods, thanks also to European citizenship (preventing any "legal nuisances" for employers in case of inspections). On the other hand, sub-Saharan Africans, mainly male, primarily work for small farms on an informal basis, often for a few days of the peak season. At present, sub-Saharan Africans live in the most (visibly) difficult conditions, in rural and suburban ghettos. Housing is poor and lacks basic facilities, and it includes an official camp with tents and a shanty town in the nearby industrial area of San Ferdinando; many old overcrowded tumbledown farm buildings, far from the city centre; a container camp in Rosarno; old derelict overcrowded buildings in the town centre, frequently rented out informally. Migrants coming from other countries, mainly North Africans and East Europeans, generally live in equally

difficult conditions but are hidden within the walls of their dwellings—hence they are hardly visible to the native population, especially when they are trapped in the "caporali" system. In Sermide, interviewees did not report working and living conditions as severe as those in Rosarno. However, they explained that migrants work for long hours, with only very short breaks, primarily in greenhouses with temperatures above 40 degrees. Often, they are employed for a few days in the peak season only and with partial contracts, as in the case of Rosarno. Housing conditions are also precarious: available solutions involve emergency accommodation in old, abandoned, overcrowded farmhouses, a few kilometres from the town centre, out of sight of the native residents. Over time, Moroccan families have managed to rent apartments in towns and nearby villages and settle there.

Nevertheless, they have recently faced obstacles in accessing the private housing market due to rising unemployment and the difficulty of covering the rent and discriminatory practices by property owners. With reference to employment, some forms of stratification are evident, based on national origins and legal status: competition has grown between Moroccan and Eastern European workers, and the economic crisis has exacerbated it. Migrants who are officially recruited through transnational seasonal contracts can "cover" foreseeable requirements, while undocumented migrants can become useful for unforeseen circumstances.

First, both municipalities made efforts to control the presence of migrants, limit their visibility and contain escalating tensions to respond to (native) residents' perceptions of unsafety. Nonetheless, it must be stressed that while in Sermide, tensions largely kept the shape of complaints, in Rosarno, they grew stronger and were further echoed by the local, national, and international media to burst out into violent episodes.

Second, both municipalities have failed to effectively address migrants' needs in terms of living conditions and labour rights. Interventions in Sermide and Rosarno have been limited in time and intensity and merely translated into partial quick-fix solutions to immediate problems while overlooking ongoing, un-addressed, and un-resolved long-term accommodation needs, labour exploitation, and social exclusion. Arguably, such actions have contributed to transforming a rising temporary emergency into a permanent one; hence the emergency management of migrant seasonal workers has become chronic. Rural ghettos have gradually lost their character as seasonal settlements linked to the agricultural harvest (Perrotta & Sacchetto, 2013) and have become permanent living solutions. In Rosarno, migrants have been settling in camps and shantytowns—occupied mainly by sub-Saharan Africans—beyond the seasonal harvesting period (Campagne in Lotta, 2013). Growing unemployment, alongside the reduction of labour demand for citrus harvesting, has further resulted in the extended precarious permanence of migrants in the area of Rosarno. In Sermide, seasonal migrant workers have continued living in precarious conditions, largely with the mediation of local cooperatives. This has contributed to their isolation and has prevented them from taking legal action against exploitation. Similarly,

the scope for action of the two municipalities can be linked to the fact that they both lack a long-term strategic vision for migrants' integration, with no reflection nor any actual arrangements to deal with seasonal migrants who have settled more permanently. The idea of immigration as a circular and temporary phenomenon is surviving, particularly as far as seasonal workers are concerned, despite rising evidence that workers often do not go back to their country but settle with their families.

Unlike public actors, non-institutional ones have proved decisive in addressing temporary migrants' needs (Ambrosini & Van der Leun, 2015). In Rosarno, sovra-local NGOs have been of pivotal importance in granting access to medical services, and many non-institutional actors have operated to assist migrants (food distribution, provision of blankets, and basic furnishings). As in Rosarno, non-institutional actors in Sermide have played a crucial role in providing "first assistance services" to migrants.

Conclusion

In this chapter, the housing conditions of migrants in present-day Italy have been discussed in detail. The poor conditions of the five different typologies of migrant housing described above present another case when the hard city fails to address questions of environmental justice. This, in turn, amplifies the vulnerabilities of those sections of the populace to environmental disasters and long-term climate risks. Migrants are often left to fend for themselves with their limited resources.

Migration is a major challenge faced by many countries in Europe today. This chapter points to yet another case, from the developed North, where soft city is negotiated with the hard city to build on resilience by a certain group of citizens; in this case, migrants.

Note

1 This section is based on a partial extract of a paper written by one of the authors. See Semprebon et al. (2017).

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5

CITIES, HOUSING EXCLUSION, AND HOMELESSNESS FROM A EUROPEAN PERSPECTIVE

Nicholas Pleace

Introduction

This chapter explores the experience of housing precarity and homelessness in European cities. The discussion explores the concepts of homelessness and housing exclusion in the European context, including the nature and extent of informal and unregulated settlements by people living in cities and their experiences. The chapter employs the experience of COVID-19, in which some European cities extended their usual definitions of populations who could at least be temporarily accommodated via governmental assistance, to illustrate how the often complex and extensive social protection and, to varying degrees, social housing systems of European urban space, construct and reconstruct what it means to be defined as "homeless." The main argument is that homelessness and housing exclusion both shift significantly in their nature and extent in relation to the level, focus, and resources of European social protection systems. Europe contains urban spaces in which informal/unregulated settlements, living rough and marginalised, street using populations are, if not extremely numerous, certainly visible on a routine basis. There are also European cities in which homelessness in these forms is unusual and more likely to be quickly addressed when they occur.

Homelessness, Prosperity, Inequality, and Social Protection

Housing exclusion and homelessness do not exist in a single, consistent form, nor are they defined consistently across the 27 European Union (EU) member states and other 20 countries in Europe,[1] including the UK, Switzerland, and Norway. The 27 EU member states account for 15% of world trade in goods, which is only exceeded by China (source: Eurostat, 2021). The economic

strength of individual European countries varies considerably, with the most robust economies tending to be in Western and mainly Northwestern Europe. Some EU member states, such as Denmark, Ireland, Sweden, and the Netherlands, have very productive and prosperous economies relative to their population size. Countries outside the EU, including Switzerland and Norway, are also amongst the most prosperous on Earth, as is the UK. Levels of inequality within wealthy European countries are highly variable. The UK is one of the most unequal economies on Earth; by contrast, Denmark and Finland are societies in which economic prosperity, life chances, and health and well-being are much more evenly distributed (Wilkinson & Pickett, 2010; Wilkinson & Pickett, 2018).

There is also considerable variation in prosperity between EU and other European countries. Towards the centre, East, and South of Europe, levels of economic prosperity tend to be lower, with countries like Greece, Romania, Bulgaria, Poland, and Hungary having relatively lower levels of prosperity than countries in the West and Northwest. These differences are relative; in global terms, a country like Romania still has a relatively high GDP, but with a population of 19 million, its economy is significantly smaller than that of Denmark, which has a population of under 6 million (source: Statista, 2021).

The definition, scale, and nature of European homelessness and housing exclusion appear to exist in a broad, if variable, relationship with the level and extent of economic prosperity, the level of inequality, and the level of social protection in each European country. Shifting this towards urban experience in Europe, the experience of homelessness in the form of rough sleeping (street homelessness), the levels of "concealed" or "hidden" homelessness and broader experience of housing exclusion in urban space seem to be heavily influenced by the broader socio-economic context. In essence, in cities that are in countries in which there is high prosperity, lower inequality, and higher social protection—i.e., the state provides relatively extensive, accessible, and generous welfare, public health, and social housing—the experience of informal/unregulated settlements, rough sleeping, homelessness, and housing exclusion appears to be generally much lower (Fitzpatrick & Stephens, 2007; Stephens & Fitzpatrick, 2007; Stephens et al., 2010; Busch-Geertsema et al., 2014; Benjaminsen & Andrade, 2015; Benjaminsen, 2016; Hermans & Pleace, 2020).

European societies that are less prosperous, more unequal, and which have less social protection appear to have higher levels of people living in rough, informal/unregulated settlements, and housing exclusion (Baptista et al., 2012; Busch-Geertsema et al., 2014; Lancione, 2019; FAP/FEANTSA 2020 and 2021). The idea that more prosperous, more equal societies with higher levels of social protection will have less homelessness, less rough sleeping, and less housing exclusion seems intuitively correct. Lower inequality, better affordable housing supply, and extensive social protection appear to be a logical sounding explanations as to why, compared to areas in the South and East of Europe, Denmark had reduced homelessness to what Meert (2005) called a "residual social problem" or

why Finland, a decade later was talking, in realistic terms, of eradicating home-lessness (Allen et al., 2020).

The problem with these apparent patterns lies in clearly evidencing them (Busch-Geertsema et al., 2010). At least on the surface, patterns of urban homelessness do appear to support the idea that less rough sleeping, less home-lessness, and either lower levels or an absence of informal/unregulated settle-ments in European urban space shifts in relationship to national prosperity, growth, and social protection. Go to Bucharest or Sofia, and there is likely to be visible homelessness at levels that will not be present in Copenhagen or Helsinki (FAP/FEANTSA, 2021). However, there are significant differ-ences in the definition and measurement of housing exclusion and homeless-ness across Europe. These differences also extend to the level, accuracy, and even the presence of any data on homelessness within individual cities or at the regional or national level (Busch-Geertsema et al., 2014; Hermans & Pleace, 2020; O'Sullivan et al., 2020).

The complexities here can be summarised as follows:

- European countries with what may be the highest levels of homelessness and housing exclusion, i.e., those with the lowest relative levels of economic prosperity, higher levels of inequality, and limited social protection, tend also to be those that define homelessness and housing exclusion in the nar-rowest ways and collect limited, if any, data (Busch-Geertsema et al., 2014; FAP/FEANTSA, 2021).
- European countries that are relatively prosperous tend to collect more data and define homelessness and housing exclusion in broader ways than the less prosperous countries. This means that the countries with the lowest levels of homelessness and housing exclusion are also the ones that often have the richest data on homelessness (Busch-Geertsema et al., 2014; Hermans & Pleace, 2020).
- The realities of the factors driving relative levels of housing exclusion and homelessness are almost certainly more complicated than the apparent asso-ciations with prosperity, inequality, and social protection suggest. Policy, particularly the development of an integrated, preventative, housing-led strategy that is well resourced, appears to make a difference. Finland, for instance, has less homelessness than Denmark and Sweden, which are broadly similar in socio-economic terms (Allen et al., 2020; Pleace et al., 2015).
- Existing measurements of homelessness may, in any case, have several seri-ous deficiencies when they are present and these may be extensive as well. For example, there is evidence that cross-sectional survey methods, which by default tend to sample visibly homeless populations over short periods, almost certainly over-represent the extent of severe mental illness, addic-tion, and other complex needs among people experiencing homelessness. Those surveys inadvertently over-sample long-term and recurrent home-lessness, i.e., those who get "stuck" in homelessness, rather than looking at

everyone experiencing homelessness over time (Culhane, 2016). Some exist-ing methods also appear to significantly underestimate the scale and extent of women's homelessness (Bretherton, 2017; Bretherton & Mayock, 2021) because women appear to be more likely to stay with relatives, friends, and acquaintances than use services or live rough and avoid spaces and situations where they feel unsafe.

- Homelessness and housing exclusion in Europe are culturally, politically, and ideologically constructed and defined. Broadly speaking, the politi-cal right defines homelessness in terms of individual pathology, advancing narratives that homelessness is "caused" by severe mental illness, addiction, and criminality, what Gowan (2010) refers to as narratives of "sin" (crim-inality, addiction) and "sickness" (severe mental illness, limiting illness, and disability). Homelessness also tends to be defined in narrower terms, i.e., people sleeping rough (sometimes including informal/unregulated set-tlements) and in emergency shelters only. By contrast, social democratic, liberal, and socialist narratives around homelessness are very different; while individual factors are recognised, the issues are much more likely to be seen in terms of what Gowan (2010) calls "systems" failure, i.e., inequality, stigmatisation, failures in housing/labour markets, and social protection policy. Homelessness is also likely to be much more broadly defined; for example, the bulk of what is seen as "homelessness" in Finland is people living with relatives or friends because they have nowhere else to go, i.e., people who while they lack a home of their own are living in housing (Allen et al., 2020). By contrast, a Southern or Eastern European country might, if it counts homelessness on a systematic basis, sometimes only define it as people living rough and in emergency accommodation (O'Sullivan et al., 2020).

Ideology, Culture, and Administration

The most recognised, if not universally accepted, definition of homelessness is the European Typology of Homelessness (ETHOS) and its associated ETHOS Light framework. The latter is designed to act as a pan-EU framework for data collection to allow comparison between EU member states (Busch-Geertsema, 2010). ETHOS Light defines homelessness in terms that can seem very broad from a global perspective and wider than the working definitions of homelessness that exist within some EU member states and other European countries. ETHOS defines the following conditions as "homelessness" (Edgar et al., 2007):

- people living rough (in public spaces)
- people in emergency accommodation (including shelters)
- people living in accommodation for people experiencing homelessness
- people living in institutions who have no home to go to when they are dis-charged (e.g., long-stay hospitals, prisons)

- people living in non-conventional dwellings due to lack of housing (informal/unregulated settlements, temporary structures, etc.)
- people living temporarily in conventional housing with family and friends due to a lack of housing (including people who are "sofa surfing" or experiencing "hidden"/"concealed" homelessness)

ETHOS Light both goes further than the definitions of homelessness used in many European countries and is at the same time narrower in scope than some national definitions. The UK, for example, with its four sets of homelessness legislation covering England, Wales, Scotland, and Northern Ireland, defines living in housing that has reached a certain level of overcrowding, poor repair, or in which it is unsafe for someone to remain (including the risk of domestic abuse) as homelessness. Systems in Wales and England are also designed to intervene prior to homelessness occurring, treating the risk of homelessness and the need to prevent homelessness as a core duty, mirroring one element of ETHOS Light that defines people about to leave institutions with nowhere to go as "homeless" (Bevan, 2021). Many other European countries would not recognise the "potential" homelessness of people living in institutions without any housing to move into nor the idea that people living temporarily in conventional housing with family or friends are anything other than overcrowded (Hermans & Pleace, 2020).

In summary, homelessness and housing exclusion in Europe are not defined in consistent terms or measured in consistent ways. Although calling it a theory might be construed as rather flattering, the main theory is that richer, more equal countries with the most extensive social protection have less homelessness and housing exclusion, i.e., fewer citizens are poorly housed, living rough, or experiencing other forms of homelessness. However, this is difficult to demonstrate because the less prosperous countries tend to have less data, or little data, on a social problem that they tend to define in much narrower terms. Equally, existing data, even in more affluent countries, may still be limited, for example, in undercounting women (Bretherton & Mayock, 2021) and in facing a range of logistical challenges in defining and counting whatever may be regarded as "hidden" homelessness (Hermans & Pleace, 2020). Beyond this, homelessness is politicised; it is defined and responded to as individual pathology, as the result of "sin" and "sickness" (Gowan, 2010) and as only encompassing people living rough, in informal/unregulated settlements and emergency shelters by right-wing governments and as more of a "systems" problem, which is more broadly defined, by governments on the centre and political left.

Homelessness and housing exclusion in Europe are also administrative constructs. In a society with highly limited or next to non-existent social protection, access to adequate housing in an urban (or any environment) is a direct function of economic prosperity and security. Equally, the nature of your housing will be determined by those factors, that is, the richer you are, the greater the likelihood that water will be clean and reliable; that power will always be present; that the

physical standard of your housing will be at, or above, adequate levels; and that, equally, at least some legal rights to occupy your home will be present, i.e., you cannot be removed from your home and land arbitrarily (at least in theory). The human right to housing (UN Habitat, 2012) is more likely to be achieved when someone has sufficient economic power to secure it, in contexts where the state is barely active with respect to social protection, allowing that foreign aid, United Nations High Commissioner for Refugees (UNHCR) and non–government organisation (NGO) activity may enhance housing rights, where that is present.

In these contexts, where state agencies offer little or no social protection, nor systematic or widespread attempts to directly increase affordable, adequate housing supply, the alternatives are limited. Someone can live rough, relying on whatever income they might generate or charity that they can access to survive, or build their own shelter or modify an existing structure. In the latter case, the soft city comes into play.

In Europe, by contrast, homelessness exists in different forms and at different levels depending on the response of individual countries, regions, and cities. As a broad example, child homelessness, including street children, is not a wide-spread phenomenon across much of Europe and certainly not across most of the EU (Baptista et al., 2017) because social protection systems are likely to step in and prevent, at least the extremes, of child deprivation being experienced. Equally, the risk of homelessness being triggered by solely economic causation, such as housing that becomes unaffordable because of a loss of employment, appears to be frequently blocked by European social protection systems that, depending on the country, either pay all or most of the rent of unemployed/low–income households and/or provide social housing at a heavily discounted rent (Benjaminsen, 2016).

Shared Patterns of Homelessness

Homelessness and housing exclusion in Europe appear to shift in form and nature, varying by the context in which they occur. However, there are also some commonalities that seem to exist across different parts of Europe. These centre on populations that face barriers to whatever assistance might be available to people experiencing homelessness and those at risk of doing so. These can be summarised as follows:

- Populations who are economically marginalised, sometimes earning some low incomes, sometimes reliant on welfare payments, or a combination of the two, who are in situations of continual housing precarity and experiencing poor-quality accommodation. These groups are difficult to quantify precisely, in part because there are logistical challenges in counting them when they are not using services. However, they tend towards experiencing and then self-exiting from homelessness (Hermans & Pleace, 2020). In the United States, this is sometimes referred to as a state of transitional

homelessness (Lee et al., 2021) and in Europe too, a similarly precariously housed population, making frequent unwanted moves, who dip in and out of homelessness, also seem to be present (Meert & Bourgeois, 2005). This population is sometimes within and sometimes outside the formal economy, sometimes within and sometimes outside the forms of inequality responded to by social protection systems, existing in a liminal state between the securely housed populations and those who are experiencing sustained homelessness.

- People with mobile lifestyles and cultures. This is about homelessness and housing exclusion in populations seen as culturally distinct and requiring bespoke responses to their housing needs, the primary example being the quasi-nomadic Roma populations of Europe. Policy here can be confusing and contradictory, sometimes nominally respecting the mobile lifestyle of these groups and not offering standardised housing solutions or support, but sometimes treating these populations as needing to be regulated because of the differences in their culture and lifestyle and reflecting old, racist, cultural interpretations and responses to Roma people (Teodorescu & Molina, 2021).
- Populations who are formally excluded from assistance, which includes migrant populations whose status prohibits some access to social protection systems or who, as in the case of undocumented migrants ("illegal" migrants), cannot access most or any forms of social protection (Baptista et al., 2016). At another level, some European countries offer little or no social protection to any unemployed individuals who are of working age and physically and mentally well (or defined as such).
- People with very high and complex needs, who face barriers to generic social protection systems and whose needs are not always easily met by mainstream homelessness services. This high-cost, high-risk population may not be helped by existing systems and services, but new interventions, most notably the Housing First model, have been rolled out in an attempt to meet their needs (Pleace et al., 2019).

Addressing these forms of housing exclusion and homelessness in much of the urban space in Europe has proven challenging. Lancione (2019) argues that these populations, effectively excluded from mainstream housing, exhibit what he terms "dwelling as difference," i.e., they construct informal/unregulated settlements, occupy (squat) in disused/empty housing or other buildings and structures that were not initially intended for residential use and live rough. It is debatable how far the creation of alternative modes of living, including informal/unregulated settlements, constitutes a clear, distinct, and deliberate response to being denied access to the mainstream housing systems that accommodate the great bulk of the European population.

There are intersections between this experience of homelessness and housing exclusion and the experience of homelessness and housing exclusion in contexts where social protection systems are highly limited or largely absent, i.e., the only

realistic choices are to build some sort of shelter, modify an existing structure in some way, or live rough (Lancione, 2019). Most European homelessness, indeed, almost all European homelessness, does not occur in this form because European national, regional, and city governments, through social protection systems, to varying degrees through social housing and to varying degrees by dedicated policy responses to homelessness, stop most of it ever reaching this point. In more affluent societies, social protection systems often stop homelessness being triggered by poverty; domestic abuse services reduce the levels that would otherwise be triggered by that cause; and public health systems reduce the risk that physical and mental illness will trigger homelessness. In countries with significant social housing provision, there is the additional safety net of a large, low-cost, publicly subsidised housing stock, which means more people are more securely housed at a much lower cost than in societies with entirely free-market housing systems.

COVID-19 created a unique social experiment across much of Europe because it temporarily extended the reach of social protection and other systems to encompass those elements of the homeless population who would usually not be assisted, face barriers to assistance, or would usually only receive limited assistance. In the pandemic, some populations living rough, in informal and unregulated settlements, and squatting, and populations whose only option in terms of homelessness services was an emergency shelter, began to receive much more assistance than was usual.

Widening the European Definition and Response to Homelessness during COVID-19

COVID-19 reclassified homelessness in Europe, just as it reclassified homelessness throughout all OECD countries, changing it from a social problem into a public health problem (Parsell et al., 2020). The risks were threefold:

- Public health systems, particularly the hospitals, would be more likely to have to admit anyone experiencing rough sleeping, living in unregulated/informal settlements or in similar situations on a sustained basis because the evidence showed this group often had secondary/underlying conditions that increased the risk of serious illness from COVID-19. The public health systems had to manage the need to stay functional; stopping a high-risk population from getting COVID-19 made practical and logistical sense.
- As they could not self-isolate, people experiencing homelessness in these forms represented a greater risk to others and were at greater risk themselves from COVID-19. This extended to people experiencing homelessness in emergency shelters that were communal—sleeping and living spaces that had no individual space; they were enclosed areas in which multiple people shared the same air.
- The optics were extremely risky from a political perspective; nothing would convey a sense of lost control than people dying en masse on the streets and

in informal/unregulated settlements; there would also be a sense of profound moral failure and civic dysfunction associated with a failure to protect a highly vulnerable population.

The degree to which individual European countries responded to these risks varied. In England, the largest country within the UK by a considerable margin, the central government's response was rapid and extensive; significant funding was made available across all urban centres, and people were taken out of rough sleeping, informal/unregulated settlements, and "shared air" emergency shelters (which are comparatively unusual in the UK) and accommodated elsewhere, making heavy use of hotels that were otherwise empty because of the COVID-19 lockdown. Levels of rough sleeping, although only a minority of homelessness in England (a great many more people are assisted by the homelessness systems and laws than experience living rough) fell significantly, and gains in health, well-being, and in exits from homelessness were reported. As of January 2021, 11,263 people had been provided with emergency accommodation (mainly hotels), and 26,167 people had moved on into settled accommodation, including social and private rental housing (supported by the welfare system in paying their rent) or were in temporary supported housing (Cromarty, 2021).

Elsewhere the response was more variable. In Germany, for example, modifications to existing systems did occur, but on a city-by-city basis, without a sudden scaling up of emergency accommodation like that seen in the UK. By contrast, Hungary modified its provision of shared air homelessness shelters and expanded the provision of emergency accommodation. In Denmark, which tends to use self-contained and housing-based interventions to prevent and reduce homelessness, i.e., people experiencing homelessness assisted by services have their own rooms or apartments, there was considerable initial success in containing the spread of COVID-19, a pattern also found in the UK, where there was a broadly similar pattern of service provision (Pleace et al., 2021). Within the UK, the relatively extensive provision of homelessness services offering self-contained rooms, the use of housing-led or Housing First services, which employed housing-based responses to homelessness, a mix of preventative services and a relatively extensive, specific safety net for homelessness meant that the population living rough and in similar situations was very small relative to the general population. This meant that when significant resources were directed at these forms of homelessness, the scale of the problem being tackled was relatively manageable in relation to the available funding (Cromarty, 2021).

The infection rates could be astronomical when COVID-19 got into shared air services being used by people experiencing homelessness. In France, the infection rates in some "shared air" emergency shelters were between 23% and 62%, while rates of 17%, 36%, and 66% were reported in some US emergency shelters (Pleace, 2021). This reinforced the risks that existed, both within homeless populations who could not self-isolate and to wider society if those populations became infected, adding to the pressure on public health systems under extreme

strain. This meant that what were at first intended as short-term interventions to reduce homelessness began to be extended, both in the sense of putting more money and more time into emergency interventions, like the use of hotels to clear the streets of people living rough, than was initially announced, but also in terms of interventions such as eviction bans, which became widespread across Europe and OECD countries (Pleace, 2021).

The initial responses to this temporary increase in resources to reduce those forms of homelessness that were relatively neglected, or which were seen as outside the remit of social protection and dedicated homelessness systems included a brief outburst of positivism, centred on an idea that COVID-19 was reigniting a sense of collective responsibility. In respect of the extremes of homelessness in Europe, some of the (relatively small) populations who received little or no assistance and who were living rough, in informal/unregulated settlements and squatting, became a lot smaller, very quickly. This led to some pronouncements that all homelessness could be quickly and effectively ended, even in a context where most European governments were making it very clear that the interventions were temporary (Pleace et al., 2021). It was also noted that forms of homelessness that had seemed intractable, such as recurrent and long-term homelessness associated with high and complex support needs and the plight of rough sleeping among undocumented migrants, seemed to essentially vanish, at least temporarily, when new levels—sometimes unprecedently high levels—of resources were aimed at them.

The results were not, of course, perfect; there were problems and mistakes, and some of the people removed from the extremes of homelessness returned to their previous situation when the attempts to help them broke down (Neale et al., 2021). However, as noted, a range of positive outcomes was also reported, including gains in health, well-being, and what appeared to be better chances of sustained exits from homelessness (Harrison, 2020).

However, there were many omissions from these policies. Across Europe, overcrowded and poorly housed populations, including ethnic and cultural minorities experiencing systemic disadvantage, were being routinely reported as experiencing higher levels of infection and mortality than the general population. The extremes of homelessness, particularly around rough sleeping and other people in situations in which they could not isolate, were addressed and addressed with significant resources in some countries like the Netherlands as well as the UK. However, the broader associations between housing exclusion, already clearly associated with poorer health and well-being, were not as widely recognised, nor responded to in the same way. One reason for this is that the level of expenditure required to reduce housing inequalities in a broader sense, as well as experiences of housing exclusion that bring the people experiencing them towards the edges of homelessness, is gigantic relative to the costs of reducing the risk for what are often very small populations of people experiencing homelessness who cannot self-isolate (Pleace et al., 2021). The broader housing crisis, which renders adequate housing in much of the urban space in the most prosperous areas of

Europe unaffordable to many of Europe's citizens and which places some of Europe's poorest, relatively poorly housed citizens at greater risk to their health and well-being than the general population, was not addressed as COVID-19 spread across the continent.

Conclusion

Homelessness in Europe, across the cities and urban spaces of the continent, is relatively small in scale, defined in what are quite often broader terms than would be used in much of the rest of the world and occurs in a group of countries that have the most extensive, expensive, and generous social protection systems in the world. The discussion in this chapter reaffirms that where robust urban policy and governance structures (dimensions of the hard city) exist, soft city plays a minimal role. If the latter exists or re-emerges (as in the pandemic), it always works better when supported by the hard city. This, in sum, builds better resilience for future risks. European homelessness, while it can and does exist in forms that are present in the rest of the world, like living rough and living in informal and unregulated settlements (Lancione, 2019), is often a relative rather than an absolute state. Much of what Europe, and particularly the EU, defines as "homelessness" is a state of relative housing exclusion within populations that are, in global terms, often well housed and, in the most affluent and egalitarian European societies, very well housed compared to the lived experience of many people living in the Global South. European definitions of overcrowding, of an inadequate standard of housing, and even the conventions of how people share living space, and thus homelessness and housing exclusion can be very different. By Nordic standards of what constitutes "homelessness," tens of millions of people who would not see themselves in those terms, because the conventions around what normal housing looks like are very different in other parts of the World, would be defined as "homeless." Even within Europe, what would be regarded as "adequately housed" in the East and South might be defined as a state of housing exclusion and sometimes as "homelessness" in the countries of the Northwest.

This is not to suggest that genuine, deep, and profound inequalities, including extremes of homelessness that mirror the worst experiences in other parts of the world, cannot exist in Europe. Housing exclusion, homelessness, and inequalities in the built environment are real and pressing issues, as is a continued failure to provide enough adequate, affordable housing with good security of tenure across the continent (FAP/FEANTSA, 2021). However, homelessness in Europe is a relative state; it encompasses situations, depending on which country is being looked at, that would often not be seen as homelessness in much of the rest of the world. The scale of homelessness may often be much smaller, to the point where some countries to the North of Europe have arguably, even if it is not a view, they would share themselves, effectively eradicated homelessness, insofar as it has existed at any scale in recent memory (Allen et al., 2020).

The lessons of European homelessness centre on what is often being defined and responded to in situations of relative affluence, sometimes extreme affluence, compared to much of the rest of the planet. It is homelessness that is unusual, homelessness that can be much more broadly defined, homelessness that is an unusual experience in societies where the great majority of people are never without an adequate home.

Note

1 Defined here as the 47 countries that are part of the Council of Europe.

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6

JUST AND HEALTHY CITIES IN TIMES OF GLOBAL THREATS

Perspectives from the Global North

Heike Köckler

Global threats like pandemics affect people in different conditions around the globe. These conditions determine the vulnerability of societies and their subgroups towards threats and may turn them into severe risks for the quality of life or even survival of exposed populations (Blakie et al., 1994; Cutter et al., 2003). Due to different reasons, the effects are not only unequal but are also unjust, as subgroups that could be identified as communities by their ethnic affiliation, religion, income, or gender are affected more than others. If reducing community-specific injustice is an overall goal, this finding calls for a societal reaction.

Increasing resilience for those most vulnerable to threats is therefore of great interest. Someone's vulnerability can only be comprehended concerning a specific risk: In the COVID-19 pandemic, people with pre-existing illnesses, who are male, of higher age, and not vaccinated are more likely to die after infection than other people do. Children and youth and their families and people living alone are more likely to suffer from lockdowns and physical distancing in pandemic times. Deprivation and structural discrimination are other predictors of loss of quality of life or death in the pandemic, which is certainly unjust. This will be argued in more detail below.

Therefore, different factors must be considered to understand the vulnerability: (a) the threat and its kind at a specific place, (b) the capabilities of society and its communities to cope with the threat at this place, and (c) the interplay of both (Cutter et al. 2003; Köckler & Hornberg 2012). This consideration is not possible when taking a snapshot as a social vulnerability "emphasizes a condition rooted in historical, cultural, social, and economic processes that affect individuals' or society's ability to cope with and respond to disasters" (Huang et al., 2021, p. 3).

According to Cutter et al. (2003, p. 245), the following factors influence social vulnerability mainly:

> social lack of access to resources (including information, knowledge, and technology); limited access to political power and representation; social capital, including social networks and connections; beliefs and customs; building stock and age; frail and physically limited individuals; and type and density of infrastructure and lifelines.

This chapter integrates different discourses, as shown in Figure 6.1, to show the power of an integrated approach for just and healthy cities as a societal response to unexpected extreme events. Based on the understanding of specific vulnerability towards threats, environmental justice and community health are seen as fruitful approaches to contribute to just and healthy cities. The discourses are focused on this book's approach to soft cities infrastructure. This chapter also reflects upon situations of the Global North with a focus on the United States, as the mother country of the environmental justice movement, and German cities, as the primary research context of the author. Relevance of the outlined thoughts for the Global South and rural areas is intended but not dealt with in detail. Furthermore, results from a WHO global technical working group on Advancing Health Emergency Preparedness in Cities and Urban Settings in COVID-19 and beyond from February to April 2021 are included with a global view, as the author was a member of this working group (WHO, 2021). The need for a just and healthy cities approach is illustrated with examples in health promotion, prevention, and care that meet elements of soft infrastructure in diverse cities, including recognition, access without discrimination, and support networks/social capital.
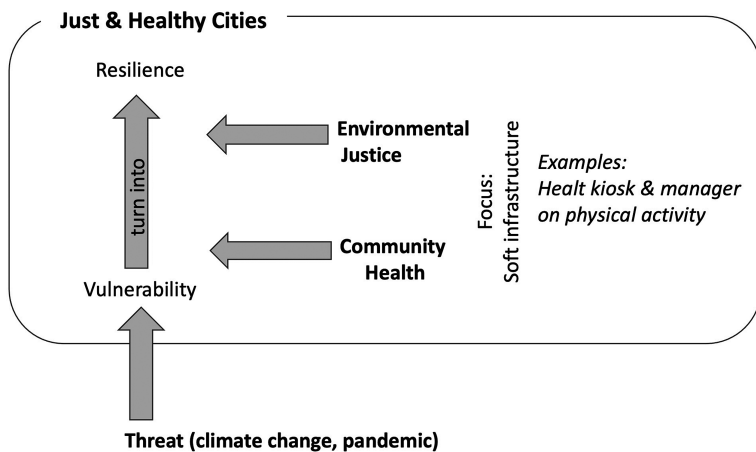

FIGURE 6.1 Discourses and theories combined in this chapter. Source: Author.

Soft Infrastructure as an Element of the Soft City

In line with this book, the relevance of soft infrastructure to cope with threats is the focus of argumentation. Soft infrastructure is first understood in contrast to hard infrastructure, which stands for built elements like buildings and facilities for different uses, service pipes, and roads.

In the context of German land use, planning infrastructure is seen as an important prerequisite for providing basic services and economic development. It is categorised into social and technical infrastructure. Social infrastructure includes education, health, culture, social care, public administration, safety, amenities, leisure, and sports facilities. Technical infrastructure groups transport systems, supply and disposal systems (energy, water, and waste), and information and communication systems (Schmidt, Monstadt 2018, p. 976f.). Both categories can have soft and hard elements. Concerning health as an element of social infrastructure, the building of a hospital is hard infrastructure, while mobile care for the elderly is a part of soft infrastructure.

It is significant to the term "soft infrastructure" that it includes services beyond those provided by public bodies. The market and social or charity service providers and communities in self-organisation additionally provide services.

Bradshaw and Blakely (1999, p. 230) see soft infrastructure as contributing to economic vitalisation, referred to by Jamal (2018) in the context of co-working spaces (CWS). Brown (2017, p. 113) points out the functions of these spaces: "CWS aim to combine the informal (social) and the formal (productive, functional) elements into a work environment that claims to encourage a range of beneficial interactions (…)." Co-working spaces are categorised as Third Spaces in neighbourhoods and, therefore, a relevant element of soft infrastructure (Growe et al., 2020). This goes back to Oldenburg (quoted Moriset, 2013, p. 6), who described third places from an urban sociologist's perspective: third places "host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work" (Oldenburg, 1989).

That soft infrastructure has a dimension beyond a physically accessible place like a co-working space shows the concept of social capital. Self-organised services within communities could be seen as support networks and captured as social capital, which is, according to Putnam (1993), a public good and depends on the amount of participatory potential, civic orientation, and trust in others available within societies. Concerning community health, the self-organisation of communities is a vital resource.

Len Duhl, a pioneer of urban health, describes the importance of infrastructure, including soft infrastructure, for cities:

> thus, a city works well only if there is an infrastructure that permits the parts to connect and to communicate. Therefore, it includes both a hard infrastructure of transport, communication, buildings, and institutions,

and a soft infrastructure that includes patterns of governance which allow
diverse groups to exist.

(Duhl, 1992, p. 252)

In a WHO report on emergency preparedness, the relevance of infrastructure
was named, too:

> As a multilateral development bank, we will be moving into funding social
> infrastructure, we have learned that focusing on the traditional infrastruc-
> ture is not enough… We are moving into new spaces such as virtual infra-
> structure and technology-driven infrastructure moving forward.
>
> *(Mr. Ping Yean Cheah, Asian Infrastructure*
> *Development Bank, cited in WHO, 2021, p. 24)*

Environmental Justice: A Framework to Understand Vulnerability towards Threats and Root Causes

To understand vulnerability towards threats and to derive measures for action for
increased resilience, environmental justice offers concepts, models, and modes of
thinking that allow deep systematic insights. Environmental justice is "seen as
an explanatory concept adding more determinants to explaining health inequali-
ties" (Köckler et al., 2017).

Furthermore, environmental justice is a vision that describes how things
ought to be (Walker, 2012, p. 40). The vision of environmental justice is often
referred to by Amartya Sen and Martha Nussbaum and their thoughts on justice
and capabilities (Holland, 2008; Tschakert, 2009; Schlosberg, 2007). Concerning
justice, Amartya Sen argues that it is more important to overcome unjust situa-
tions than to agree on an overall state of justice within a society (Sen, 2012, p. 7).
In the last decades, this proved to me to be a pragmatic approach to come closer
to how things ought to be.

Environmental justice consists of four sub-concepts (Köckler et al., 2017). (1)
Distributional justice shows the unequal and unjust socio-spatial distribution of
environmental factors determining the living conditions of subgroups of soci-
ety. (2) *Procedural justice* stands for fair decision-making, including meaningful
involvement of all groups of society in decision-making processes, the initiat-
ing of environmental decision-making, as well as social impacts resulting from
environmental decision-making. (3) The concept of *outcome justice* includes the
right to compensation for those affected. (4) *Fair opportunities* are the basis for
the other concepts and address existing deep-rooted inequities in societies: pro-
viding capabilities that could be brought to functioning, according to Sen and
Nussbaum, is one way to operationalise fair opportunities.

Many studies show that social subgroups are exposed to more environmen-
tal burdens and have less access to environmental resources, resulting in higher
morbidity or even mortality rates (e.g., different chapters in Holifield et al.,

2019). Especially in the United States, it led to different institutional arrangements: specific laws are in power, there are units within the Environmental Protection Agency on national and state levels that follow the vision of environmental justice, superfund compensation addresses situations of environmental injustice following the concept of outcome justice, and much more. However, you can find a lot of environmental injustices in the United States. So, everyone can look at the online map of US-EPAs EJSCREEN and check the environmental quality and subgroups exposed compared to other places and groups of society (EPA, 2022).

Distributional justice analysis scraps at the surface of underlying reasons while reporting apparent factors. In line with Walker (2012), it is not only about description but about explaining and target formulation (how things ought to be). In this understanding, the four sub-concepts of environmental justice have emerged. They all contribute to understanding why people are more vulnerable and which societal and political structures cause situations of environmental injustice.

To understand the reasons for environmental justice, one must deal in detail with structural discrimination like racism. This includes considering vulnerable people and those who are relatively privileged and benefit from this unequal share of environmental burdens or access to resources. Such structural analysis is not on the individual racist behaviour of individuals mainly; they address historically rooted causes going back to colonial times and resulting in everyday life like land-use policy, education system, and mindset.

Hurricane Katrina hit in 2005 as an extreme event of the global threat of climate change in the Gulf South of the United States. It caused over 1,800 fatalities and tremendous economic damage. It showed the results of centuries of racial discrimination furthermore. Most apparent was the situation in the Superdome of New Orleans, a multi-purpose stadium located in the city's centre. Many people who had not been able to evacuate themselves tried to save themselves from the flooding by taking flight to the Superdome. Almost all these people were people of colour. Following Cutter's broad understanding of vulnerability, we can conclude that a lack of social networks, e.g., knowing people in other places beyond their neighbourhood or knowing people who own a car, increased people's vulnerability tremendously. This vulnerability did not only lead to later evacuation—after going to the Superdome—but also negatively influenced the possibility of returning to New Orleans at a later date. Many deprived people, mainly people of colour, had been evacuated to other states. As displaced people were far away from home, they had fewer opportunities to participate in local re-building activities and corresponding decision-making, a procedural environmental injustice.

Elliot and Pais carried out research amongst displaced people and found out that 75% of homeowners returned to their place only one month after the hurricane. Only 25% of renters had returned at that time. As reasons, he mentions:

This lower rate may reflect not only lower attachment to place among renters and boarders but also less power over decisions about whether to re-enter and/or re-develop damaged properties. Landlords, for example, may be reluctant to readmit renters for a variety of reasons, including a fear of lawsuits involving unsafe conditions, a lack of capital and/or labour needed to repair damaged units, a desire to break leases and re-rent at higher rates in a high-demand market, and/or plans to demolish and rebuild alternative housing on the same space.

(Elliot & Pais, 2006, p. 309)

Environmental Justice and Soft Infrastructure

So far, soft infrastructure is not part of environmental justice studies. However, it could enrich the discourse as it could play a role in all four sub-concepts of environmental justice:

A lack of infrastructure is sometimes one indicator in distributional justice studies concerning *distributional justice*. The distribution of infrastructure is a subject of interest in the access to transport or studies on access to (quality) food. To my knowledge, distributional justice studies, which include the availability of soft infrastructure, do not exist. However, soft infrastructure is of great relevance to understand if we consider models on environmental justice explaining, for example, health effects of unequal distribution of environmental factors (Bolte et al., 2012). We know, for example, that health services in deprived neighbourhoods with higher environmental burden and higher morbidity rates are fewer and sometimes of less quality than in better neighbourhoods. This includes offers for health promotion and prevention or health-care services. A lack of these soft infrastructure services can increase the vulnerability of such neighbourhoods.

Procedural justice has a lot to do with recognition. Schlosberg (2007) argues how important it is that all groups can make their voice heard in environmental decision processes. Furthermore, decision-makers must be able to hear the voices and integrate them into their decision-making. An empirical study on environmental procedural justice in Germany showed a loss-spiral for people with immigration history. If a person does not receive recognition (in everyday life, as well as in public planning), he or she has a lack of confidence to participate in decision-making processes and does not get the chance to take part and be recognised (Köckler et al., 2017, p. 210). Confidence and recognition could be gained or improved by community-specific soft infrastructure activities that allow people to gain momentum and be empowered over time (Köckler et al., 2017, p. 224). Cultural urban gardening is one example of empowerment by community-based soft infrastructure projects.

Understanding both the lack of health-promoting, preventing, and caring services and the need for empowerment, soft infrastructure could be part of *outcome justice*. So, concerning specific risks and their health outcomes could lead to

specific place–related reactions. This could include specific approaches to increase the participation of vulnerable groups in public planning procedures as well as community health responses as described below. This again could empower people and strengthen their recognition. Soft infrastructure can finally—or first—support fair opportunities.

EJ and COVID-19—Some Findings, Potential Answers, and Shortcomings

The COVID-19 pandemic hits existing inequities, leading to individual or group vulnerability and making them visible to a broader audience. The unequal distribution of environmental determinants is an essential and health–relevant aspect as it contributes to morbidity and mortality in specific communities (Holified et al., 2019). Considering the COVID-19 pandemic, it became evident that lung and heart diseases which are caused partly by the environment, as well as other living conditions, contribute to social inequality in morbidity and mortality rates in cases of a COVID-19 infection (Chen, Krieger 2020; Terrell, James, 2020). Housing conditions became more relevant in times of lockdown. Access to services, networks, open spaces, and housing conditions made lockdown situations very different for subgroups within the same town. This led to health inequalities in morbidity and mortality in COVID-19 (Dragano et al., 2021).

WHO calls for taking environmental justice into account when considering extreme events like a pandemic:

> It is important that cities account for the needs of vulnerable groups. One key area is environmental injustices and the need for governments to develop urban areas with sufficient green and open space safeguarded by minimum standards. Space constraints could be addressed by having multifunctional activity spaces which would provide flexibility.
>
> *(WHO, 2021, p. 8)*

In the United States, scientists insisted on reporting data stratified for ethnic groups and have been successful. Now it is possible to observe potential patterns related to communities with a specific ethnic belonging. This leads to a search of causes, which again could be found in structural discrimination such as racism. Tan et al., 2021 found significant associations between higher levels of measured structural racism and higher rates of COVID-19 cases and deaths after adjusting for county-level population sociodemographic characteristics, measures of population health, access to health care, population density, and duration of the COVID-19 outbreak. Their analyses applied indicators on structural racism specifically relevant for COVID-19 pandemic: (a) residential segregation, (b) racial disparities in socioeconomic outcomes, and (c) racial disparities in incarceration rates.

Such results led to a great debate in the United States, including recommendations for research to follow this thoroughly. Facing the COVID-19 pandemic,

Payne-Sturges et al. (2021) highlight the relevance of structural racism in a commentary and come to five recommendations for environmental health research:

1. Recognize that race is a social/political construct, not a fixed biological trait. Investigate all potential causes of racial disparities in environmental health instead of assuming they are due to intrinsic biological differences.
2. Seriously consider racism as a plausible explanation of racial disparities in health.
3. Develop new measures of racism.
4. Consider structural racism as a factor in environmental health risk/impact assessment.
5. Develop guidelines on the use of race and ethnicity within EHS.

(Payne-Sturges et al., 2021)

There is no monitoring of the individual migration status in Germany in COVID-19 statistics. Therefore, it is impossible to identify potential patterns based on individual data. Some analyses on the level of districts for Berlin, Cologne, and other cities show that neighbourhoods with a relatively high share of people with migration backgrounds in the population have higher incidence rates than other neighbourhoods. In the Berlin case, these neighbourhoods are characterised by less open space available, higher population density, and reduced net dwelling than other Berlin districts (Berlin Senat, 2021).

Just and Healthy Cities

Providing just and healthy cities is an answer to vulnerability towards (unexpected) extreme events. As shown in Figure 6.1, the understanding that the societal response towards vulnerabilities to a specific threat increases resilience. If resilience is increased based on the vision of environmental justice and community health approaches, just and healthy cities could result.

Resilient Cities

Increasing city's resilience against hazards is crucial for just and healthy cities. For the United Nations and its different organisations, resilience, especially in urban contexts, is of great importance. "Urban Resilience refers to the ability of any urban system to withstand and recover quickly from all plausible shocks and stresses and maintain continuity of functions" (UN-Habitat, n.y.). The all-hazards approach is a worldwide leading idea to an increase in the resilience of cities and their communities towards global threats, including extreme and unexpected events (WHO, 2021). The United Nations General Assembly adopted the SENDAI Framework for Disaster Risk Reduction 2015–2030. To build resilient structures, the SENDAI Framework pursues the following goal:

> prevent new and reduce existing disaster risk through the implementation
> of integrated and inclusive economic, structural, legal, social, health, cul-
> tural, educational, environmental, technological, political and institutional
> measures that prevent and reduce hazard exposure and vulnerability to dis-
> aster, increase preparedness for response and recovery, and thus strengthen
> resilience.
>
> *(UN, 2015, p. 6)*

This represents the need for integrated approaches. To monitor how this out-
come is reached, different quantified targets have been fixed as part of the SENAI
Framework, including the reduction of global disaster effects (mortality, peo-
ple, and infrastructure affected) and increased disaster preparedness, including
national strategies, international cooperations, and access to multi-hazard early
warnings for all. The SENDAI Framework has also agreed upon priorities for
action and guiding principles.

   In its Common Guidance on Helping Build Resilient Societies, the United
Nations lists the following eight guiding principles (UN, 2020, p. 13):

1. Leave no one behind and reach those most in need and at risk in a gender-
    responsive manner.
2. Ensure equality, non-discrimination, and a human rights-based approach.
3. Be accountable for pursing inclusive partnerships.
4. Do no harm.
5. Engage and commit over the long term in a flexible, yet strategic approach.
6. Pursue context-specific and tailor-made approaches.
7. Act early to prevent or mitigate crises.
8. Build on local and national capacities for ownership and leadership.

These guiding principles touch on unequal opportunities by pointing out in its
first principle "most in need," but neither the SENDAI targets nor the monitor-
ing includes a systematic approach to monitoring the situation of specific sub-
groups and communities. This would be relevant as shown above in the case of
COVID-19 statistics in the United States compared to Germany.

   The eight guiding principles are reflected in the resilience-profiling tool pro-
vided by UN-Habitat. In the understanding of UN-Habitat, resilient cities are
persistent, adaptable, and inclusive. The third characteristic focuses on commu-
nities and social inequality:

> an inclusive city centres on people by understanding that being resilient
> entails protecting each person from any negative impact. Recognising that
> people in vulnerable situations are among the most affected by hazards,
> it actively strives towards social inclusion by promoting equality, equity
> and fulfilment of human rights. It fosters social cohesion and empowers

comprehensive and meaningful participation in all governance processes to develop resilience.

(UN-Habitat, n.y.)

In the tool, basic infrastructure is mainly addressed in terms of hard infrastructure (ibid. 39). Aspects of soft infrastructure representing a soft city are included in social inclusion and protection. It includes "consideration of citizens' initiatives (bottom-up approaches), the collaboration of civil society organization in local government's" (ibid., 42).

The UN-Habitat guide shows how important it is to think about vulnerable subgroups and see their resources. So it could be that groups identified as vulnerable are included in bottom-up approaches by making their resources, livelihood strategies, and networks accessible. To strive for resilient cities, all groups must be seen as groups with resources, and aspects of structural discrimination and suppression must be followed.

Health is of relevance in resilient cities, too. Almost all resilience approaches aim to reduce mortality, like the SENDAI Framework. Within the COVID-19 pandemic, besides numbers of infection rates, it is mainly again mortality and the functioning of the health-care system that is monitored. An approach to health promotion and prevention is rarely followed. In Germany, in 2021, a Memorandum on Urban Resilience was published as part of the Nationale Stadtentwicklungspolitik (national policy on urban development). This memorandum also follows an all-hazard approach and refers to SENDAI Framework. But it clarifies that health promotion and prevention are an essential part of resilient cities (BMI, 2021).

Urban Health: The HiAP Approach to Resilient Cities

Urban health is an approach that aims to provide healthy living conditions within cities. The relevance of social and environmental determinants for health is the basis for the so-called "Health in All Policies (HiAP)" approach (Böhm et al., 2020). Health in all policies was put on the agenda by the Ottawa Charta in 1986:

> health promotion goes beyond health care. It puts health on the agenda of policymakers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health.

(WHO, 1986)

Therefore, health promotion and prevention, including access to clean air and water, sanitation and aspects like walkable neighbourhoods, which, especially in the Global North, support physical activity, are critical. In HiAP approaches, all policy fields recognise their contribution to health and include it in their sectoral policies.

Community Health a Contribution to Resilience

The concept of environmental justice teaches us to understand cities with their internal patterns of injustice and claims the need for specific resilience strategies in parts of the cities. The approach of community health supports such strategies, as it addresses health promotion, prevention, and care based on the needs of communities and neighbourhoods. Core to the concept is a resource-oriented perspective on communities and structural approaches to providing healthy living conditions where people have an equal share of opportunities. Next to the built environment, different aspects of the soft city play a significant role. One example is the concept of community health centres, which has a navigating function in access to the health-care system for different communities. Another example is health promotion through physical activity in the immediate neighbourhood. This follows the idea of the WHO global action plan on physical activity (WHO, 2018). As the following examples illustrate, this demonstrates the interplay of built and social infrastructure as a contribution to resilience.

Examples of Soft Infrastructure for a More Just and Healthier City

Based on the theoretical discourse of the power of an integrated approach for just and healthy cities as a societal response to unexpected risks, two examples are outlined in the following: health kiosks as destinations for health promotion, prevention, and navigation in the health-care system in diverse neighbourhoods and a manager on physical activity to make neighbourhoods accessible as a place for physical activity for all. The examples are based on the real-world experiences that the author gained in a praxis-science cooperation in the district of Bochum-Wattenscheid, Germany, in the last years. The examples are neither described in detail nor are they comprehensive to reach just and healthy cities. Instead, the two samples should be considered illustrating and food for thought. Regarding the United Nations' eight guiding principles for helping build resilient societies, both examples have the power to contribute to resilient cities. The examples are community health approaches with a resource-oriented neighbourhood approach aiming at vulnerable groups. Following the HiAP approach as policies and urban planning instruments are the breeding ground of both approaches.

Bochum-Wattenscheid is a neighbourhood of the city of Bochum with more than 70,000 inhabitants. It is part of the old-industrial Ruhr area in western Germany. It is characterised by several indicators of economic deprivation and environmental burden. Analyses on distributional environmental justice show a relatively higher share of multiple burdens, respective lack of resources (noise, heat islands, availability of green). The local health department's school entry survey on health shows that children in this neighbourhood must face more non-communicable diseases than other children of the same age in Bochum. For these and other reasons, an integrated urban development plan was developed for a part of Bochum-Wattenscheid. This was the basis for acquiring funding

from the German Urban Development Support Programme (BMI, 2020) since 2015. This funding allows significant construction activities in public spaces and physical infrastructure accompanied by neighbourhood management. The urban renewal process in Bochum-Wattenscheid follows health promotion and prevention, especially for children and their families, as a guiding principle. Health promotion and prevention are not traditional guiding principles in urban renewal processes. Therefore, the implementation of the integrated urban development plan in Bochum-Wattenscheid is one of the first examples of Germany with such a clear focus on health in the policy field of urban planning. Therefore, innovative approaches like the health kiosk and the implementation of a manager on physical activity are immediate outcomes of these activities and not common approaches in other urban renewal processes.

Health Kiosks

Health kiosks (in German: Gesundheitskioske) are structural innovations in the German health-care system as they complement established structures of health care mainly provided by physicians and medical specialists. Health kiosks are destinations for community health advice and navigation service in the health-care system and can be understood as community health centres. They are context-specific in their portfolio, location, and management approach. The first health kiosk established in Hamburg is organised as walk-in spaces and works together closely with local physicians or hospitals. The aim is to (co-)finance their operating costs through savings of health insurance companies. Because it was proved that successful health promotion and prevention leads to fewer diseases. This is not only an improvement in the quality of life for the individuals but leads to savings in the health-care system as several medical treatments are no longer necessary (Golubinski et al., 2020).

In Bochum-Wattenscheid, an initiative of the local health department, a welfare trust, a network of physicians, our university, and the neighbourhood management of the urban renewal programme developed a portfolio and management approach for a health kiosk. This includes not only walk-in services for vulnerable people. It aims at providing visiting health services, too. Visiting services reach the target group within their settings. This is important for vulnerable people who have different restrictions in reaching walk-in infrastructure. Our approach addresses various social determinants of health. For example, if a person is confronted with private insolvency, he or she could be navigated to debt counselling and psychological support and/or community support networks. Therefore, it is of great importance that not only health-care specialists develop the health kiosk in Bochum-Wattenscheid, but that a welfare trust plays a key role. The welfare trust has experience working with diverse groups, including migrants, refugees, single parents, older people, and children. In the health kiosk, staff will be available that is multi-lingual and culture-sensitive; what is one reaction to (structural) discrimination in the health-care system and neighbourhood.

A health kiosk can be seen as a third space open to different communities within one neighbourhood and supports building up social capital within a neighbourhood. As measures of health care, prevention, and promotion reach vulnerable people, their level of pre-existing illness has the potential to decline, and their vulnerability will be reduced.

Manager of Physical Activity

Analogous to the WHO Global Action Plan on Physical Activity, the neighbourhood is an essential place for physical activity. In Bochum-Wattenscheid, major re-construction of physical infrastructures like public places, parks, train stations, and schools are realised within the urban renewal programme. A soft element was introduced by a so-called "manager of physical activity" (in German: *Bewegungsmanager*) to strive for more physical activity in this more attractive environment. The city's sports alliance runs this project, the city's health department, financed by health insurance and evaluated by our university.

The physical activity manager has four main tasks: provide sports programmes, provide sports equipment for free, build up a network of active partners, and educate and train people in the neighbourhood to promote physical activity and be instructors themselves. These four tasks aim to reach vulnerable groups that are by now not so physically active. There are activities of no charge in the rebuilt parks, in kindergarten for mothers who do not find time for sports activities, sports programmes with schools, like girls' soccer, or outside fitness trails where one can practice alone.

Sports and communal physical activity are inclusive and empowering. The training, e.g., of long-time unemployed people or refugees, not only empowers these individuals but also leads to better access to these communities. Therefore, the manager contributes to building up social capital. The resilience is increased by fewer non-communicable diseases resulting from a lack of physical activity. Furthermore, people may gain more self-confidence and are empowered.

Conclusion and Outlook

An integrated view of different concepts like environmental justice and community health has an innovative power to contribute to resilient cities that are just and healthy. Putting the positive side of the coin in the focus of the two examples illustrated above shows that things work if they are followed in a contextual and integrative manner. The cooperation of different partners from practice, science, and society has a great potential for knowledge creation in transdisciplinary learning.

This learning process will bring other forms of social innovation that work in a specific context and may be transferred and adapted to different places with other contexts without seed funding. If we can experience and prove the power of soft infrastructure projects and show how the resilience of vulnerable communities towards threats can be improved, another step is made towards just and healthy cities.

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Case Studies

Attempts for environmental justice are understood to be efforts to ease inequalities in the spatial distribution of risks and resources within cities, thereby countering existing environmental injustice. Thus, as a first step, attempts for environmental justice comprise assessing spatial inequalities in ambient burdens, risks, and resources in each locality. The two case studies which follow hereafter serve to illustrate such issues of environmental injustice in an exemplary manner by looking at informal settlements from a health point of view. Through

this lens, they try to understand how spatial planning (or the lack thereof) can perpetuate unhealthy living conditions for residents who struggle to make their voice heard in the political and decision-making arena.

Additionally, a case study of Kibera in Nairobi, Kenya, explores how the internet can act as critical infrastructure to enhance epistemic, distributive, and procedural justice in marginalised settlements.

Case Study 1

THE CASE OF SETTLING DEONAR DUMP YARD SITE, MUMBAI

Mamta Patwardhan and Tania Berger

This explorative case study looks at informal settlements from a health point of view and tries to understand how spatial planning perpetuates unhealthy conditions. It takes the case of Adarsh Nagar, a neighbourhood in Mumbai, India, which is located adjacent to the city's biggest dump yard, to understand the root and the nature of these vulnerabilities and health risks. A qualitative and quantitative approach was adopted to increase understanding of the mutual influences between hazards and degrading health in informal housing. On this basis, the objective of the case study is to identify measures to address the "hazard–health nexus."

The underlying research questions of this study are as follows:

1. How do (natural) hazards contribute to health risks/problems in informal settlements?
2. How do city growth and urban development impact the vulnerability of the informal community under scrutiny?

Method

This case study was carried out using the following methods for data collection:

Primary Data: An empirical investigation of living conditions in the settlement was carried out through 72 structured interviews, participant observations, and on-site visual observations. Respondent-driven sampling (RDS) was used to access more respondents who participated willingly and actively. The results have been documented in the form of participatory risk maps. Primary data was especially collected regarding health issues in women after extreme weather conditions. Interviews with the physician at the municipal health-care centre in the area provided critical insights into understanding residents' apparent health conditions. Interviews conducted with various NGOs such as Ghar Bachao Andolan

Samiti ("Save our homes") and Apnalaya, which have been working with the local communities on legal and health issues, revealed three risk indicators:

1. Environmental (sanitation and toxicity).
2. Man-made hazards (fires).
3. Social (livelihood) (not investigated in detail in this study).

Secondary data in the form of air quality tests and health and sanitation data from the municipal authorities was studied. The exacerbation of risk due to flooding attributed to the urban geography of the settlement was assessed with the help of municipal data and data published by the Indian Institute of Technology (IIT). Risk due to the proximity of the livelihood means of the residents of Adarsh Nagar in waste picking from the dump yard was analysed by the study of secondary data.

Adarsh Nagar on Deonar Dump Yard Site

Adarsh Nagar is an informal settlement situated in Mumbai's M-East Ward, near the Deonar dump yard site and adjacent to Thane Creek, with an area of about 132 ha of land. The dump yard is surrounded by the creek on one side and several slums, including Adarsh Nagar, on the other.

In 1972–1973, poor residents from the inner city of Mumbai were first relocated to this area. Following acute droughts in rural areas of Maharashtra[1] and other parts of the country, more people, largely Dalits (formerly known as "untouchables") and Muslims, relocated around the dumping ground. In 1976, people were internally displaced within the ward. The Prime Minister's special grant for urban renewal from 1986 to 1993 resulted in massive eviction of poor people from inner-city areas of Mumbai to Deonar. This trend of relocating large numbers of slum households from all over the city for "urban development" continued from 2003 to 2006, with World Bank-funded infrastructure projects.

The Bombay Municipal Cooperation (BMC) made land available for these displaced households which were laid out in a grid pattern. Water lines and toilets were provided for the displaced, but homes were to be built by each family itself. This area kept on being inhabited by families from inner-city areas that were demolished in a wave of urban development and infrastructure projects.

A little later, a large section of rural migrants and displaced families began to inhabit the huge marshy terrain beyond the gridded area mentioned above. From the study of the municipal development plans and tracking the trajectory of the growth of the city-specific to the M-East Ward and the dumping ground, one can see that what was originally earmarked as a green park got converted into a dumping ground, and the formal housing allotted for the relocation of project-affected people (PAP) grew uncontrollably as slums. Adarsh Nagar is one such pocket of informal housing beyond the government-planned and serviced resettlements.

The colossal growth of the nearby dump yard in Deonar has been directly proportional to the city's development. "We continue to dump because we have no option," said Amita Bhide, chairman of the Centre for Urban Policy and Governance at the Tata Institute of Social Sciences in Mumbai. "We are exhausting our landfills. This issue is reaching crisis proportions."[2]

Adarsh Nagar's exponential growth was a result of the livelihood means offered by the constantly enlarging dump yard. This area is the poorest in the ward and most deficient in civic services. Most houses do not have sanitation and water facilities as they are on encroached land.

With Adarsh Nagar not being a notified slum,[3] residents' shelters will be bulldozed and demolished by the Municipal Corporation of Greater Mumbai (MCGM) at least three times a year on an ad-hoc basis. Authorities attempt to instil fear among the inhabitants by carrying out these demolitions. Hence at times, only a few huts undergo demolition, sometimes a larger number. Inhabitants attempt to avoid complete demolition by paying off the authorities. Building components are salvaged during demolition drives, and structures get rebuilt quickly once the authorities are out of sight. Residents are thus accustomed to the reality that their homes get demolished regularly. Nevertheless, the constant fear of eviction haunts the lives of men, women, and children alike.

The experiences of the unprofitability of livelihood by rag picking further weigh on them as they sift through the garbage. Excluded even in the urban periphery of M-East Ward, an area that is infamous for its underdevelopment and lowest Human Development Index (HDI) in Mumbai, Indira Nagar (abutting Adarsh Nagar), symbolised poverty and marginality of migrant populations in the city. The inhabitants get branded as encroachers and illegal and face the constant threat of eviction that leads them to live lives laden with insecurity (Jha et al., 2015).

The inhabitants, including children, have been sorting garbage and engaged in rag picking for years. Adarsh Nagar's makeshift shelters, built on marshy land and garbage heap, are characterised by tarpaulin sheets, tin shades, crowded and filthy lanes, overflowing drains, and the overpowering stench from the dumping ground. Residents' daily lives are marked by precarity and insecurity of work and habitat, informality and illegality associated with access to basic services, and experiences of humiliation and indignity when interacting with outsiders.

Living and Working on a Dump Yard

Adarsh Nagar has become a hub of several entrepreneurial activities and businesses based on waste collection from the dumping ground. The proximity to residents' place of livelihood determines the location of their residences, and adverse impacts arising out of it seem to be ignored by the inhabitants. People fill in marshy land as reclamation and build their shelters on it. They thus live on the edge of or virtually on the garbage dump.

Garbage dumped in this part of the Deonar dump yard is often mixed waste—with paper, plastic containers, bottles, cans, and, at times, electronic goods. Often it accumulates with decomposable wastes from food, dead animals, construction debris, and even industrial waste. Many residents of Adarsh Nagar engage in waste collection and burn garbage to extract metals.

However, the open burning of garbage represents an inefficient combustion process that releases dense white or black smoke and significant amounts of air pollutants and ash. The air contaminants released depend on the material being burnt and the conditions of the fire. Even small amounts of burnt plastic and rubber release unsafe chemicals which are inhaled. These pollutants are often toxic to humans depending on their concentration and may cause irritation, skin, and respiratory problems. Some are carcinogenic. Individuals with respiratory problems such as asthma or with allergies may be even more sensitive to the smoke. The most significant health risk from the open burning of garbage at a waste disposal ground is for those closest to the fire who may inhale the smoke.

The dump yard has persistent small fires caused by high ambient temperatures and methane. Respondents mentioned that they first prod at the garbage in the dump with sticks to explore if a fire exists and then proceed to pick it up and segregate it.

Fire hazards get aggravated during summers when ambient temperatures are very high. The local doctor interviewed for this study blames the pollution oozing from the dumpsites for the spiralling incidence of respiratory infections in the area. His observation and practice reveal that though there is an increase in respiratory issues at the time of fires, not all infected visit the medical centres and leave health problems untreated. He stressed that those already suffering from diseases like asthma and TB face an aggravation in health problems during the summer and during a fire.

In the year of the study, the out-patient numbers had gone up by 20% ever since a major fire had started sweltering for several days. "People are complaining of irritation in the throat and eyes, and also of breathlessness," the local physician said, adding that the visibility at night drops to eight to ten metres at times. The hazardous levels take on alarming proportions in case of breakout of major fires. Raging fires lead to difficulty in breathing and aggravation of respiratory ailments like bronchitis, asthma, and tuberculosis.

A recent study of air pollution in the Mumbai area found Deonar to be one of the areas most susceptible to health impacts due to the high concentration of the air pollutants PM10, NO_2, and SO_2 (Kumar et al., 2016). Inhabitants at Deonar have the maximum exposure to PM10, which is the primary cause of the chronic obstructive pulmonary disease (COPD) and allergic rhinitis. Similarly, they have the maximum exposure to NO_2 and SO2, making them susceptible to cold and allergic rhinitis (ibid.).

Tests conducted show an increase of particulate matter during summers and a distinct reduction during monsoons, which, however, correlates with a rise in contamination of drinking and groundwater.[4] The maximum concentration of pollutants is found in winter (Kumar et al., 2016).

During the monsoon, pollutants are diluted or dissolved, and hence an aggravation of respiratory diseases is observed during winter, according to the physician interviewed at Deonar. The cases of respiratory ailments may drop during the monsoon and the cases of inhabitants suffering from water-borne ailments increase. Though the nature of the disease may thus vary at different times in the year, people in this area are perpetually exposed to health risks.

Layout and Density of Dwellings

The dwellings in Adarsh Nagar are laid out in a grid fashion that is extremely closely knit. The units are constructed in brick and one-storeyed, character-ised by narrow alleys that separate two rows of dwellings, also serving as the stormwater drain. However, in cases of extreme rainfall events, the narrow lanes frequently experience waterlogging and flooding. The residents interviewed in Adarsh Nagar point out that stagnant and unclean water serves as a breeding ground for mosquitoes. The result is an aggravation of vector-borne diseases, especially malaria.

The storage drums for water are placed in the narrow alleys, and most of the washing and cleaning activities also take place there. The absence of a sewage system is a significant factor in the aggravation of unhygienic condi-tions leading to the spread of diseases. Spillages of raw sewage are observed, which collect on the streets or flow into the nallahs (open drains). There have been instances where the floors of toilets have collapsed, and users have fallen into the septic tanks below. The exposure to septic tanks, lack of water, and reluctance to use the public toilets due to large distances all contribute to unhygienic conditions.

Most of the drains are damaged and often strewn with garbage. This leads to the clogging of the drains and the contaminated water collection. Contamination of ground and drinking water exists, leading to susceptibility of waterborne dis-eases in that area. Additionally, Adarsh Nagar is located in a flood-prone area. Waterlogging and flooding take place where the lanes are extremely narrow.

The dwellings at Adarsh Nagar are partly made of temporary materials like tin sheets crudely boarded up and roofed with the same material. The construc-tion materials used for the dwellings correspond to what is affordable to the inhabitants. They comprise bamboo or casuarina framework, tin, and plastic.

Single rooms of around 10×12 ft are made of tin sheets—walls and roofs—with light wood logs supporting the structure. There is no scope for windows or any ventilation; the shelters, therefore, have very hot interiors. Residents' belongings usually consist of a few ragged beds, a large mat, a kerosene oil stove, some aluminium utensils, two large jerry cans for water storage, a bucket, an airbag, and a suitcase with a few clothes—casually strewn in the shelters.

The units in this area are just about one metre apart. Windows of the units open out into these small alleys. Immediate escape in cases of major fire outbreaks is virtually impossible in this dense layout of the settlement. The nearby presence

of highly combustible methane generated by the decomposition of garbage is the leading cause of fires. Coupled with high temperatures during summers, the frequency of fires increases due to this combustibility. Elevated temperatures due to urban heat island effects aggravate the release of methane and other toxic gases in the atmosphere. In the fire, smoke engulfs the densely packed houses almost immediately, not allowing a quick escape.

A study of circulation in and around the houses of Adarsh Nagar revealed the level of threat in case of fire. A detailed inspection taken by the research team regarding the widths of the lanes and their condition exposes the fact that the only escape routes available do not offer any assistance during a fire. The insecurity of losing the house and belongings prevents residents from leaving the place until a dire situation arises. This leads to life-threatening situations at the time of fires. One of the respondents recalled:

> when the last major fire broke in 2001, it burnt all our belongings. We tried to stop the fire by every means we could. We even threw drain water to stop the fire, but it didn't work. So, we all ran with the children and let our belongings burn. It caused massive coughing due to the smoke emitted. The smoke remained there for a week and the smell reached distant places.

Additionally, the local authorities have regular anti-encroachment drives—about twice or thrice a year—which instil insecurity in the inhabitants as they suffer from losses of assets in these drives. Insecure tenure thus endangers their means of livelihood and their residences. It harbours the fear of eviction and prevents residents from investing in more permanent and safer building materials for the construction of their units, thus bringing on the exposure to fire risks.

Drinking Water, Toilets, and Health Care

Formal drinking water supplies are available only at neighbouring Kamla Raman Nagar settlements. The informal status of Adarsh Nagar does not allow for proper water connections by the municipal authorities. Only one municipal drinking water line is provided in every lane. Unauthorised connections are available at a high price of Rs. 16,000 each (app. 210 USD) and thus nearly impossible to obtain for those with meagre incomes.

A typical day at Adarsh Nagar starts at around 4 am when municipal water becomes available in the single lines. All household members are involved in filling water in the containers they possess. The long hours spent in the collection of drinking water results in children abstaining from school, as more hands to help are a welcome relief. As mentioned by the residents in interviews, the provided drinking water is of poor quality and is further contaminated by inappropriate storage methods arising out of lack of space. Interviewed residents remarked that the water is at times visibly turbid. The containers are often left open, and children may take a comforting dip to beat the heat. An

alternative is to buy drinking water which, however, represents a stress on residents' finances.

Septic tanks are used in the settlement's huts, and no formal drainage network exists. There is just one public toilet facility for women and men in the entire locality. No water is provided to this facility, and hence the users carry one bucket per person for the daily rituals. This water supply is highly insufficient to keep the toilets clean, and even though the municipality cleans the toilets twice a day, their condition is generally deplorable. Open defecation is resorted to as the number of toilets is grossly insufficient.

The ratio of the toilets per person works out to 1 in 290 (Kumar et al., 2021, Figure 74), and this imbalance is the main reason for inhabitants to resort to open defecation. The unhygienic conditions and the lack of water lead to skin allergies and genital ailments and raise concerns over menstrual hygiene. Inadequate quantity of water means the inability to clean the private parts thoroughly, causing skin allergies that eventually lead to genital ailments.

Residents of Adarsh Nagar are thus burdened by spending long hours queueing for the toilet and are often compelled to use the early hours of the morning to ensure timely reporting to their place of work. For women, this additionally results in reduced levels of physical safety. There have been a number of instances in the area when women and girls have been subject to molestation in case they have had to resort to open defecation.

Out of the residents' disadvantaged economic status arises a lack of access to primary health-care services, which are inadequate in numbers, and poor-quality health care. There is only one public health centre located near Adarsh Nagar. According to the physician at this public health centre, the same is visited by around 200 patients daily, primarily women, with complaints of throat and eye irritations, respiratory ailments, skin allergies, and genital and menstrual problems. Most women tend to stay at home looking after the children and the home. That exposes them for longer periods to the toxic gases of the neighbouring dump yard.

A "Right to Information" (RTI)[5]—request filed with the authorities within this study—revealed that an almost three- to four-time increase in waterborne diseases among women is registered in the area during monsoons. It is thus evident that due to a lack of essential services, extreme rainfall events make them more susceptible to waterborne diseases. Vector-borne diseases were not indicated in this data, and it was only established by the local physician that usually, the number of such cases also increases during the monsoon season.

Respiratory diseases are not well indicated in this secondary data, but the interviewed inhabitants indicated suffering from chronic respiratory ailments. During the study, extensive interaction with them on-site at various times of the year helped observe the throat irritations they always suffered from. Respondents were observed to be clearing their throats and coughing perpetually, and the researchers themselves also experienced itching, throat irritation, and irritation in the eyes during the site visits.

Of the 72 households interviewed, around 56 women suffered from respiratory diseases that escalated to 65 during extreme weather. Twenty women suffering from waterborne diseases escalated to 65, and 28 women from vector-borne diseases escalated to 47 during extreme weather events.

Findings

The vulnerable condition of inhabitants of Adarsh Nagar is a consequence of unabated migration to this area coupled with the increase in waste generation resulting from urban development in the overall megacity of Mumbai. It is a process of increased numbers of migrants settling here. Furthermore, they do settle here because they depend on the dump yard for their livelihood and sustenance. This dump yard thus, at the same time, secures their income and threatens their health and sometimes even life. Sifting through and recycling garbage, the settlers of Adarsh Nagar process the waste produced by the city and are thus rendering an essential service to the city in which, however, they cannot afford a formal and secure home.

Their insecure legal status as informal settlers and migrants lends them to complete ignoring by municipal authorities, local stakeholders, and policymakers. Hence this case study demonstrates how the existing conditions in the community of Adarsh Nagar are, in fact, a direct function of the development of the city surrounding the Deonar dump yard.

Notes

1 Maharashtra: Indian union state of which Mumbai is the capital.
2 https://www.livemint.com/Politics/xZdqBRJhyDqYhx1UAmOvjK/Mumbai-is
-being-buried-under-a-mountain-of-its-own-trash.html (last access May 2, 2022).
3 In the Indian context, a "notified slum" is a neighbourhood that is notified by the state, a union territory (UT), or a local government under any Act (such as the Slum Act). By contrast, an "identified slum" such as Adarsh Nagar (defined as "a compact area with a population of minimum 300 or having 60–70 households of poorly built, congested tenements in an unhygienic environment, usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities") is legally unsecured and thus can become forcibly evicted.
4 *Hindustan Times*, March 23, 2016: Air quality poorest in Maravali, Deonar, and Andheri.
5 A citizen of India who desires to obtain any information on Central, State, and Local Governments, and all the bodies owned, controlled, or substantially financed by these, can appeal under the Right to Information Act to the Public Information Officer of the concerned public authority. The applicant shall receive the requested information within 30 days from the receipt of the application by the concerned public authority.

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Case Study 2

ENVIRONMENTAL INJUSTICE: AIR POLLUTION AND DATA INEQUITY IN KIBERA, NAIROBI

Surbhi Agrawal

The burden of environmental degradation is not evenly shared. Environmental injustice and inequity stem from the harsh reality where the burdens of environmental harm impact communities that are already vulnerable. Many studies have explored the differences in harm from air pollution to racial or ethnic groups and people who are in a low socio-economic position, have less education, or live nearer to major sources of pollution. On the global stage, set against the background of rapid mass urbanisation in developing countries, these aggregated harms further exacerbate the inequities faced by the millions of residents living in informal urban settlements.

The central research question of this article is how can the internet act as a critical infrastructure that enhances epistemic, distributive, and procedural justice in marginalised and gentrified urban settlements and help to address inequitable harms through community-based data empowerment.

Site in Focus: Kibera in Nairobi, Kenya

The African continent hosts one of the largest proportions of urban population living in informal settlements. Highly vulnerable residents lack basic infrastructure and social services, translating into challenges to their quality of life and opportunities for growth. While the internet has proven to be a powerful tool for activism and entrepreneurship, access to the internet remains severely limited for the millions of residents of informal urban communities. While the internet has proven to be a powerful tool for activism and entrepreneurship, access to the internet remains severely limited for the millions of residents of informal urban communities. This absence of affordable internet further marginalises already

vulnerable populations, inhibits socio–economic development, and delimits the flow of communication for residents. In Kibera, Kenya (one of Africa's largest informal settlements: about 250,000 residents), community members have long struggled with this critical infrastructure gap. The 13 villages, 2 estates that constitute Kibera have been sites of significant NGO and researcher interest for decades. Despite this history of engagement and research (nearly 18,000 studies on Google Scholar reference Kibera), data has generally been collected about residents of Kibera, rather than with/for them. Subject to the control of researchers and international organisations, much of the data collected in Kibera remains outside the control of the residents. There is a crucial opportunity to work with marginalised residents, empowering them through equitable access to digital services and ownership over data about their neighbourhoods and communities (Carolini, 2022).

Living Data Hubs: Community-Based Wi-Fi and Data Hubs

The project in focus, Living Data Hubs (LDH), is a community-based Wi-Fi and data hub based in Kibera. The project is set up with an innovative data-based model that advances access to affordable internet. LDH empowers residents with a platform to collect and control data while benefiting from access to internet services, digital literacy, and data-based empowerment. A core element of this work is to build capacity in the communities through training resident participants in the management and benefits of data ownership and digital literacy. Using an on-ground pilot-based methodology, the aim is to develop a functioning and self-sustaining model for the community-based Wi-Fi network and data hubs and scale up the setup to similarly challenged contexts globally.

LDH is a collaboration between the Massachusetts Institute of Technology's Civic Data Design Lab (PI: Sarah Williams) and City Infrastructure Equity Lab (PI: Gabriella Carolini) in Cambridge, the United States, and the Kounkuey Design Initiative (a non–profit design think tank) and TunaPandaNet (a community internet network) in Nairobi, Kenya. The mission of the collaborative is to address the critical infrastructure and data gaps found in informal urban communities. The action research project is based on making reliable, affordable internet accessible for the urban poor by working together to set up community-based Wi-Fi hubs in informal settlements that enable communities to access and leverage critical information, use their internet network to collect, analyse, and disseminate data about their own neighbourhoods, build digital literacy, and enhance their internet-based entrepreneurial and learning opportunities. The current pilot of the project, Kibera Public Space Internet Network (KPSPIN), is an extension of KDI's Kibera Public Space Network (KPSP), a network of community-managed public spaces in Kibera. This relationship further embeds the internet network in the social fabric of the settlement by providing internet access at nodal community centres like schools and youth centres.

Air Pollution in Kibera

Fifty-eight per cent of Nairobi's population live in informal settlements in extremely poor conditions. Household air pollution is one of the leading causes of premature death and disease in these settlements. Regulatory frameworks and government budgets for household air pollution do not exist, and humanitarian organisations remain largely inattentive and inactive on this issue (West et al., 2021). Sandwiched between two high-end residential neighbourhoods with a road on one side and a river on the other, the difference in air quality and pollution in Kibera is immediately perceivable across these edges of the settlements.

LDH is currently trying to set up a community-based data collection, engagement, and awareness approach towards this issue of air pollution in Kibera. The community-based Wi-Fi internet network is being used to host air quality sensors at the sites of KPSPs. The first phase of the pilot that started in January 2020 focused on creating a reliable internet network at four KPSPs, engaging and co-creating with local community-based organisations (CBOs) at these sites. The pilot is currently in its second phase, where we are building community data collection capabilities and using the established internet network as a host for the communities to collect data about themselves around critical issues in the community. Based on consultation with the communities, KDI's community team and existing research about Kibera, we have decided to focus on the issue of air pollution in the settlement.

Working with the Community On-Site
towards Data Empowerment

In March 2022, I visited Kibera and worked with KDI, TunaPanda, and the CBOs to install the air quality sensors and understand the community's perception of air pollution through their lived experiences. During my visit, I visited the four sites of the Community-Based Organisation (CBO) that are engaged with the project and held air quality sensor installation and air pollution + data trainings with them. During these visits, we held discussions with various community residents on their understanding of air pollution, sources of air pollution in their neighbourhoods, and the effects of this pollution on their lives. After installing the air quality sensors, we helped the communities understand the data graphs created by the devices and helped think about how this data could be useful for them towards creating awareness in their communities and mobilising collective action. (We used Purple Air's PA-II sensors and their online map and data visualisation tools for the trainings.) The summaries of the discussions at the four sites can be seen in Table 6.1.

After the individual discussions with the individual CBOs, a larger community-wide air quality data meeting was held. In this meeting, the community collectively reflected on the sources of air pollution most prevalent in their communities. Burning of waste, plastic, and tyres was identified as the most prevalent

TABLE 6.1 Summary of air quality discussions with the CBOs at the four KPSPs under the LDH pilot

	Vijana Usafi na Maendeleo (VUMA Youth Group)	Andolo Bridge Community (ABC)	Anua Junior Academy	SUN Centre (Slum Care, Usalama, Ndovu)
Description of public space	A community hall, outdoor space, and a sanitation block	Open community space with laundry area, seating, and playground	A primary school including community skill development and innovative sustainable water management solutions	A youth group centre, a baby care collective, and outdoor play area
Air pollution	Polluted sewers, fires in market next door, and waste burning	Polluted river next to school, dust, and fire	Burning coal, firewood, and waste dust	Polluted river right next to site, waste burning, dust, waste dumping in river, seasonal shifts
Effects	Ill effects on the health of kids, newborn babies, smell from drains, and diseases	Many lung diseases and chest-related illnesses	Carbon monoxide poisoning, lung diseases, children miss school, and parents have to take days off from work	Watery eyes, air- and waterborne diseases, lung diseases, sick children, and carbon monoxide poisoning
How will air quality data help	Community Awareness, innovative collective action, and identification of pollution sources	Community awareness about air pollution	Creating community awareness and different data visualisation tools for communication with communities	With information people will be able to make better choices
Collective action	Youth groups can mobilise communities and help to organise collective action	School as centre of education	School as centre of education and engagement with parents	Social media, posters, community meetings, word of mouth, and political mobilisation

outdoor source and using coal and firewood for cooking and heating indoors. The major effects in the short term were foul smells from the sewage, coughing, and carbon monoxide poisoning, while long-term lung-related chronic diseases were identified. Following the data training (which explained how the data was being collected and how they could understand it), the community members shared challenges towards awareness and actionability. Lack of affordability for cleaner fuels like gas supply was expressed as a major cause of coal and firewood usage and there was also a discussion led by the schoolteacher from ANWA based on the economic burden of air quality faced in health-care expenses and sickness leaves. While they saw value in the data as a tool to create community awareness, there was also the need to support this awareness through government support towards creating access and affordability towards cleaner fuels and better waste management systems. Some future steps collectively identified were the creation of advocacy groups, establishing further research and educational partnerships with interested parties and community mobilisation efforts.

Reflections

My experience with this project has helped me think about data empowerment as a tool for equity. An innovative data-based approach towards community awareness and data collection, ownership, and communication can help generate community-driven awareness and help them co-create solutions for the challenges they face. It has also been important to understand that problem identification, especially in marginalised and financially challenged communities, should be carried out with great care and sensitivity towards the community and a solution-driven approach. To effectively address these inequities, these solutions require collective action from both the communities and concerned government authorities. NGOs and research organisations can also play a role in creating tools for community-based advocacy. Such community mobilisation also has the potential for creating systemic change and political power by enabling communities to collectively collect and use data to advocate for their challenges. This shift towards participatory data collection and data ownership can serve as a critical way of addressing power imbalances. While data in itself is certainly not the solution, it has the potential to act as an empirical tool to support collective advocacy.

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PART II

Relocation, Resettlement, and Resilience

7

RESILIENCE AT THE CITY MARGINS— ROMA SETTLEMENTS IN BULGARIA

Ilko Yordanov and Boyan Zahariev

Introduction

The Roma is the largest ethnic minority in the European Union, living in particularly large numbers in some of the ex-socialist countries of Central and Eastern Europe. The European Commission, basing its estimates on publications of the Council of Europe, puts the total number of Roma in Europe at 10–12 million, and Bulgaria is the EU member state with the largest share of Roma population.

The European Union (EU) uses the term "Roma" in its documents as a rather fuzzy concept, under which many groups that do not identify themselves as Roma are included.

The reference to "Roma," as an umbrella term, encompasses a wide range of different people of Romani origin, such as Roma, Sinti, Kale, Romanichels, and Boyash/Rudari. It also encompasses groups such as Ashkali, Egyptians, Yenish, Dom, Lom, Rom, and Abdal, as well as traveller populations, including ethnic travellers or those designated under the administrative term gens du voyage and people who identify as Gypsies, Tsiganes, or Tziganes, without denying their specificities (EC, 2020).

It is clear from that definition that it is even difficult for some of those groups to claim that they are of Roma origin. As we will show in the case of Bulgaria, this concept may include even more groups which are not mentioned in the definition used by the EU. This said, the EU definition definitely has a useful reference and meaning in political terms drawing public attention, focusing policies, and dedicating resources to support people who have historically been excluded, stigmatised, discriminated, and, sometimes, up until a not-so-distant past, even persecuted or killed.

The actual number of Roma, if we assume that this umbrella term must have at all any number attached to it, can only be estimated approximately for two reasons. One is the fluidity of the term; the other is the intensive migration. The only reliable figure is the number of persons identifying as Roma taken immediately after a national census. According to Census 2011—the last from which data are available—Bulgaria had a total population of 7.365 million, including 325,000 Roma and 588,000 Turks. A new census took place in 2021, but up to the time this chapter was written, no data had been published yet. For comparison, the Council of Europe estimated the number of Roma in Bulgaria at 750,000 (EC, 2022), clearly basing this assessment on expert estimates rather than self-identification. Similar divergence in the estimates of the Roma population is observed in Romania and elsewhere in Central and Eastern Europe. In Romania, Roma are 6.6% officially and up to 9% unofficially; in Hungary, 1.7% officially and 5.6% unofficially; in Slovakia, 1.7% officially and 8.4% unofficially (Giordano & Boscoboinik, 2008).

In Bulgaria, as elsewhere, there is a complex interplay of identity as felt and declared by a specific person—these two can diverge as well—and the way a person is perceived by his/her neighbours or his/her community is described by historians, anthropologists, or linguists. In addition, persons may have multiple identities, but the Bulgarian census does not give the option to identify with more than one ethnic group. Some researchers and activists believe that many Roma may "hide" their identity for fear of discrimination or for other reasons. Moreover, in certain regions, coexistence, interactions, and communications for a long time with other major ethnic groups—Bulgarians and Turks—have created new identities by blurring boundaries within communities and mixing. For example, today, members of many communities who can be identified as having Roma roots historically identify themselves as Turks or prefer to use the term "millet," which in Turkish means "people" or "folk." Within the broad Roma community, there are hybrid identity terms denoting "Turkish Roma," "Bulgarian Roma," "Vlachian Roma," among others, which have also been borrowed by anthropologists and ethnographers (Pamporov et al., 2008). This fuzzy ethnic terminology is, in addition, overlaid and partially mixed with typologies based on inter-group marriages and traditional trades, making the overall identity landscape even more variegated.

According to the data from Bulgarian National Censuses, Roma live in more than 2,000 settlements out of a total of 5,000+ settlements in Bulgaria, but in more than half of them, there are just a few persons identifying as Roma. In general, according to the census in 2011, about 55% of the Roma lived at that time in cities—a figure which has increased just marginally in the two decades since the census in 1992 (NSI, 2014). Based on data from expert assessments, Roma, forming at least small compact communities of 50 persons or more, inhabit about 600 locations in villages and 300 locations in towns around Bulgaria. There are 18–20 settlements where more than 5,000 Roma live. These are located in the capital Sofia and several other large district cities such as Plovdiv, Burgas, Stara

Zagora, Sliven and Varna, and Vidin and Kyustendil. The size of most Roma settlements is relatively small; the median is about 350 inhabitants, while 80% of the settlements have below 900 inhabitants.[1]

Looking at the size of the Roma settlements from the perspective of vulnerability, one can discern a multitude of different situations. The continuum of vulnerable settlements starts with individual households squatting an abandoned space in their struggle to secure a livelihood or small pockets of poverty usually occupied by newcomers, which epitomise loneliness and atomisation. Finally, there are also bigger, more visible, and firmly established settlements where community life becomes possible in all its forms. Settlement size and habitation patterns thus cover a whole gamut of agency, starting from the lonely struggle for survival all the way to rich community life and networks of relationship and solidarity.

The rest of the chapter is divided into ten parts. Part two provides an overview of Roma slum settlements in Bulgaria. Part three highlights the living conditions in Roma neighbourhoods. Part four contains a general discussion of informality and institutional innovation, which exemplify the creativity and resilience of Roma slum dwellers. Part five through eight present different informal practices that provide an alternative to absent institutions in slum areas. Part nine is dedicated to the role of some religious denominations in Roma communities, which assume very broad roles and cover existing institutional gaps. Part ten looks at the most radical way to compensate for the deficiencies of the slums—moving away. The conclusion summarises the essential points in this chapter and links it to the theme of environmental risks and climate change.

Roma Slum Settlements: The "Gypsy Mahala"

Informal settlements display distinctive patterns that make them recognisable from space (satellite imagery) or by just walking and looking. This is also true for many Roma neighbourhoods in Bulgaria. Informal areas form specific labyrinthine patterns, which bear the trace of their unplanned and spontaneous genesis. The basic features include a dense fine-grained structure and the lack of repeated patterns, lattices, right angles, and parallelograms.

The street network of informally built sections of the city is sometimes different from the rest of the city in ways that are not so easy to spot with a naked eye but can be detected using statistical models such as spatial syntax. In some of the ghettoised Roma neighbourhoods, such as Stolipinovo in Plovdiv and Fakulteta in Sofia, streets lead to "deep" places with poor connectivity. Emerging from such places involves a journey through narrow streets, retaining only the function of basic pedestrian access, where congested private spaces have encroached on public space (Zahariev, 2011).

Bulgarian cities and towns have clearly defined central areas, which usually include a pedestrian precinct. Roma neighbourhoods are situated away from these areas. Although they have a centre it usually only has some small shops or

a cafe. This is also where one could find a local school (if any) and/or the build-
ing of a traditional cultural club known as chitalishte (reading place). Even today
chitalishte remains the most widespread form of civic organisation in Bulgaria.
Some Roma communities have registered their own cultural clubs, which typi-
cally evolve into multipurpose organisations also implementing projects related
to school education, community health, and different types of advocacy. For
example, the city of Montana (one of 28 district centres) has two Roma neigh-
bourhoods: one located not far from the centre and a more distant neighbour-
hood at the urban periphery called Kosharnik. Kosharnik has two distinct parts,
one inhabited by Bulgarians and another inhabited by Roma. The main public
spaces, except for a segregated primary school, which form a kind of a neigh-
bourhood centre, are located in the Bulgarian part and include a prayer house, a
youth cultural club, a health centre, and a small post office. The Roma section
of the neighbourhood does not have any distinct centre. Very often, facilities
such as health centres or cultural clubs are created under projects funded by some
donors such as the EU or bilateral programmes: this makes them unsustainable,
as is the case with the youth club and health centre in Montana.

The Roma neighbourhoods popularly called "mahala" are characterised by
poor housing conditions, inadequate infrastructure (narrow and muddy roads,
lack of water supply and sewerage, lack of parks and yards with greenery), wide-
spread poverty, low education and qualifications, high unemployment, poor
health, and high mortality. This word has an Arabian origin ("mahalla") and,
through Turkish, has penetrated different Balkan languages and nowadays is
widely used in Bulgaria, Romania, North Macedonia, and Greece to denote
Roma settlements. In Bulgarian colloquial speech, "mahala" refers neutrally
to a (usually small) neighbourhood. It thus bears conflicting connotations of
intimacy and homeliness but also of poverty and destitution. Such neighbour-
hoods can be found in all parts of Bulgaria (Sofia, Lom, Yambol, Sliven, Varna,
and Burgas) and in other Central European (Romania, Serbia, Hungary, and

FIGURE 7.1 The photo (left) shows the Lozenets neighbourhood in Stara Zagora.
The photo (right) shows the most deprived informal part of the "Iztok"
(East) Roma neighbourhood in the Southwestern town of Kyustendil.
Photographs by Elitsa Markova and Valeri Lekov.

Slovakia) countries. Some Roma neighbourhoods are physically enclosed from the outside world with high walls that either surround most of the neighbour-hood (Kazanlak) or isolate it from neighbouring infrastructure (Kyustendil).

The typical Roma "mahala" is located on the outskirts of the settlement or even outside it, often out of regulation and in places that are considered contaminated or dangerous or close to agricultural land or forests. Many Roma households tend to live near cemetery parks, landfills, and legal and illegal dumpsites on lowlands endangered by flooding. Some green organisations called the process that creates this raised environmental vulnerability "environmental racism" (Heidegger & Wiese, 2020). Paradoxically sometimes renovated areas stand next to polluted and foul-smelling sites like a renovated kindergarten in one of the Roma settlements in Northwestern Bulgaria that houses a garbage dump. Such sites bear the trace of tunnel-vision planning when some issue is suddenly zoomed in and comes into focus, but the whole surrounding becomes blurred and is ignored. Tunnel-vision planning is the typical outcome of uncoordinated efforts when different agencies consider their own decontextualised and disconnected issues and priori-ties. Patchwork interventions also expose the deficiency of funding to implement integrated solutions. One can even come across dwellings, which upon visual inspection can easily be mistaken for abandoned property that has been squatted, but which are, as a matter of fact, poorly maintained social housing.

Even when Roma neighbourhoods are within the urban bounds, their inhab-itants may speak of the city as another settlement, as is demonstrated by inter-views from the cities of Sliven, Byala Slatina, and Kyustendil. In the limited areas of these neighbourhoods, there are almost always huge inequalities, which are expressed in the creation of "ghettos within ghettoes" inhabited by the most vulnerable among the vulnerable (Tomova, 1995, p. 62). As dwellers of informal housing are rarely welcome or tolerated in the direction of the regulated domains of the city, growth often occurs towards secluded and unhomely spaces: river-beds, rail tracks, poorly maintained and unfrequented green areas, abandoned production facilities, and service areas of various infrastructure.

Roma neighbourhoods are often connected to the rest of the city by vast stretches of pedestrian-unfriendly spaces side-lined by warehouses and work-shops completely deserted at night. These spaces often look more unwelcoming and frightening than areas far away from the outer bounds of the city. This puts pressure on the inhabitants of slums to avoid venturing out of their environment and seek daily necessities and services within the bounds of their own communi-ties. However, the idea that the ghetto is entirely self-sufficient and completely isolated does not correspond to reality. Inside the ghetto, its residents find a significant part of the services generally satisfying some of the basic needs in everyday life, but in fact, they are not entirely isolated from the "outside world" because they do venture beyond its boundaries in search of jobs, health, educa-tion, and administrative services that cannot be provided or replaced by anything within the community. Sometimes they search for a better place to start a new life, which is bound to face many obstacles.

Inhabitants of Roma neighbourhoods are among the least desirable neighbours: only about 30% of Bulgarians don't mind having Roma as their neighbours. The closest the imagined social ties, the fewer the persons from the majority who would like to enter into such a relationship with Roma (Ivanova, 2013). A survey conducted by the Bulgarian Academy of Sciences in 2009 showed that 83% of Bulgarians believed that criminal offences are most often perpetrated by Roma, 75% of Bulgarians believed that Roma themselves are to blame for their abject situation, 81% believed that Roma are lazy, and 67% believed that Roma are a privileged minority (Nakova, 2011).

Living Conditions in Roma Neighbourhoods

In this section, we focus on the inhabitants of Roma neighbourhoods and their living conditions, concentrating on their housing situation.

In Bulgaria, the at-risk-of-poverty rate of Roma is approximately three times higher than for the overall population (NSI, 2021). This compares with a set of peer countries (RO, CZ, HU, and SK), where the rate of poverty for Roma ranges from three to more than six times higher than for the general population (FRA, 2016). The high number of Roma living in separated locations and dwellings lacking basic amenities further exacerbates their isolation and limits their chances of breaching the poverty cycle. In 2011 Roma households lacking at least one of the basic amenities were 76% versus 34% among non-Roma; Roma households experiencing severe material deprivation were 82% versus 38% among non-Roma (FRA & UNDP, 2012). Poverty maps show that in the three largest cities—Sofia, Plovdiv, and Varna—districts inhabited by Roma are among those with the highest poverty rates (Ryustem et al., 2018).

Despite possible improvements over the last decades, the overall level of education in Roma communities remains much lower than among the Bulgarian population on average. According to a recent survey, the share of Roma with secondary education had reached 22.9% (Education and Realisation of the Roma Community, Main conclusions from a nationally representative survey of Roma Community in Bulgaria, January 2020, Trust for Social Achievement, Global Metrics, p. 26) starting with levels of about 9% in 2011 (NSI, 2014). The share of Roma with higher education, despite its increase, remained very low at a level close to 1% (Angelova et al., 2020). Even the growing number of Roma with secondary education appears to be very slow, and at this growth rate, it may take at least two more decades before it reaches the average level for Bulgaria.

The health of the Roma had started to deteriorate during the 1990s due to many factors such as impoverishment, poor nutrition and poor diet, and unhygienic living conditions (Tomova, et al., 2007). Roma in one of the largest ghettos located in the district centre of Kyustendil were found to suffer disproportionately from chronic diseases, in most cases, due to a late start of treatment. Infectious diseases, including vaccine-preventable diseases such as TB and measles, were also found to represent a significant threat in Roma neighbourhoods.

Documents prepared by the government to chart their plans for improving health outcomes for the Turkish and Roma minority recognise that life expectancy among members of ethnic minorities is much shorter (Council of Ministers, 2005)—compared to the EU population; life expectancy at birth for the Roma population in Bulgaria is ten years lower (NCCEII, 2022).

Health care is a complex service which depends on expensive infrastructure, availability of highly qualified staff, and legal entitlements, which can be very complex and involve many parties and an overlaying set of relationships subject to ethical rules and constraints. If any of these ingredients is not functioning correctly, the service may become unavailable or inaccessible or at least its quality may become sub-optimal. Access to health care for the Roma has important locational aspects. Poor access to health care can be due to many factors, among which infrastructure plays a significant role. There are very few health-care facilities, medical practices, or pharmacies in Roma settlements or in the close vicinity. The exceptions include some unsustainable medical practices established under projects involving a one-time investment and irregular, non-statutory funding.

Among the Roma, overcrowding is widespread. According to EU-SILC data (EU-SILC, 2017, own calculations), 69% of Roma households live in over-crowded households, with an average overcrowding rate for Bulgaria of 30%. It should be noted that the definition of overcrowding adopted by Eurostat and implemented in EU-SILC is rather demanding in its expectations for living space and cannot be considered culturally neutral. According to the definition, a household needs a separate common room, each couple needs a room, each single person aged 18 or more needs a room, children up to the age of 12 can share a room independent of their sex, while above this age up tom the age of 18 only same-sex siblings can share a room (EUROSTAT, 2021). The size of the rooms does not play a role in the definition, and it is obviously expected to conform at least to minimal national standards.

According to EU-SILC data (EU-SILC, 2017, own calculations), among Roma, the percentage of owners is about ten points lower than the national average (71% vs. 80% on average and 81% among ethnic Bulgarians), while the percentage of Roma who use housing which is not their property without paying rent is ten points higher (22% compared to 13% on average for the whole Bulgarian population). Accommodation under non-market arrangements is a sign of potential vulnerability and precariousness.

There are no national data on the constructive fitness of the housing inhabited by Roma but judging by the other housing problems registered by EU-SILC, such a situation is not uncommon, especially in housing built without the requisite documentation. This is due, among other things, to the fact that many Roma households inhabit mostly old houses, even when living in highly urbanised areas.

About two-thirds of Roma live in housing deprivation (in a dwelling too dark or leaking roof/damp walls, floors, or no bath/shower or no indoor toilet),

compared to 18.7% of the population (NSI, FRA & NSI, 2021). Living in family houses means they have to take care by themselves of the maintenance of their homes, which is a serious financial burden under income constraints. The technical infrastructure in the urban Roma neighbourhoods can be either missing or in poor shape. Sometimes it could be preferable not to have sewage than live in an area with old leaking pipelines, which release a fetid smell.

The problem with the house's lighting practically exists only among the Roma. One in four Roma households says their home is not adequately lit (EU-SILC, 2017, own calculations). Lighting in the home is essential for children for all activities that occur indoors, including play and other activities directly or indirectly related to the child's learning and development.

In 2020 the share of Roma households saying that they cannot keep their homes adequately warm was 57.3%—more than twice higher compared to the national average (27.5%) (NSI, 2021). This is even though Bulgaria has a scheme for heating allowances given to low-income households in the winter. Heating allowances are used mainly for solid fuel heating as this remains the cheapest source of energy. In densely populated urban areas burning solid fuel contributes significantly to air pollution, creating an unhealthy environment and reinforcing hostility towards the Roma. Poor households often use old domestic appliances, which are very inefficient in terms of energy consumption, generating costly electricity bills.

The dire housing situation of the Roma is reinforced by the existing housing policies in Bulgaria (or rather the lack thereof). Housing benefits are a negligible proportion of total benefits. They are offered only to inhabitants of social housing who meet certain conditions to support them in paying their rent. After the fall of communism, due to privatisation, the housing stock in public ownership has contracted to below 3%. The remaining social housing, except for a small number of new units built with support from the EU funds, is in poor condition, even in advanced dilapidation and disrepair.

Although the penetration of the requisite infrastructure was slower in Roma communities, modern communication technologies are gradually bringing into Roma neighbourhoods a rich flow of information and experiences which were previously unavailable. There is limited access of a large part of Roma neighbourhoods to the services of local cable operators, whose amenities often do not cross the boundaries of Roma neighbourhoods. In a few cases, like in the Roma neighbourhood of Kyustendil, local entrepreneurs have launched a cable TV servicing only the community and producing its own content. But in many Roma neighbourhoods with Turkish-speaking communities, satellite dishes have long been installed and tuned to receive signals on TV channels from Turkey, reconnecting the inhabitants to a culture they feel deeply affiliated with. In some of the neighbourhoods with Turkish-speaking Roma one can spot graffiti on the walls of depleted houses and outdoor toilets displaying affection for the Turkish TV series "Çukur." Locals, a lot of whom know Turkish, watch Turkish TV channels with great interest. The name "Çukur" means "The Pit"—metaphoric of a dangerous neighbourhood, ran by a noble mafia family. Inhabitants of the slums

FIGURE 7.2 Graffiti displaying affection for a popular TV series shown on Turkish TV channels in "The White Clay" neighbourhood in Shumen (left) and "Nadezhda" (Hope) neighbourhood in Sliven both of which are considered "Roma" neighbourhoods. Photographs by Valeri Lekov.

in these mid-sized Bulgarian towns liken themselves to the story and settings of the Pit (Mitkov, 2020).

Institutions, Innovations, and Informality in Roma Neighbourhoods

This section looks at some specific institutions and practices in Roma neighbourhoods in Bulgaria, providing a replacement for the absence of their official prototypes. Some of those institutions and practices are not uncommon in many other informal settlements across the world; others are rarer and bear the sign of local specificity. Most of the practices described have remained informal or even possibly illegal mediation that in its different forms had started informally had often been taken over and developed by community organisations and NGOs and finally evolved into new services and professions.

It must be noted, however, that even innovations that found official recognition continue to face criticism for unnecessarily duplicating existing institutions, albeit dysfunctional, and producing a parallel segregated system of services for Roma. Some have insisted that public services such as health centres, labour offices, and social assistance offices, among others, should not have facilities within or close to the Roma neighbourhoods: as these services are visited exclusively or primarily by Roma, their very existence reinforces segregation (Tomova, 2016). The argument goes as far as claiming that there should be no specific functions or designated persons within any public office dealing exclusively with Roma. The opposite point of view sees the absence of such services as a sign that the community is isolated, abandoned by the government, and generally treated unfavourably as far as access to public service is concerned.

Logistical obstacles and the unwelcoming attitude of some institutions to the Roma are not the only reasons for their poor access to mainstream services. There is a generally high distrust of government and all public institutions in Roma neighbourhoods. This replicates a similar situation in Bulgarian society, but Roma have much more reasons to distrust the government and the media due to a long history of discrimination, neglect, and negative stereotyping. This is yet another reason for the appearance of various alternative solutions that replace their official prototypes or doppelgangers.

Cash, Credit, and Retail Trade

The high levels and depth of persistent poverty and unemployment in Roma communities make many of their residents unreliable borrowers for credit institutions. Credit is therefore unavailable for many of the residents. The market niche of high-risk lending is occupied by local usurers who sometimes own registered pawnshops but often do not have any registration. In these informal institutions often operating at the edge of the law, interest rates significantly exceed market levels. For example, in 2019, in the Nadezhda neighbourhood in Sliven, interest rates from 50% to over 100% were reported.

Buying on credit is still common in local grocery shops in some segregated Roma communities. The debt is registered in a special notebook, and usually, no interest is due. Some inhabitants from vulnerable groups do not have access to cash for months when they must repay their debt to local usurers. Sometimes informal credit turns into ruthless exploitation. Cases were reported when debit cards where social benefits and allowances are received were kept by the informal usurers or owners of food stores as a guarantee that they would be able to claim the due payments (Yordanov & Zahariev, 2009). However, the system of "ticks" could be viewed as an expression of intra-community social capital and trust. It is an alternative to the official credit markets, a survival strategy for households that face a chronic shortage of food and receive irregular income. We can also consider it as a kind of local credit card where overdraft is based on the informal knowledge about each customer's income and trustworthiness. The use of this shopping model was intensified during the COVID-19 pandemic due to the loss of income and the lockdowns imposed selectively on some Roma neighbourhoods, which were perceived by authorities often without much proof as epidemic hotspots (Grekova et al., 2020).

A typical example of a local informal retail market in segregated neighbourhoods is a shopping street in "Stolipinovo"—Plovdiv (considered the largest neighbourhood with a predominant Roma population in Europe—between 40,000 and 50,000 inhabitants), as well as a shopping square and several surrounding small streets in Nadezhda (Sliven). Most of the trade outlets are not registered and do not pay taxes; there are no cash registers, but visits by tax authorities to these informal markets are rather an exception. Most of the goods, including foods such as meat, are sold in the open air, violating hygiene requirements.

Often the commercial mark-up by retailers makes the price of the products sold much higher than in the hypermarkets and even the shops in the central parts of the settlements. However, the price remains acceptable for the local residents, as the isolation of the neighbourhoods and their geographical remoteness are associated with costs to reach other shops. Informal retail trade is often practised by women who can combine it with housework, which partially compensates for the high unemployment among women in these communities (Report from the mapping of Stolipinovo, Nikola At. Venkov, Genika Baicheva, Swiss-Bulgarian Cooperation Program-Program for the Promotion of Social Inclusion of Roma and Other Vulnerable Groups Plovdiv, 2017).

Low education, insufficient professional skills, and discrimination in the labour market are among the factors that lead to limited employment and the demand for unconventional forms of employment. It is not uncommon for a person, mainly the head of the household, to perform several types of activity at the same time to provide a livelihood for the household—e.g., part-time work under a programme for the unemployed, builder, and owner of a small stand for the sale of retail goods, food, and household utensils.

Borrowing Electricity

In many Roma neighbourhoods, access to electricity for some households remains an issue. Even if in response to survey questions, a large majority say that they have electricity at home but are never sure under what arrangements the electricity is supplied and how secure it is going to be. Even though consumer prices for electricity in Bulgaria are regulated, energy poverty is widespread. Bulgaria has a special programme for heating allowances which supports poor households with a lump sum for heating during the five cold months of the year. The number of Roma who benefit from this programme is not known, but it is almost certain that Roma are overrepresented among the programme beneficiaries.

For several decades, poor Roma neighbourhoods have experienced substantial difficulties in paying their electricity bills. There have been several episodes marked by the accumulation of significant arrears on electricity bills that have occasionally led to the cutting of the electricity supply to whole Roma neighbourhoods or large sections of them. Roma have been accused by utility companies of tempering electric meters and connecting illegally to the grid. In some Roma neighbourhoods, in response to the suspected "stealing" of electricity, utility companies had moved electric meters high above the ground where consumers could not access them and check their bills. This practice had, in turn, fuelled existing suspicion among Roma communities that they had been subject to a surcharge by utility companies. This practice was discontinued after a ruling of the European Court of Justice in 2015 (Adamova, 2015). Previously the Bulgarian Supreme Administrative Court failed to come up with a definitive decision on the issue of inaccessible electricity meters.[2] Later the Supreme Court overturned a decision of the Anti-Discrimination body which was in favour of

the affected Roma customers. The European Court of Justice found the practice discriminatory and stated that consumers should not be made to pay for charges that they cannot control themselves by accessing their electric meters.

In its statement, the ECHR advises the Bulgarian court to take into account the offensive and stigmatising nature of the practice in question and that, as a result, residents of a whole neighbourhood have long been deprived of the opportunity to regularly monitor their electricity consumption. The ECHR also underlines that although citizens of non-Roma origin also live in the neighbourhood, this circumstance in itself does not exclude the possibility that the disputed practice was introduced due to the ethnic origin of most of the residents of the neighbourhood.

In this context and in response to the lack of options for electricity supply in buildings that do not fully conform to the building regulations in some Roma neighbourhoods, the practice of "borrowing" electricity from neighbours had emerged and has been documented to exist even in recent surveys as well as among Roma communities in other countries (RCM, 2020; Pelekani & Symeou, 2018). It consists of establishing an illicit connection to the electricity through a neighbour who is usually legally connected to the grid. Many neighbouring and distant households can borrow electricity from the same source. Under this arrangement that bears a significant risk of conflict, the neighbours typically have to decide between themselves what part of the overall bill each has to pay as the illicit connection is rarely equipped with an electric meter. As borrowing often occurs between relatives or persons tied to each other by friendship, the disruptive potential of the situation is subdued, but external economic shocks in an overall environment of precariousness and insecure incomes can easily lead to defaults and let latent conflict erupt (Yordanov & Zahariev, 2009).

Meshare (Romani Kris)

Expensive access to legal aid, which the poor in Roma neighbourhoods cannot afford, and distrust in the institutions lead to the search for alternatives in the areas of security and justice. In Bulgaria, the trust in the judiciary and the police is among the lowest—only about one-fifths of Roma express confidence in these institutions, and the level of trust among Roma is significantly lower than among the majority.

In some of the Roma communities in Bulgaria, an internal and informal traditional judicial institution (court) is still operating—"Meshare," known in other European countries as "Romani Kris." This model of traditional administration of justice, also called the "Gypsy Themis," relies on the authority and ability to exercise informal influence and power by the members of the "Meshare" (Pamporov & Zhelyazkova, 2006). The functions of the informal court are to provide a specific informal form of mediation in conflict between persons from Roma subgroups, for whom the decision of the "Meshare" has the status of supreme law. Thus, it is an informal alternative to the official judiciary

and resembles the statutory model of out-of-court dispute resolution through mediation.

In section nine we have also included a discussion of the role of some religious denominations in Roma neighbourhoods. Those are officially registered organisations, but their presence in Roma neighbourhoods permeates many, if not most, aspects of the life of their congregations. It involves a lot of informal but very central and sometimes ambiguous roles.

Mediation

In Roma communities, mediation is generally the practice of using what we call community workers to bridge the gaps between Roma communities and specific services and institutions. The persons tasked with this function are usually themselves Roma and are called mediators with an additional qualifier identifying the field in which they operate. Mediators can be anything, starting with informal non-professional volunteers to trained public staff with job descriptions, recruitment rules and criteria, professional associations, and regular training and supervision. Actually, the usual trajectory of development of mediation in any field is from informal volunteering to an established profession.

By 2020 three types of mediators were developed for Roma communities in Bulgaria: health mediators, labour mediators, and educational mediators. The position of labour mediators was officially recognised in 2008. Since then, the number of Roma labour mediators has reached more than 100. Labour offices usually do not have outposts inside or close to Roma communities, although this is one of the institutions with the widest infrastructure, with more than 250 regional and local offices. One of the functions of Roma labour mediators was to do fieldwork several times a month by going to the Roma communities they work with.

Early attempts to establish education mediation in Bulgaria date back to 1999. These attempts were unsuccessful as the education mediator was conceived mainly as a teaching assistant who was to be present in the classroom to facilitate communication with those children who do not know the official Bulgarian language well. This situation created some tension with the teachers.

Later on, mediation in education was conceived mainly as a liaison between the school and the community, so the mediators assumed a function closer to social and community work rather than teaching and pedagogy. During the 2010s, Roma educational mediators became increasingly numerous in primary schools and kindergartens, despite the fact that there was no official recognition of this occupation, nor any agreed set of duties or a standard job description. The role of Roma educational mediators was crucial for reaching out to vulnerable families with children, particularly those from cohorts that need to attend mandatory preschool.

A health mediation programme was introduced in Bulgaria in 2001, leading to the establishment of the National Network of Health Mediators in 2007.

In 2018 more than 230 health mediators were working in almost half of the municipalities in Bulgaria. The health mediators have multiple roles: they work to bridge cultural gaps and overcome prejudice and discrimination that members of the served Roma communities may often encounter at health-care facilities. During several epidemics, health mediators have proven very effective in raising awareness, providing logistical support, and contributing to prevention with deep knowledge of their communities. In addition, health mediators have their own professional network, which provides training and support. The network is in charge of training and supporting the work of Roma health workers with the most vulnerable groups of Bulgarian society. Health mediators are very valuable in understanding the cultural differences of Roma communities and establishing a connection with the local medical staff. Their work on immunoprophylaxis and hygiene awareness is central to the prevention of epidemics. Very often, they need to fight negative stereotypes and prejudices and provide not only health information but also social work in the Roma community.

In recent years one of the largest and most active Roma organisations in Bulgaria, Amalipe, has started to establish and promote community centres run by community mediators—a function that appears to generalise the idea of mediation. The initial inspiration for the establishment of the community centres came from the observation that institutions "failed to perform successful fieldwork." They remained distanced from the communities even when the social workers, teachers, and other staff involved in close contact with the Roma communities believed that the main reason for the apparent lack of success in communication lies with the Roma themselves—being a closed and conservative community.

Religious Denominations

Churches (Christian religious denominations) are strongly represented in many Roma neighbourhoods, and specific congregations have large memberships. These are primarily evangelical churches run by a pastor who can be a local person or an outsider, even a foreigner, who has settled to serve in the community. The expansion of churches in Roma neighbourhoods is a relatively recent phenomenon in the decades after the fall of communism. However, Protestantism, in general, has deeper historical roots within Roma communities, the first documented presence of protestant pastors dating back to the 19th century.

Churches are the universal provider of a wide variety of services. In addition to religious work, churches provide social services—primarily food, clothing, and money. An example of educational activities is the organisation of Sunday schools at churches and the pastors' activities of providing disinfectants and masks in some Roma communities during the COVID-19 pandemic.

After the start of the COVID-19 pandemic, pastors in some Roma communities (in the towns of Maglizh, Sliven, and Kazanlak, among others) provided computers for distance learning to students or worked in close collaboration with

health mediators to cater for the needs of the communities during lockdowns and school closures.

Churches have also been instrumental in creating an ethos of trust and solidarity and other moral virtues that seem to have contributed to reduced alcohol abuse and adherence to communal rules such as those established in condominiums and shared public spaces. The evangelical ethos seems to have supported, among others, the implementation of social housing projects.

The role of pastors as trusted sources of information and authority sometimes has been ambiguous. Some of the pastors conveyed to their congregations messages which created distrust in the severity of the COVID-19 pandemic and the role of the vaccines. Some pastors interpreted the infection as a "sign of human helplessness" and shared their distrust in official institutions and vaccines, and even went as far as calling vaccines the "mark of the beast" and suggesting that many people would die upon vaccination. There seems, however, that messages depend strongly on the personality and values of each individual pastor, as a few examples of the opposite were also documented. Some pastors encouraged members of their congregations to observe rules prescribed by authorities and get vaccinated, following, if not genuine trust in science, then at least the statement from Mark's gospel to "render unto Caesar the things that are Caesar's."

Migration, Displacements, and Escapes

Over many decades the existing Roma neighbourhoods have been shaped by diverging economic, social, and cultural forces among which the inflow and outflow of inhabitants play a prominent role.

Roma settlements have been a target of resettlement policies. Resettlement in newly built blocks of flats was extensively practised among the Roma during communism. This practice is partially replicated on a smaller scale in the contemporary situation. To meet legal requirements in the case of the demolition of a person's only home, Roma from evacuated informal settlements are offered to move to public social housing on a "take it or leave it basis." Formally there is no coercion in that, but the ultimate negative effects of displacement are described by (Nunev, 2018): disrupting relationships with neighbours, often painful restructuring of family ties, and no opportunities to sustain previous livelihoods such as practising craftsmanship.

Internal migration, which is often driven by extreme poverty, is related to informal settlement closer to the economic core. This can be a movement from declining small towns and villages to the nearest city, i.e., to one of the 28 district centres or directly to the capital city, where a disproportionately large part of the Bulgarian economy is concentrated. Big cities offer a multitude of opportunities for precarious livelihoods such as bin diving, waste picking, and occasional low-skilled jobs in the informal economy. Internal migration is both emptying and filling Roma neighbourhoods. Many Roma continue to come from villages and economically depressed small- and mid-sized towns and settle in the periphery

of existing Roma neighbourhoods in cities. Some of the larger settlements have gradually encroached on the available uninhabited neighbouring territories and have, in many cases, started reaching the limits of sprawl. This triggers a process of congestion, intensifying informal construction and forcing newcomers "to settle on the most dangerous or undesirable plots, e.g., near garbage dumps or on flood plains" (World Bank, 2017).

Since the fall of communism in several successive waves, there has been a massive emigration, mainly to countries in the European Union. The main destinations for Bulgarian Roma are Spain, Germany, the UK, Italy, and Greece. The destination depends on the type and duration of migration, whether it is seasonal, circular (leaving and coming back, then leaving again, etc.), or with the intention to settle more or less permanently. Plans, intentions, and patterns of migration can change according to the circumstances. These flows were pushed and pulled by a set of economic forces: the search for jobs and higher incomes as well as better living conditions.

A respondent from Sliven—a district centre, which is home to one of the large compact Roma communities in Bulgaria—shared in 2019 in an interview with one of the authors of this chapter that the neighbourhood had two distinct parts in terms of their willingness to migrate: in one part, presumably, the inhabited by Roma, almost nobody migrated apart from a handful of young persons who went to work as barbers in the UK and a couple of others in Italy. While in the part that the respondent calls "Turkish," "if we go there right now, we will come across nobody, everything is closed, every single house is locked and everybody is abroad—to Germany, England, France, Denmark." The respondent also refers to a third section of the neighbourhood according to the indigenous typology, the inhabitants he calls "musicians," who have moved in large numbers to Spain, Greece, and Italy. In this context, both the ethnonym "Turks" and the occupational term "musicians" should be understood in the complex interaction between language, ethnicity, religion, and designations based on traditional trades, which are typical for the way Roma communities are internally perceived and lived.

Respondents from other Roma communities, i.e., from the city of Shumen—a district centre in Northern Bulgaria—also reported in 2019 that "at least one person from each house" had moved abroad to work and support his/her family. Some respondents in their own words, express their concerns that this has led to a deterioration of the community's human capital, including the quality of the local leadership (OSI-Sofia, 2019).

Leaving a segregated community can also take the form of an escape or a personal revolt, particularly for a growing number of educated young Roma. This is the case with some of the stories told by Roma women collected by Amalipe, who have chosen to defy the rules of their communities, expecting them to marry early and have instead chosen to pursue their education and careers (Amalipe, 2011). This has brought them success in terms of their social status though sometimes at the expense of disruptive effects on their kin relationships. Often these

personal success stories, at least the ones that persons were keen to tell, culminate in reconciliation and recognition. Sometimes, however, modernisation could be accompanied by alienation from the communities. An unknown number of Roma, mostly successful professionals from different fields, live dispersed among Bulgarians. Quite probably, many of them do not identify as Roma either in their personal life or in surveys and thus remain undetectable.

Conclusion

Many Roma in Bulgaria, as elsewhere in Central and Eastern Europe, live in informal settlements facing multiple forms of deprivation and vulnerability. A long history of exclusion has taught Roma communities to look for different ways to survive in a generally unwelcoming environment and to compensate for missing public and private goods and services. Long-term neglect on behalf of public authorities and market dysfunctions due to stigma and discrimination paved the way for alternative arrangements and informality. Some innovations such as mediation initiated by activists and NGOs have even outgrown their original scope and settings and have become part of official institutional responses to poverty and social exclusion. Resilience and survival skills have worked well in many contexts though at a very high price in terms of opportunities for development and the overall quality of life. The human costs of living at the margins (or beyond) include inadequate education, unemployment, poverty, lower life expectancy, and early onset of chronic disease and disability, among others.

Most of the challenges that Roma communities face are man-made (pollution generated by industry and households, segregation, exclusion). Other challenges stem from natural hazards and risks beyond human control. But what appears to be natural is often also mediated by human action or inaction, especially by poorly designed policies or outright disinterest on behalf of governments to intervene in supporting the vulnerable.

Deeply embedded processes expose disproportionately ethnic minorities to environmental hazards and deny them access to natural resources and benefits such as water, sewage, and sanitation. Some have called these processes "environmental racism" (Bullard, 1993) or "environmental injustice" (Adeola, 2000). Nowadays, access to water, sanitation, and sewage requires complex and expensive technical infrastructure. In the Bulgarian context, it is not easy to decide which part of poor access to natural resources is indeed due to "nature" and which part is a matter of poor management of natural resources.

In the European context, Roma are definitely among those who suffer from disproportionate exposure to environmental risks and can be considered victims of various environmental injustices (Antypas et al., 2007). Roma happen to have little other option but to move close to dumpsites, waste landfills, high-voltage electricity lines, railway tracks, greenfield or brownfield land, or service areas of functioning industrial sites.

Some believe that resilient Roma communities who have struggled and survived for decades—and maybe centuries—against the odds of anthropogenic environmental hostility can now offer crucial knowledge on how to mitigate the impact of the pending climate crisis (Szilvási, 2021). We have to remember, however, that the hard-earned knowledge and adaptation skills of Roma have come at a high human cost.

Notes

1 The database used for this assessment was first built in 2012 to serve as a tool for civil monitoring of policies for Roma inclusion (Dimitrov et al., 2013). The database was then continually updated with the participation of local community activists, mediators, social workers, and representatives of Roma NGOs.
2 http://www.sac.government.bg/court22A.nsf/d038edcf49190344c2256b7 600367606/c22583660052f5ecc225793e00465f00?OpenDocument

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8

TOLERANCE TO HEAT AS A COPING STRATEGY OF LOW-INCOME HOUSEHOLDS IN INDIA AND AUSTRIA

Tania Berger and Faiz Ahmed Chundeli

Studies have highlighted the relationship between extreme heat conditions and mortality rates and that temperature increases pose a real health risk to vulnerable populations (Alessandrini J.-M. et al., 2019). Excessive heat is frequently referred to as a "silent killer":[1] heatwaves are less visible and appear less dramatic than other natural disasters such as flooding, hurricanes, and earthquakes. And human casualties are not always as clearly linked to the former as they are to the latter. Nevertheless, heat waves are regarded as the deadliest consequence of climate change, already taking a substantial toll today and expected to further increase the number of heat-related deaths globally in the coming decades (Eckstein et al., 2021).

Large urban agglomerations worldwide are significantly affected as heat in cities is further aggravated by urban heat island effects. Dark surfaces of roads and buildings absorb substantially more solar radiation, and materials commonly used in urban areas have significantly different thermal properties than those in the surrounding rural areas. Consequently, urban concentrations heat up more. Rapid urbanisation in countries of the Global South, therefore, fuels heat waves' impacts in growing metropolitan areas.

Besides these macro- and meso-level influences, the thermal environment experienced by individuals in cities also depends on their immediate built environment during extreme heat. High-quality building stock that sufficiently provides thermal mass, shading, and ventilation can significantly make hot external conditions bearable for city residents. Such buildings, however, are not affordable to many, especially low-income groups in developing countries and cities. How then are such groups attempting to cope with excessive urban heat?

This case study mainly looked at "soft" approaches applied by affected low-income city residents in India and Austria to cope with the heat—rather than technical and technological solutions that these households can hardly afford.

By looking at a similar group of people in these two different continents and the distinctively different living conditions prevailing in them, this study found striking similarities in the difficulties they face and the low-cost strategies they apply.

Introduction

In India, compounded effects of high population densities and urban heat islands are prevalent, and heatwaves pose heightened threats (Baniassadi and Sailor, 2018). Rapid urbanisation and the growing socio-economic disparity within city regions have brought the planning and design of low-income housing areas into focus (Mahmoud and Gan, 2018).

The urban poor in India mostly live in crowded, often informal housing of inferior quality and cannot sufficiently protect themselves during severe heat waves (Wang et al., 2019).

Installing air conditioning may appear to be a ready technological solution in hot climatic conditions but is often too costly for low-income households (Farbotko & Waitt, 2011). This is especially true for low-income groups in countries of the Global South. Their income may not be sufficient to purchase or run a fan even if they have access to electricity (Osunmuyiwa et al., 2020). In India, only a tiny minority of households can afford air conditioning units[2] (Sustainable Energy for All, 2020, p. 26). In Austria, by contrast, air conditioners have been unusual in residential buildings, given the local temperate climate. However, due to recent increases in summer temperatures, air conditioners have become more common (Sustainable Energy for All, 2020).

In the planning and design of low-income housing schemes in India, quantity and costs are often prioritised over the comfort of the inhabitants (Marwasta & Nurhidayat, 2019), while in a country with a tropical climate, building design should be responsive to the local conditions, particularly in low-income housing settlements (Taleghani, 2018). Despite the implications of inadequate housing for the residents' health (Debnath et al., 2019), many local governments do not consider thermal environments in social housing projects but instead strive only to meet the immediate housing needs.

Buildings' design in multi-storey rehabilitation schemes significantly influences electricity consumption—higher household appliance ownership (compared to conditions before rehabilitation) has been observed (Sunikka-Blank et al., 2019). Increased electricity consumption can cause considerable economic distress due to high electricity bills. The move to rehabilitation and resettlement colonies often changes women's daily household routines. They are found to be more affected by relocation than men (Debnath et al., 2019).

Low-income rehabilitation and resettlement projects tend to overheat due to poor planning of layouts and spatial arrangements (Ali & Patnaik, 2018; Chen et al., 2018; Nazarian N. et al., 2019; Wang et al., 2019). Studies in low-income housing settlements across the country have shown that most occupants are

dissatisfied with the thermal environments and the comfort levels achieved in their units.

Here, thermal comfort is defined as the desirable physiological state of a person, according to social norms. Beyond technical aspects of "hard" infrastructure provision, social and psychological factors can play an essential role in residents' thermal comfort (Xu et al., 2018, Chen et al., 2017). People's thermal comfort practices must be understood as activities that they undertake to heat and cool their bodies and homes (Madsen & Gram-Hanssen, 2017). Habits, knowledge, and meanings constitute the main components of collectively shared practices and the different configurations of such methods in other households, which vary with residents' ideas of identity and social histories (Gram-Hanssen K., 2010). Therefore, thermal comfort is a socio-technical issue, a negotiable socio-cultural construct that is an ideal and material reality (Chappells & Shove, 2005).

Actions taken by occupants to cope with inconvenient thermal conditions vary significantly (Ioannou & Itard, 2017). These actions depend upon people's economic possibilities and social standing: wealthy households have more choices and options to strive for thermal comfort than poorer ones. Daily, complex interactions often occur between people living in households, their housing, associated technologies, and their ambient environment (Moore et al., 2017).

Regarding heat, existing quantitative research has shed little light on why some households are more vulnerable than others and how this vulnerability is being produced. Hardly any studies have investigated these groups' strategies to cope with heat (Osunmuyiwa et al., 2020). In this setting, Brown and Walker (2008) see qualitative research methods as best fit for understanding the relationship between heat exposure and the norms, practices, and material contexts of people's everyday lives (Farbotko & Waitt, 2011). Particularities of the residents' homes, routines, and daily life practices can construct vulnerability. Qualitative methods can help understand these particularities and provide insights into how adaptation to extreme heat is constrained (Brown & Walker, 2008).

This study conducted in-depth qualitative interviews to understand residents' perceptions of heat stress in low-income households in India and Austria. Many of the Indian interviewees are living in a resettlement colony. The interviews aimed to understand the following aspects of residents' shared practices regarding heat:

- Traditional coping strategies
- Limitation of traditional coping strategies
- Access to advanced, technology-based coping strategies

This study therein looked at how residents interact with their built environments on a daily basis and how these environments hinder or support them in their striving to cope with extreme heat. Identifying supportive and obstructive features allows for deriving recommendations for the planning of future low-income settlements and improvements in existing ones.

Methodology

In recent years, collating data through interviews on human behaviour and attitudes in building energy research has become standard (Huang et al., 2018). Qualitative interviews are recorded, transcribed, and critically analysed in such research, often by several researchers to minimise bias based on the research questions. Examples of this kind of research are found in journals that deal with technical aspects of energy in buildings (Galvin, 2015).

Qualitative interview formats allow interviewees to speak on broader aspects of a particular problem, allowing new ideas and insights to emerge, which the researchers would not have thought of otherwise. Often information on human needs, preferences, and opinions cannot be obtained through quantitative methods (D'Oca et al., 2018).

However, the literature still suggests a lack of social science approach in energy research to improve the outcomes, especially in social housing and low-income projects (Bavaresco et al., 2020; Sovacool, 2014). Therefore, it is essential to understand how occupants use buildings (Wolff et al., 2017). Only then can human-centred housing policies meet the target groups' needs.

To this end, 13 in-depth qualitative interviews were conducted in this study based on an interview guide. These interviews were done in July/August/September 2019 in the Indian cities of Jodhpur and Vijayawada and the Austrian capital Vienna.

Interviews were conducted based on the following research question:

1. How and when is heat perceived as a burden by residents?
2. What are the coping strategies adopted to reduce the impact of heat; how effective are these strategies; and how do people know about these strategies?
3. How do buildings contribute to reducing the negative impacts of heat on residents?

The adopted household identification strategy selected households to include a comprehensive spectrum of different housing situations regarding ventilation and exposure to solar radiation. Interviews in Vijayawada mainly focused on one state-built resettlement colony, comprising individual row houses and units in apartment blocks. Houses in Jodhpur were owner-built, single-family dwellings, while all interviewees in Vienna lived in flats in multi-storey buildings.

All households interviewed in Vijayawada can be categorised as "low income." At the same time, the picture was more mixed in Jodhpur: it ranges from street vendors to artisans to small-scale business owners with higher education. All households interviewed in Vienna live on low income and rent their current flats with the help of welfare organisations via which they were approached for the interviews.[3] Household size was relatively homogeneous for the Indian samples: mainly, households comprised a married couple and two to three children. In the Vijayawada case, the kids were relatively young, while children were teenagers or

young adults in Jodhpur. Two households in Vienna consisted of single females; only one included a child.

Interviews lasted between 30 minutes and 1 hour. Due to the necessity of translators in India, it was challenging to build rapport with interviewees and create a relaxed environment. A set of questions guided the interviews, but these were not fixed, and the researcher added or omitted some depending on the respondents' reactions.

Most of the interviews were conducted with a group of interviewees, mostly entire households. Interviewing just one person proved difficult in the spatial settings of densely populated settlements. The appearance of a foreigner and non-local Indian researchers immediately triggered families to congregate and listen or contribute to an interview, even if this was meant to be done only with one specific respondent. The interviews thus were indeed rather group interviews. Consequently, care needed to be taken to detect potential discrepancies between single respondents' comments and statements.

Interviews were translated and transcribed from the local Hindi and Telugu into English by students who functioned as translators. An extensive research diary kept during the entire fieldwork allowed for continuous reflection on observations during interviews. This allowed for adaptation and fine-tuning of the investigative approach throughout the research. Minor reframing of questions was enacted in the briefing of translators, conducting interviews and debriefing of translators.

Answers provided by interviewees were inserted into a matrix to give an overview both across different interviews and topics touched by each interviewee. Data was coded (including member checking) following a phenomenological approach. Analytical categorisations were formed to identify patterns.

By way of such analysis, central patterns of respondents' particular strategies of dealing and coping with heat-related stressors are carved out, and concepts are built based on this data (Cropley, 2002, p. 165). These concepts, along with the underlying perceptions of respondents, are presented in the subsequent chapters.

The inclusion of different forms of data (diaries, photographs, interviews) was considered necessary to provide a means of triangulation. Analysis began by reading and coding text sections, retaining participants' language and concepts. As the analysis progressed, some codes appeared to have greater explanatory power than others. Hence transcripts were recoded, and at various stages, codes were raised to the level of categories. Data were compared and contrasted at every level (e.g., code, focused code, category) to construct categories to organise and explain the data. Memos were continuously written and revised to record impressions and explore relationships. By comparing and contrasting different data, it was possible to have more confidence in the validity of the constructed theory.

Results

Disposing of minimal resources (materially, economically, and in terms of knowledge and skills), interviewees could hardly afford to use technology and technical

infrastructure to alleviate discomfort in times of excessive heat. Overall, the study found how, in several ways, interviewed households were instead engaging in daily practices to cope with heat embedded in the socio-cultural contexts of their communities.

Usable floor areas were very limited in the Indian cases, especially in Vijayawada, where hardly any of the investigated homes were more than 30 m². The average number of persons per room ranged between two and three, thereby not trespassing the UN-HABITAT threshold for overcrowding[4] by a small margin. It is reasonable to assume that such crowded living conditions aggravate physical, physiological, and psychological heat stress as more humans in a confined living area generate more internal heat load and limit spatial coping strategies of each individual. The homes of Austrian interviewees were comparatively larger (ranging between 28 m² and 56 m²) but still small for local standards.

Traditional Coping Strategies and Their Limitations

One of this study's underlying assumptions was that people have learnt how to deal with heat in their socialisation and have thus developed coping strategies. Immediate coping strategies often mentioned by interviewees include drinking more water, buttermilk, etc., covering one's head in direct sunlight, and wetting curtains and other textiles. Most of these were mentioned in India and Austria and mainly focused on interviewees' bodies rather than their buildings.

When questioned about how or from which source they knew about these remedies, most interviewees referred to socialisation by indicating that they had seen their mothers and grandmothers doing so or that this "was simply in our blood" (which is interpreted to be synonymous with tacit knowledge). Geographical differences within India (with Vijayawada being located in a hot and humid climate and Jodhpur in the dry and hot desert) and even between India and Austria were of minor importance.

However, traditional coping strategies are reaching their limits during increasingly intense heat waves—both in terms of absolute temperatures and duration. A coping strategy reaches its limit when people stop applying it because they perceive it does not work any longer under the given circumstances. A strategy may also be given up if this strategy, though still effective in principle, needs to be applied with increased frequency to effectuate relief in thermal comfort. At a certain point in time, the effort required to use the strategy time or money-wise is not regarded as worth more when compared to the effects it achieves.

Some examples of coping strategies were found in the interviews, which were given up due to decreased effectiveness. It appears plausible that these strategies had less impact on indoor temperature and human physiology under higher outdoor temperatures.

One such example is wetting curtains in Jodhpur. The effort of doing this repeatedly in the sweltering desert climate of Jodhpur and the water necessary to do so were cited as reasons why most interviewees had either never used or

stopped using this technique. Another example concerns the coverage of roofs with grass or (palm) leaves: it was given up, besides other reasons, because grass dried out rapidly, thereby losing effectivity.

Gender Differences in Perception of and Dealing with Heat

Even though many interviewees conceded that heat was intense, they mostly put it into perspective with other difficulties they face in day-to-day life (such as water and electricity shortages or lack of proper sanitation). They stated that, compared with these, the heat was one of their lesser concerns. Prioritisation of their daily problems also contributed to paying less attention to the heat. Heat tolerance can thus be understood as a low-cost coping strategy applied by many of the interviewees.

A stark contrast became apparent regarding heat, especially within the socio-economically homogeneous group of interviewed households in Vijayawada. While women tended to indicate that they were used to heat, men openly cited a whole range of instances when and how heat was a burden to them. This difference may be linked to acculturated gender roles, with women traditionally expected to rather stay calm and subordinate without too much complaint about their problems in the first place. This also seems to be due to a secondary impact of different societal roles. While many interviewed women stay at home and take care of their children, male interviewees are engaged in manual work, mostly outdoors. This fact can be seen in some of the interviewees' statements, such as: "They [women in this household] must stay inside the house. We being gents, we will go out. They have to look after the kids and sit inside." And: "A Housewife doesn't go anywhere. In case of working woman, she has to go according to her timetable. A housewife is not able to get herself free from household chores. […] But normally, a housewife doesn't go outside anywhere."

In the latter statement, a differentiation is made between working women and women staying at home; while the former might leave the house, the latter is regarded as more or less obliged to stay put. Neither option is directly linked to climatic considerations but has impacts thereupon: those who have to leave the house for work—be it men or women—are more exposed to sunlight and heat while those staying at home remain in the shade.

Due to their work, men are therefore more exposed to direct sunlight during the day. However, even at home, male residents face difficulties in recovering from heat experienced during the working day. As their houses are constantly hot during the night, they often find it hard to sleep well and work the following day. Several interviewees reported having been incapacitated by a constant lack of sleep and associated ailments.

It is apparent that not being able to work due to either heat itself or heat-induced illnesses/sleeplessness represents a significant problem for daily wage earners and self-employed alike who depend upon their daily earnings for sustenance.

Staying Inside

Staying inside is undoubtedly perceived as advantageous during morning and midday hours. The picture starts to change during and after the hottest hours of the day. Most interviewees indicated heat to be most prevalent between 11 am and 4 pm. Several households in Vijayawada—both in single-family units and apartment blocks—reported that they would start sitting outside in the shade (of trees or buildings) around this time. This habit is partly due to their houses and flats becoming heated up and turning uncomfortably hot in the afternoon. However, mostly they sit outside to chat with neighbours and relax. This behaviour thus has both climatic and social reasons.

Such outside interactions with neighbours were not reported in Jodhpur nor Vienna, pointing to a less densely knitted social fabric within the neighbourhoods. Nevertheless, some households in Jodhpur agreed that staying inside in the afternoons becomes difficult when there are power cuts, and thus fans cannot work.

For most of the day, interviewees, especially in the resettlement colony in Vijayawada, regarded their home as a means of protection against hot, direct sunlight. Measurements of indoor temperatures showed that these were consistently higher than those outside for 24 hours of the day. Temperature differences between indoor and outdoor get especially stark during and after the hottest hours of the day. Homes, in reality, are therefore not the protective devices that residents perceive them to be.

Due to their limited resources, most households—especially those in the resettlement colony in Vijayawada—had had no choice in selecting their homes, be it row houses or apartments in multi-storey buildings. They had to accept what was provided to them by the authorities. They had no say in the design of their homes regarding climatic conditions, for example, openings to enable ventilation, shutters, and shades.

Not being able to cater for the alleviation of inconvenient climatic situations leaves many of them with a genuine feeling of helplessness in the face of external powers. The government had provided them with inadequately designed homes, and municipal authorities do not clean open drains in their district with sufficient frequency (which attracts mosquitoes).

Many households resort to sleeping outside due to the summer heat. Others conceded that sleeping outside might be more comfortable but was not possible for them: apart from the fear of mosquitoes, which affected several respondents, one interviewee in Vijayawada pointed out that they were not able to sleep on the roof as there was no ladder in their rented house, and consequently they had no means to get to the rooftop. Even so, she did not state this explicitly; it may be assumed that her family was financially unable to buy a ladder themselves (or did not consider investing their limited resources in it.) Another interviewee indicated that wild monkeys would invade the roof terrace and keep them from sleeping outside.

Sleeping outside is an option for none of the interviewees in Vienna as they live in multi-storey buildings with pitched roofs, and most of them do not have a balcony. Two interviewees mentioned night-time as especially hot while those who can open windows to let in cooler outside air suffer less, except if traffic noise and pollution prevent them from doing so.

Tolerance to Heat

An interviewed resident in Vijayawada stated, "we are the people who work hard for earning and hardworking people don't care about sun and rain." Enduring heat not only as something that one cannot change but also as a circumstance that one is used to, does not suffer from, and bother about can also help cope with an unpleasant and uncomfortable thermal situation. The tension between a thermally unsatisfying situation, which one desires to change and the inability to bring about any positive change can inflict dissatisfaction and pain upon the individual concerned.

This potential conflict can be coped with by changing one's perception of the thermal environment. Ascertaining whether such an adaptation strategy is primarily based on physiological habituation or more of a psychological mechanism goes beyond the scope of this study. Either way, tolerance to heat supports respondents in coping with the heat and was mentioned in most interviews. Even though many interviewees conceded that heat was indeed intense, at least during the summer months, they mostly put it into perspective with other difficulties of day-to-day life. These include water and electricity shortages or lack of proper sanitation, etc. Several respondents stated that, compared with these difficulties, the heat was one of their lesser concerns. Prioritisation of their daily problems also contributed to paying less attention to the heat. Tolerance of heat can thus be understood as a low-cost coping strategy applied by many of the interviewees.

Mixed Attitudes towards Air Conditioning

Interviews in India included a question to investigate whether respondents would sometimes purposefully go to air-conditioned spaces such as malls, shopping centres, and cinemas to enjoy low temperatures. While all respondents negated this, many indicated they would go to such places for entertainment even though some could not afford to do so. Three interviewees mentioned the negative consequences of times spent in conditioned spaces, such as: "After coming out, I feel more heat …"

One interviewee pointed out that spending time in air-conditioned spaces would raise wishes and aspirations within him and his family, which they knew that they could not live up to: "If we go to places like that, we have to spend some Rs. 2,000 or more. If we spend one day like that, our greed of staying in such places won't be ending. So, we will be in trouble after that."

Another interviewee said that she would not like her hardworking husband to toil even more to afford an air conditioning device for her and the kids. Some interviewees expressed disdain for air conditioning due to either physiological or moral reasons: "Actually, I can't say I don't like them [air-conditioned spaces]—everybody likes (laughs) being, you know, humid free and cool but you know as a morally …, talking morally, we should prefer coolers."

Here, the interviewee builds upon an argument established earlier in the conversation when he was talking about so-called "desert coolers":[5] "actually, I really don't like the idea of air condition because we in India have an eco-friendly method of cooling."

Though he belongs to the only interviewed Indian household that can afford air conditioning, he raises a moral argument concerning the system's energy consumption. He contrasts it with the less energy-consuming desert cooler.

When it comes to installing an air conditioning device in their home, most interviewees in all three locations, either explicitly or implicitly, will face difficulties related to affordability. This difficulty can be set into perspective with how households handle a possible desire for cool(ed) homes. While some were indifferent to this question, others outrightly opposed the usage of air conditioners or did not consider it an option. However, another group frankly or tacitly acknowledged that they would desire to install an air conditioner but could not afford to do so.

Only the wealthiest sample household in Jodhpur possessed an air conditioning unit. One family in Vijayawada used to have one but gave up upon it, allegedly because it did not cool the house properly. A Viennese interviewee reported that she had recently received a second-hand air conditioning device at a reduced rate. While she enjoyed the relief provided in indoor temperature, she realised only later that she might face difficulties covering the resulting electricity bill.

While this question of whether to install an air conditioner or not is rolled out between the poles of desire and ability to afford it, one can only speculate if explicit disdain for air conditioners is a way of coping with the inability to afford it. The effect is the same for either option, whether a low-income resident full-heartedly and due to physiological discomfort distains air conditioning or successfully convinces herself/himself that they do not like it. It will help them endure heat as this attitude lends them slightly more agency over their situation when they perceive it as something they choose not to change.

Trees as Providers of Shade

Trees were cited as shade providers by several interviewees in Vijayawada and Jodhpur, especially during afternoon hours when neighbours gather outside to chat and relax in the shade. This habit was more prevalent in the tightly knitted resettlement colony where all interviews in Vijayawada were conducted. However, interviewees reporting this habit of sitting in the shade of trees during afternoons mostly stressed that this was less to do with climatic considerations.

Instead, semi–public spaces underneath trees and scrubs provided them with the opportunity to sit with friends and neighbours, chat, and relax. Social interaction was thus very much at the core of this activity. Comfortable conditions in the shade merely set the physical framework thereof.

It is noteworthy that the trees and shrubs in question all grow on public land rather than on private premises. The plots of row houses in the resettlement scheme do not allow for tree planting, and multi–storey apartment blocks do not provide for private tree planting either. The colony layout foresees some open spots for trees. However, those plants, not being within anybody's direct responsibility, are primarily in rather dire conditions, lacking necessary maintenance and displaying mostly untended conditions.

In households interviewed in Jodhpur, families would rather stay inside their premises, not mingling with neighbours, but still lament the widespread cutting of trees in the overall city, including their immediate neighbourhood. In a debriefing session after interviews in Jodhpur, the local translators linked this behaviour to religious sentiments, which attribute divine properties to trees in general.

A Viennese interviewee recorded a massive tree in front of a house she had previously lived in. When it was cut down, the increase in heat stress was palpable for her. When venturing out, two respondents in Vienna take care to remain in the shade of trees—in contrast to a prevalent culture of sunbathing in the region.

Conclusion and Policy Implications

This study helped identify and understand low–income residents' perceptions and attitudes regarding urban heat. It discerned respondents' daily practices of dealing with heat in their environment and the problems they face in this regard.

Buildings constitute the most important and effective means of protection against heat stress for most respondents, especially in India. However, design restrictions and cheap building materials limit the effectiveness of this protection, especially during evening and night–times.

Many low–income residents had had no or only minimal choice in selecting their homes. They had to accept what was provided to them and could hardly influence the design and layout of the buildings. Consequently, and due to their general lack of resources, they cannot cater to any significant alleviation of inconvenient climatic conditions therein. This situation can leave them with a feeling of helplessness in the face of external powers such as "the government" that had provided them with their inadequately designed homes or municipal authorities who do not clean open drains in their district to protect them from mosquito infestation.

The study revealed how daily practices of dealing with climate change impacts such as extreme heat are intertwined with people's perceptions, attitudes, gender roles, and social activities. Therefore, attempts to promote the resilience of these

communities need to take the embeddedness of such practices in community life into account.

Acknowledging that homes are people's primary means of protection against heat demands improvements that make buildings satisfy these necessities. In so doing, agency needs to be vested in residents themselves to choose solutions with which they are comfortable.

Lessons learnt from this study should not only be applied to plan future large-scale housing schemes. Once poured in concrete and bricks, building design and materials are tough to change. The most low-profile measures for alleviating heat stress in existing colonies can only indirectly target heat problems. Safeguarding regular and sufficiently frequent garbage removal, especially from open drains near homes, represents one such indirect approach to increasing a household's thermal comfort. This maintenance will help avoid drain clogging, stagnant water, mosquito breeding, and the consequent need to block openings for much-needed night-time ventilation. Recurrent provision of mosquito nets to the affected households could likewise address this hindrance for thermal relief.

In abundant literature on climate change adaptation, targeted plantation of trees and vegetation is generally shown to provide residents with much-needed shade within their neighbourhoods in urban areas (Ali & Patnaik, 2018). Improvements of such kind require small-scale investments for seedlings and clear designation of responsibilities for care and maintenance such as regular watering, etc. Local authorities are often hard-pressed and too underfunded to satisfyingly live up to this responsibility. In this dilemma, engaging residents in such activities in their neighbourhood may emerge as a pragmatic and empowering solution. On the other hand, it can also impinge upon their already constrained time and resources.

Beyond the building scope, it needs to be acknowledged that heat threatens poor households' incomes; those earning their daily wages outdoors are mostly low skilled, low-income manual workers in informal working arrangements. Physically they are most exposed to urban heat and, consequently, may be incapacitated by heat in such a way that they will not be able to work and will thus earn less. Household budgets that are already limited today will get tighter in the years to come due to excessive heat, while heat-induced illnesses and deaths are on the rise.

Communities and societies as a whole will therefore have to negotiate long-term strategies of capacity building and training to get workers off hot streets as well as more immediate measures of catering for less health-threatening workplaces and emergency relief payments for those unable to earn a living during heat waves.

Soft versus Hard City Aspects

Low-income residents interviewed in this case study strongly relied on their homes—the physical, "hard" structure of their homes to protect them from the

excess summer heat. However, as shown, these homes turn out not to be the protective devices which residents perceive them. Due to their poor material quality, these buildings fail to dampen outside temperature spikes and can turn into heat traps wherein residents are constantly exposed to stressful, elevated temperatures, even throughout the night.

The selection of cheap and unsuitable construction materials under existing relocation schemes has left residents with no other choice for their immediate living environment. The incapacity of the local administration to administer basic maintenance works such as regular clearance of sewers in their vicinity further accentuates the hard city's failure. It is only by "soft" means—daily routines of heat avoidance and adaptation—that the residents can try to cope with this physical environment. However, the efficacy of these coping strategies is limited, at best.

Notes

1 https://www.hsph.harvard.edu/news/multimedia-article/extreme-heat-climate -change-health/; last accessed 25 November 2021.
2 Not to further elaborate on the fact that these devices contribute to further global warming.
3 No household income data was collected for reasons of confidentiality and trust establishment with interviewees; thus an exact assessment of affordability of different coping strategies is not possible for the households interviewed in this study.
4 UN-Habitat defines three and more persons per room as overcrowding (United Nations Human Settlements Programme (Hg.) (2004): p. 12.
5 Desert coolers work through the evaporation of water, which adds moisture to a room, thereby making it cooler. Khus, a native Indian grass, has traditionally been used as a coolant in these coolers: dry air cools as it passes through layers of wet khus. Desert coolers need hot, dry air to function properly while air conditioners can be used in places with more than 20% humidity in which a desert cooler cannot operate properly. Air conditioners cool air more effectively but are more expensive to use and operate.

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9

HOME-BASED INCOME GENERATION IN ADDIS ABABA, ETHIOPIA

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In Addis Ababa, the capital city of Ethiopia, 80% of inhabitants live in slums and 51% work in the informal sector. Home-based enterprises (HBEs) are crucial among the informal sector activities. However, there is a paucity of studies on this activity. Hence, this study was motivated to explore the use of domestic spaces for home-based work in city areas where population density is high. Thus, self-employed women in Addis' district of Ketema are used as a case study here.

Methods employed in data collection include self-administered questionnaires, in-depth interviews with households and key informants, field observation, photo registration, and measurement and drawing of domestic spaces. Drawing on this data, this chapter examines the implication of using domestic spaces for home-based work.

The findings reveal that home-based work is not spatially confined to the dwelling, and scarcity of space does not prevent from accommodating HBEs in domestic space. Home-based workers use domestic spaces starting from the dwelling to the courtyard and neighbourhood street. Besides, operators use different techniques to configure these spaces, from simple to quite comprehensive.

Furthermore, the study explores households' attitudes towards accommodating HBEs in the domestic space. It found that the benefits of accommodating these HBEs in the domestic space are perceived to be found in the closeness to customers and service (time- and money-saving), the symbiosis in the phenomenon and optimal use of the house, household participation, and family supervision, and in the enhancement of security. However, the challenges are nuisance related (noise, smell, dust, and smoke), risks related (health, privacy, and security), and crowding.

Even though HBEs are the primary source of income to support the households, the study reveals that respondents have different perceptions and attitudes regarding the use of domestic space for home-based work. The integration of

HBE activities into the domestic setting is appreciated when households have small numbers of members, ample room area, or where the activity intensively takes place outside the dwelling (such as the courtyard and adjacent neighbourhood streets). Furthermore, households support the integration of the HBE activity when there is no need to recurringly move working equipment. Surprisingly, households with scarce space and a large number of family members still have positive attitudes due to HBE being their indispensable income source, enabling them to cover their daily expenses.

Nevertheless, respondents are worried about integrating the home-based income generation activity in the domestic space, where the activity creates health-related risk (dust and smoke) and crowdedness. Based on the findings, the study concludes that the accommodation of HBEs in domestic space is an important way through which low-income households can earn and boost their livelihoods and living spaces.

Introduction

In keeping with the pattern of urban growth of the least urbanised countries, Ethiopia is currently witnessing one of the fastest urban growth rates in the world, with an average of 10.9% per annum over the past ten years (UNDP, 2014). Addis Ababa, the capital city of Ethiopia, is haphazardly developed with substandard housing and poorly serviced neighbourhoods, particularly in the inner city (UN-Habitat, 2007). Today, Addis Ababa, with the vision to take on a role as a global player, looks like a huge construction site in constant motion due to the inner-city redevelopment and its national Integrated Housing Development Programme (IHDP).[1]

Its intractable housing challenge and teeming population growth have led to a high concentration of public housing schemes. However, UN-Habitat (2010) reports that the issues of socio-spatial adaptation and affordability in these pro-poor housing schemes remain pressing and most likely to be more pronounced in low-income households.

The use of housing as both a home and a source of income in informal urban areas has long been every day a strategy to improve living conditions (Kellett, 2003). For many low-income households, their dwelling is one of the few resources they have for generating income. They do this either through passive activities such as renting out rooms or more active ones, generally known as home-based enterprises (Tipple, 2004).

According to Strassmann (1987) and Ezeadichie (2012), HBEs introduce commercial and industrial uses into areas zoned for residential, extensive use of temporary structures (Okeke, 2000), and the need for additional income through informal business ventures is the driving force behind dwelling alterations (ILO/UNCHS, 1995).

Owners of HBEs have been able to consolidate their dwellings through income generated by these micro-enterprises, and many households would not

have been able to afford their dwellings without HBEs (ibid., 2000). One of the major arguments against HBEs is their likely effect on domestic space; they use scarce space that is needed for domestic functions (Tipple, 2004).

In recent times, research on different aspects of home-based income generation is on the rise globally and in developing countries (see Ghafur, 2001; 2002; Kachenje, 2005; Tipple & Kellett, 2003; and Strassman, 1987), but with a relatively smaller number in Ethiopia, (Tegegne, 2010; Johnson et al., 2005 and Wondwossen, 2005). Nevertheless, these have become imperative for a better understanding of HBEs. Though there are numerous studies examining the phenomena from an economic perspective, there is a paucity of studies, which look at home-based income generation from a socio-spatial perspective of housing.

In Ethiopia, the existing studies, for example, Tegegne (2010), mainly highlight its importance for residents and factors influencing this, while others, for example, Johnson et al. (2005), examine individual skills, the meaning of housing, and the role of women households in income generation. Wondwossen (2005) examines income generation and job creation in public housing. From these studies, it has been evident that home-based work in the country is imperative to eke out a living and access shelter and that this is more pronounced in the women-headed poor urban households.

Tegegne (2010) suggested that home-based enterprises are an indispensable source of income for the urban poor households in Addis Ababa, since 70% of the inhabitants are engaged in such activities. Although HBE is crucial for poor urban households, studies have shown that accommodating this in the domestic space causes side effects.

Existing local and international studies help provide insight into the general phenomenon of HBEs. However, the differences among countries in terms of household composition, cultural values and norms, housing design standards, housing quality and needs as well as homeownership structure affect the nature and extent of space use by HBEs. Spatial configuration and potential conflicts pertaining to this will most likely differ from one country to another. Therefore, this chapter seeks to research the implication of using domestic spaces for income generations in Ketema, a district of Addis Ababa.

Research Questions

This study addresses the following general research question:

"How is the domestic space used for HBE and what are the emerging issues of using home (domestic space) as a workplace (income-generating space)?"

In so doing, it looks at several more specific questions:

1. How do HBE operator households perceive the functioning of dwellings as both home and working places?
2. What do the HBE operator households do to make their domestic spaces generate income?

3. How is the domestic space configured and used for home-based income generation?
4. What are the potential challenges of overlapping domestic space and workspace?

Significance of the Study

According to Kellett and Tipple (2000), the existence and growth of HBEs is a phenomenon that is directly related to the current economic situation of the world; hence it is unlikely for it to perish in the near future. Therefore, studying how it operates, along with the associated issues, contributes to the body of knowledge for the benefit of the HBEs owners and the communities living in informal areas with similar characteristics to the study.

Therefore, this study aims to fill the knowledge gap on the role of domestic space in home-based income generation on the urban poor. Moreover, the research is expected to give an insight on how spaces within and adjacent to the dwelling of HBE operators are configured and used and their implications. The information on the organisation and use of the various spaces also contribute towards conceptualisation of spatial needs in the domestic setting.

Defining Home-Based Work

In the Ethiopian context, according to the Central Statistical Agency (CSA, 2003) which conducted a nationwide urban informal sector survey in January 2003, the informal sector is defined as:

- home-based or individual establishment/activity operated by the owner with few or no employees;
- they are, for the most part, unregistered and operating on a very small scale and with a low level of organisation;
- most of them have very low levels of productivity and income;
- they tend to have little or no access to organised markets, credit institutions, modern technology, formal training, and many public services and amenities;
- a large number of them are carried out without fixed location or in places such as small shops, outlets, or homes;
- they are not recognised, supported, or regulated by the government; and
- they are beyond social protection, labour legislation, and protective measures at the workplace.

To identify the households with informal sector operators, the CSA (2003) used the following criteria:

- At least one member of the household must be engaged in a productive activity.

- Employment of the owner of the activity must either be a self-operated activity or rendered by an employer.
- The establishment/activity shall not be a corporate type of enterprise.
- The establishment/activity should not keep a complete book of accounts.
- The number of persons engaged (if any), including the operator, must be less than ten.
- The establishment/activity should not be registered by any legal authority, which gives licenses.

Strassmann (1987) claims that a home-based enterprise is not just a small business in a small structure but a family operation in a dwelling. It is a functional and organisational unit of production, generative reproduction, and consumption within the social formation of the entire dwelling.

Lipton (1980, p. 20) discusses home-based enterprises as a "family mode of production enterprises" whose characteristics are as follows:

1. The family controls most of the land and capital to which its labour is applied.
2. Most of the family's land, capital, and labour are used in the enterprise.
3. Most of the labour applied is provided by the family.

As Ghafur (2002) stated, home-based work is a specific manifestation of urban poor women's involvement in the household production/reproduction sphere at the dwelling and its immediate neighbourhood context—the "local space" (Moser, 1993, 1995; Moser & Peake, 1994). Local space is the setting where poor women live with the members of their households and, importantly, is crucial for their appropriation of productive resources.

Hence, for this study, home-based work is defined as the involvement of women and families (households) in the production and reproduction sphere at the dwelling and its immediate adjacent domestic space.

Grouping of Home-Based Income Generation

According to Kellett (2003, cited in Kachenje, 2005), home-based income-generating activities are classified into five groups:

1. Sales.
2. Commodities production for selling.
3. Services.
4. Activities with a social character.
5. Activities directly related to the lot and the open spaces.

This study analyses all the classes, given that they exist in the study area.

Fungibility of Resources: Money, Time, and Space

The fungibility of the main resource (space, time, and money) should be well understood when conceptualising the process of income-generating at homes. Lipton (1980) stresses the advantages to home-based enterprises of being able to treat these resources fungibly: they can be converted swiftly, conveniently, and without loss from one use to another.

Cash is the ideal fungible resource, and money can be spent on improvements in living conditions or in working conditions (or both at the same time). Similarly, time spent on domestic activities can be converted into time spent on home-based enterprises as the ebb and flow of domestic work allows, and space can be used for a range of activities, which may change throughout the day as well seasonally. These changes can be made with minimal cost and inconvenience (ibid., 1980).

The larger the dwelling, the more sufficient the space to enable activities to be defined in spatial terms with dedicated spaces for productive activities. With smaller dwellings, different activities must occur within the same space, either simultaneously or demarcated by time (Kachenje, 2005).

This implies that spatial and chronological aspects are both of importance here. Payne (1974) argues that high intensity of use within the confined spaces is possible because the "spatial and chronological symbiotic interaction of activities creates a greater effective space than exists physically" (Payne, 1974, p. 64).

Disadvantages (Costs) of HBEs

Costs of HBE have been identified by different researchers, such as Gilbert and Gugler (1992), claiming that there is a close relationship between poverty, informal housing, and informal income generation. Benería and Floro (2005) point out the use of child labour; and Berik (1987) and Ghavamshahidi (1995) cite that lack of special skills is associated with HBEs. Other costs of HBEs include the evasion of specific taxes, services charges, and avoidance of regulatory requirements like licensing, resulting in a lowering of fiscal returns to governments (Ezeadichie, 2012).

Ezeadichie (2012) and Strassmann (1987) point out that HBEs have been regarded as undesirable in planning orthodoxy due to devotion to uni-functional land-use theories, as HBEs introduce commercial and industrial uses into areas zoned as residential. In most cases, the need for additional income through informal business ventures is the driving force behind dwelling alterations (ILO/UNCHS, 1995). Okeke (2000) further noted that the extensive use of temporary structures, commonplace in this sector, exhibits very high nuisance value in land use development. Sheds for workshops and retail outlets result in a physical neighbourhood character, which is very different from that envisaged by planners, making such alterations a clear example of residents acting in defiance of official regulations.

Strassman (1987), in reviewing the effects of HBEs, confirmed that the worth of buildings in neighbourhoods with a high rate of HBEs is usually lower than those in neighbourhoods lacking them since negative impacts, such as fumes from fish smoking, cause nuisances.

Advantages (Benefits) of HBEs

There is a strong relationship between housing and home-based enterprises, as dwellers can consolidate their dwellings and make ends meet through the income earned. In addition, many would not have a dwelling at all without their home-based enterprises, and many enterprises would not exist without the opportunity to use the domestic spaces (Tipple & Kellett, 2003; Mahmud, 2003; Strassmann, 1987). Thus, housing is crucial for the operation of HBEs in most countries.

According to Ezeadichie (2012), recent studies indicate that the share of the informal economy generally exceeded 60% of total employment in all of Africa. The informal economy also accommodated 75% of the new entrants into the African labour force in the 1980s (Ezeadichie, 2012).

By 2020, it is estimated that 95% of all African workers will be in the informal sector (Hope K., 2001). Hope K. (2004) stressed that given the current importance and potential of the informal sector as a source of economic growth and employment, most restrictions on this sector should therefore be eliminated so that it can flourish as a means of promoting further growth and reducing poverty and deprivation in the African economies.

According to Tipple and Kellett (2003), HBEs are essential for the households' incomes and quality of life. Without them, many would be severely hampered, and it would be beneficial if policy could take account of this when considering any harmful effects they may have. For example, it may be better for a household to endure poor spatial conditions than being plunged into dire poverty by having their livelihood removed. Such arguments and the trade-offs households make among their various assets are at the heart of the current discourses on livelihoods.

According to Johnson et al. (2005) a house and a place for income generation are the same for poor people. The house is a place where they live and a space where they produce their means of subsistence. "A [house] not only provides a shelter and food but also is a place from which, and in which one claims an identity…. A human organism is intact with the building, the objects it contains, and its settings" (Nel, 2002, p. 444). In addition to providing identity to members of the household, a house to the poor community, in general, and poor females, in particular, is a place that they use as a space for production.

Research Methodology

This chapter deals in detail with the methodology employed to conduct this study. It explains how data was collected and analysed for drawing conclusions and recommendations.

The research method used here is a case study. This research combines qual-itative and quantitative methods to find valid data. The quantitative method employed in this research is used to measure the numbers of rooms, areas of rooms, occupancy rates (persons per room), space per person, areas used for HBE activities, and shared spaces (HBE and domestic). Through the qualitative data (pictures, maps, sketches, stories, words—through the in-depth interview and documents), this research identifies the cost and benefits of HBE, space appro-priation techniques, and the perception of HBE operators about the dual func-tioning of their home.

Data collection obtained by qualitative and quantitative means from 15 affected households was targeted at understanding the key issues of the study highlighted above.

- Characteristics of the HBE and the dwellers: the background of the respond-ents and the home-based income generation they undertake.
- Perception towards the double functioning of domestic spaces: the percep-tion of dwellers to the home-based work.
- Domestic Space configuration: the dwelling space, courtyard, and neigh-bourhood street, appropriation of the domestic setting.
- Potential and challenges of the HBIG (home-based income generation): the benefits (potential) and costs (challenges) of the home-based work.

Additional data was obtained from:

Government agencies: data to understand the context of the case area (Addis Ketema) was obtained from the Addis Ababa planning institute.

Organisation for women in self-employment: to understand HBEs under-taken by women in self-employment, data from a local organisation of these women was reviewed thoroughly.

Findings

In the subsequent sections, descriptions of the interpretation of research results and what is an addition to the existing body of knowledge are discussed. This chapter includes some recommendations for understanding the role of domestic spaces for home-based income generation in poor urban households (especially self-employed women).

Domestic Space Configuration for Home-Based Income Generation

From the survey result, it has been observed that home-based work is not spa-tially confined to the dwelling. However, dwellers perform both the domes-tic and home-based work activities in the dwelling and the immediate adjacent space to the dwelling. The spatial requirement of the HBE (e.g., producing,

marketing, selling products, and procuring raw materials) depends on the HBE type and the scale of the available space.

Hence, as a result, the dwellers running HBEs perform both their domestic activity and home-based work activity interchangeably in the dwelling, the courtyard, and the neighbourhood street/lane. The spaces in the dwelling and adjacent to the dwelling are adopted based on the space requirement of the HBE. Indeed, requirements referred to by the respondents as environmental issues (e.g., ventilation and sunlight), risk (privacy, security), and nuisance (noise, dust, smoke, etc.) determine where the activity takes place. Interaction with and attraction of customers based on the HBE type affects where to perform the home-based income generation.

Adaptation of Domestic Space for HBE

The study reveals that adaptation of the domestic setting is a must to start any HBE. Households engaged in different HBEs have adopted the domestic space based on their personal interests, the nature of the HBE, and the availability of the space to practice these activities. The adaptation varies from simple to comprehensive, from temporary to permanent, and includes the private sphere and public sphere.

During the survey, it was observed that 86.6% of the dwellers lived in "kebele"[2] houses. None of these buildings were designed by architects. Hence, the adaptation of spaces within "kebele" houses is architecturally a very interesting phenomenon.

It is forbidden to renovate or repair a "kebele" house unless the situation is life-threatening. Although the adjustment of these houses is forbidden, out of constant lack of space, dwellers adopted several ways to maximise the same, without it being visible from the outside.

Hence, based on the simplicity/difficulty of the task done to prepare the space, the actors involved range from the family members (women and children) to hired skilled persons. The testimonies given by the HBE operators reflected this preparation of spaces: "When I am preparing to work, my children will help me taking the machine outside of the room, as I cannot carry the machine and take it downstairs by myself" (Interview with a woman working in "Duwur,"[3] 2014).

The most common appropriation techniques observed for the preparation of the domestic settings are listed as follows:

- Building transformation (construction of new rooms, extension, and enclosure of the veranda, adjusting partition of rooms and replacing the structure step by step).
- Changing the function of the space.
- Constructing simple structures.

FIGURE 9.1 Adaptation of dwelling. Photographs by A.Girmay.

Building Transformation

Building transformation here refers to an alteration or extension involving construc-tion activity and using materials and technology in use in the locality. Alteration as one form of housing transformation and is defined by internal changes of a building without increasing the total net floor area of the house. In contrast, an extension adds space to the layout of the building. Both alteration and extension have been continuously undertaken in the study area to prepare or increase some space for HBEs. Of the 15 houses studied, 9 have been transformed in one way or another, involving vertical and horizontal transformation. To each of the trans-formed houses, one or more of the following forms of transformation were applied:

a. Construction of new rooms adjacent to the original house.
b. Extension and enclosure of verandas.
c. Adjusting partitions for rooms.
d. Replacing the structures step by step.
e. Constructing and placing simple structures for HBEs.
f. Changing the function of spaces.

Constructing New Rooms Adjacent to the Original House

Construction of new rooms adjacent to the original house is a form of housing transformation through which the owner adds new rooms later on to the house

built initially. The addition is horizontal and varies in scale from one house to another, but the purpose is to provide or increase space for accommodating HBEs.

A resident explains the reason for the transformation of her house as follows:

> Initially I only had one room, yet it was difficult for me to accommodate both the HBE activity and domestic activity, when I gave birth to my first kid. So, we constructed a new room to the original house to accommodate the HBE and domestic activity.

However, constructing new rooms to accommodate HBE activity is not officially permissible in "kebele" houses, as there is a distinctive law forbidding such activities. Besides, the dense settlement (scarce availability of open space) also limits the horizontal extension.

Extension and Enclosure of Veranda

It has become common for many households to extend the veranda and enclose it for HBE working space and stores. This form of transformation uses comparatively limited additional building materials to adapt the veranda to the new desired use. Some households use this method due to limited funds for new construction, and others due to limited space that could allow construction in a larger scale locally. The extension could also be used without any enclosure, depending on the nature of the products being sold and the temporal nature of the enterprise. However, such a situation could mean vulnerability to dust and weather, and it could necessitate taking the products in and out for security purposes when closing and opening, respectively.

Adjusting Partitions for Rooms

For most households, the only way to create more space is a vertical extension, usually building a second storey, which they can use as a sleeping space, storage, and working area. This kind of adaptation is due to the scarcity of space for horizontal extension and the distinctive law preventing repairing the "kebele" house. Therefore, dwellers end up doing interior transformation to adjust the allocation of space for various uses.

In the study area, both the demolition of interior walls and the construction of partition walls were featured as ways of interior transformation for HBE purposes. This maximises the amount of space for the HBE operators. One of the respondents testifies to this phenomenon as follows:

> Initially I only had one room, as my business grew, I was forced to look for extra spaces for storing the products. So, I decided to maximise the space by making a vertical extension[4] and partitioning the room (creating a mezzanine floor).

(Interview with an HBE operator)

FIGURE 9.2 Room adjustment. Photographs by A.Girmay.

FIGURE 9.3 Vertical extension ("kot"), first storey (left), second storey. Photographs by A.Girmay.

FIGURE 9.4 Vertical extensions ("kot"), first storey (left), second storey (right). Photographs by A.Girmay.

Replacing the Structure Step by Step

Most of the "kebele" houses in the study area were built with building materials such as mud and wooden poles. Tenants of these houses have been transforming them, especially the roofs, in instances where it is highly deteriorated and rainwater drips through during the rainy season. In this kind of transformation, rooms are replaced step by step while the house keeps on being used. During the survey, two houses' ceilings were being renovated.

Changing the Function of Spaces

Changing the function of spaces is a most common phenomenon due to the scarcity of spaces and financial capacity. In most cases, a single room is used for multipurpose (both domestic and HBE activities). The change occurs diurnally and seasonally. For example, rooms used as a living, cooking, and dining area during the day will be adopted into sleeping areas. Spaces that are involved in the change include bedrooms, verandas as well as the open. In this case, no significant changes are made to the spaces, except for the regular change in use.

Constructing and Placing Simple Structures for HBEs

In situations where HBE involves displaying of products for selling, the nearby public space is adopted for this purpose. So, households in the study area erect structures made of corrugated iron sheets as walls and roofing to facilitate the running of HBEs. However, the structures do not have enclosures/walls, but consist of wooden posts. This kind of structure is not meant for leaving properties overnight after the business' closure, except for those guarded all night long.

Costs and Benefits of HBE

HBE operators' attitude towards HBE is based on the importance of the HBE-generated income for the household, the impact of HBE on the scarce available space and related conflicts arising from HBE.

The issues emerging due to HBE are mainly categorised into two sections: firstly, it discusses the issues associated with the costs (disadvantages) of accommodating the HBE activities within the domestic setting. Secondly, it presents the benefits of home-based income generation (double functioning of dwellings) for the HBE operator households.

Costs of Double Functioning of Dwelling

Risks to the Home Due to HBEs

Respondents pointed out that risks associated with the home-based enterprise are various, depending on the individual characteristics of the HBE and the interaction with customers.

For example, a respondent involved in preparing a local drink called "Tela" explains her situation like this: "Risk is high because when people get drunk, they fight even using bottles or other weapons … Drunkards normally use undisciplined and abusive languages that are dangerous to our children's behaviour" (Interview with a HBE operator, 2014).

Another respondent (see Figure 9.5), involved in producing liquid detergent soap, states:

> When I am preparing for this job, I have to send my little kid to play outside by herself or with other kids, since I fear the chemical smell for her health; besides I have to be careful not to contaminate anything edible and drinkable.
>
> *(Interview with an HBE operator, 2014)*

Some respondents (see Figure 9.6) involved in HBE activities such as "Duwur" weaving and tailoring reveal that the noise of these machines creates a disturbance.

FIGURE 9.5 Changing of a function of space, the living space is used both for domestic activity (such as drinking coffee, dining, sitting) and for HBE activity (preparing detergent soap for sale). Photographs by A.Girmay.

FIGURE 9.6 Women working "Duwur," tailoring and their challenges (left), domestic activity (cooking pot) and HBE taking place in the same area (right). Photographs by A.Girmay.

Another risk related to HBE activities is dust. For example, a woman working a "Duwur" complains about the tiny dust of the cotton spreading all over the room and in the air. The family usually has to cover furniture with plastic coverings or take the work outside the dwelling.

During the survey, it was observed that fire also represents a potential risk. As shown in Figure 9.6, both cooking and working activities are taking place side by side to use the time interchangeably for domestic and HBE activities. Thus, overcooking and unattended cooking stoves represent possible hazards.

Nuisances

Noise associated with the operation of HBEs turned out to be the most outstanding nuisance in the study area. Home-based operators involved in preparing spices face the itchy smell of these products. Home-based operators involved in the selling of Injera bread also face the risk of smoke due to the traditional method of baking Injera. The bad smell was evident, particularly at places where local drinks are sold. The smell is basically from the latrines for customers, many of which are of poor structural quality.

Weather-Related Risks

As pointed out in previous sections, some households operate their businesses in open spaces; hence, they are subjected to weather variations. Some depend on roof overhangs, which provide limited protection against rain, and some just use spaces without any shade. In case of rain, these HBEs are vulnerable and compelled to move commodities inside homes for protection. Mostly HBE operators selling Injera and vegetables are exposed to such risks. One respondent engaged in such HBE commented on this situation as follows:

> This business needs to be exposed outside so that customers can see what we sell. However, when it rains, we remain without choice but to rush inside with our products or cover it with plastic sheets. In that way, we incur a loss, as we cannot continue selling our products in the rain.
>
> *(Interview with a vegetable seller, 2014)*

Crowding

Accommodating HBE in the home inevitably requires sharing a significant portion of space. Regarding net and domestic space usage, the HBE activity adds to crowding. Dwellings which were initially sufficient in size were rendered insufficient due to these HBEs taking some portion of the space. These eventually lead to the adaptation of the space by the different strategies discussed above.

Benefits of Double Functioning of Dwellings

Closeness to Customers and Services

As most of the HBE operators provide daily needed services and products, customers mainly come from the immediate neighbourhood. Given the demand for products offered by HBEs, there is almost an ensured continuous market for which to compete. Related to this factor of closeness are benefits such as:

Money-Saving

Respondents indicated that working at home enables them to cover their daily expenses. In addition to that, during the survey, it was observed that it is the primary source of income for the women involved in HBE. Based on their membership in a local cooperative, some are able to create job opportunities for others.

Time-Saving and Convenience

One of the advantages of working at home, according to the testimony given by the respondents, is that they can use their time conveniently and interchangeably with their domestic work. Comparing this home-based work to other works done outside the house, they suggest that working at home enables them to minimise time spent travelling from home to workplace and back.

A woman involved in working with "Duwur" describes her situation as follows: "One of the advantages of working at home is: I can work at any time, be it in the night or early in the morning, anytime I feel convenient to work" (Interview with a woman working "Duwur," 2014).

Another woman working in tailoring also supports this idea:

> As you can see me now, I am working (sewing) my customers' cloth, as well as preparing lunch for my family. Thus, working at home enables me to save time for working both the domestic task and the HBE activity.
> *(Interview with a woman working tailoring, 2014)*

Another woman (see Figure 9.6) who produces detergent soap also emphasises this advantage: "Working at home, this business enables me to look after my child, besides; I can use my space and my time both for the domestic activity and the HBE. In addition, I can work the job at any time."

Enhancement of Security

According to the testimony given by the interviewees, all respondents agree that working at home enhances the security of the home. Working most of their time at home enables them to look after their houses. However, women who

constructed a temporary structure to run HBEs on the neighbourhood street leave their properties there at night and hire a guard since they find it tiresome to move the HBE inside during night-time.

Household Participation and Supervision

As observed during the survey, women are not the only household members involved in running the businesses. Young members are likewise involved in different activities, from looking after the business when parents are engaged in a domestic activity at home to tasks such as moving and preparing the workspace and work equipment.

Perception of Double Functioning of a Home

Even though home-based income generation is the primary income source to support the households, respondents have different perceptions regarding using domestic space for home-based work. Respondents who support the integration of HBE activities into the domestic setting are those where the primary source of income is home-based income generation as well as households where the activity is taking place outside the house (courtyard and adjacent neighbourhood streets), the number of family members is small, and room area is ample. Besides, when no moving of the working equipment is necessary, respondents support the integration of HBE activities.

Even households with scarce space and many household members have positive perceptions due to HBE being their main source of income, enabling them to cover their daily expenses and save some money for additional needs. However, respondents negatively perceive HBE where the activity creates crowdedness, dust, and noise. A woman engaged in preparing a local drink, called "tella," explains this phenomenon as follows:

> The problem with this home-based income generation is that when customers get drunk, they make noise; besides some clients throw bad words. Additionally, the smell of the drink is disturbing, yet, since I do not have a proper latrine, I have to spill it in the nearby street latrine.
>
> *(Interview with HBE worker woman, 2014)*

Conclusions

This survey demonstrates that home-based income generation plays a vital role for poor urban households (especially women-headed households) in the investigated area of Addis Ababa. Some households would not be able to survive without them. Ignoring these home-based income-generating activities, their spatial requirements and their likely effect on the domestic setting would hamper the livelihood of many urban poor households engaged in this sector. Therefore, stakeholders involved in the planning and designing of urban space need to

critically consider its role in enhancing the livelihood of the urban poor and their spatial implications and requirements.

Although alternation and adaptation of "kebele" houses is prohibited, dwellers still search for ways to appropriate the space and the building to accommodate the home-based income generation and subsidise their family livelihood without displaying it on the outside. Therefore, understanding and providing spaces for such activity is essential to creating economic sustainability for urban poor households in the inner city.

Soft versus Hard City Aspects

All residents interviewed in this study live in "kebele" housing in Ethiopia. Due to the country's history of large-scale nationalisation of land and housing stock in the 1970s, this type of building has been formalised. Thus, these homes are not categorised as "informal," despite their often slum like living conditions, characterised by a general state of dilapidation and a lack of basic infrastructure. As part of the "formal" city, residents face several restrictions in how they can adapt their homes for their businesses. The faltering hard city thereby impinges upon their options. Residents' "soft" workarounds consist of daily practices of adapting—moving equipment here and there within the allowed limitations to make room for workspaces, carrying wares back and forth, and temporarily occupying (semi) public space to vend.

Notes

1 IHDP was launched by the Ethiopian government in 2005 to tackle housing and employment backlogs. It aimed at constructing 50,000 housing units annually, thereby reaching an overall goal of 200,000 units in total. The main objective of the IHDP programme was to create low-cost housing in condominiums for low-income recipients.
2 "Kebele," a term in the local Amharic language, is the lowest administrative level in Ethiopia, comparable to a municipality or an urban district. Under the communist Derg regime (1974–1991) in Ethiopia, existing housing stock was rented out as "kebele" houses by the municipality which was also in charge of its maintenance. This type of accommodation covered most of urban rental housing. The majority of urbanites remained residents in "kebele" housing. Few new housing was built and as rents for "kebele" houses were purposefully kept low, funds were lacking for maintenance, upkeeping, and renewal. Up to today, this causes large parts of the "kebele" housing stock to gradually deteriorate and dilapidate while it still forms a big junk of Addis' residential quarters, especially for low-income groups.
3 "Duwur": a traditional method of weaving cotton for cloths.
4 Termed "kot" in Amharic.

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"NOTHING IS TO BE GAINED BY INVOLVING THEM": EXPLORING RESIDENTS' LIVED EXPERIENCES OF RESETTLEMENT IN A MEDIUM-SIZED CITY IN INDIA

Hiranmayi Shankavaram, Janani Thiagarajan, and Tania Berger

Introduction

Countless academic studies have been conducted regarding social housing programmes for poor urban residents in countries of the Global South, and abundant and substantial literature has evolved and has been critically assessed over the decades (Ackerman, 1971; Chakrabarti, 2001; Coelho, 2016; Davis, 2007; Gulyani & Bassett, 2007; Hagn, 2016; Lim, 1987; Mahadevia, 2011; Mukhija, 2002; Patel S., 2013; Shah, et al., 2021; Sunikka-Blank, et al., 2019, Turner & Ward, 1977; among many others). Different policy approaches have been developed and tested under varying political and economic framework conditions, and outcomes were screened and evaluated. Shortcomings, constraints, and challenges were detected and highlighted, as well as recommendations devised thereupon. Such assessment and analysis, in turn, facilitated further adaptations, revisions, and improvements of national and regional policy approaches in various countries worldwide.

Given these extensive experiences, which have contributed to a vast and continuously growing knowledge base, it may be regarded as noteworthy that some fundamental concepts of such social housing schemes have remained astonishingly unchanged over the decades in many regions. As a point in case, resettlement of slum dwellers to different locations still represents a fairly common practice throughout the Global South even though Andavarapu and Edelman (2013), amongst others, discern a phase roughly between 1950 and 1972 as the heydays of this social housing approach. For such—often large scale—redevelopment schemes, which displaced affected residents to urban fringes, evidence of negative social implications quickly surfaced. However, redevelopment by relocation and replacement continues to be executed to this day, often in a relatively unchanged manner.

The literature identifies two prominent areas of concern for the case of resettlement. Firstly, these concentrate on issues causing economic distress for affected residents, such as difficulties accessing jobs in the new place and increased cost for transport (mainly linked to a location on urban peripheries) and increased running costs in the new flats. These failures are generally perceived as contributing to a rebound effect that sees beneficiaries opting to leave resettlement colonies for more affordable slums and squatters (Bardhan et al., 2018; Debnath et al., 2019; Berner, 2001). Broader investigations highlight that the affected residents lost economic and social capital in the resettlement (Cernea, 1999).

The second strand of literature perceives these failures as closely connected to a lack of participation of the affected residents in resettlement schemes, be it in terms of site selection, flat layout or the overall resettlement process (Bardhan et al., 2015; Cronin & Guthrie, 2011; Dupont et al., 2014; Geest & Nys-Ketels, 2019; Mafukidze & Hoosen, 2009; Patel, K., 2013; Coelho, 2016). Resistance to resettlement on the residents' part and their unwillingness to take responsibility for the maintenance of resettlement colonies is seen as a direct result of this lack of participation and residents' agency.[1] On the other hand, a general lack of capacities and capabilities on local urban bodies' (ULBs) side is seen as the main reason why these do not adequately involve residents in the planning process. This latter fact is seen as especially poignant for ULBs of smaller and medium-sized cities (Ahluwalia, 2019; Véron, 2010).

For the case of medium-sized cities, investigations into outcomes of resettlement policies are scarce,[2] even though they are potentially beneficial for understanding whether experiences gained with resettlement schemes in bigger towns are likewise applicable here. There are about 70 medium-sized cities in India, comprising of a population ranging roughly between 500,000 and 2 million inhabitants. Secondary cities perform essential functions in the national and global system of cities. They are secondary hubs in a complex network of production-distribution supply chains, connecting different spatial levels of human settlements. Urban growth is expected to be most significant in medium-sized and small cities of the developing world, which are generally less well resourced in terms of professional capacity, governance, and finance.

Compared to big megacities and first-tier cities, these smaller urban agglomerations' local authorities often lack human resources, capacities, and experiences in planning and implementing large-scale housing projects (Ahluwalia, 2019; Véron, 2010). Consequently, there is a particular risk of repeating somewhat outdated models in these smaller cities that have been proven problematic or unsuccessful in megacities. Given these framework conditions, there is a need for research to understand the requirements for policy responses in these kinds of cities (Cronin & Guthrie, 2011; Kamath, 2012; Patel 2013; Roberts, 2014).

This article intends to holistically understand the impact of resettlement in the context of Coimbatore, a medium-sized Indian city in the union state of Tamil Nadu. It aims to explore the effects of resettlement on the urban poor's daily lives and lived experiences and the institutional responsibilities of the government/

parastatal agencies in this respect. It describes these effects relating to the residents concerning their social networks, livelihoods, living habits, and culture. It also explores the local government's fundamental problems during projects' implementation and completion and how these processes shaped resettlement outcomes.

Methodology

The first step of this study consisted of the identification of potential policy affected sites within city limits. Different cases in terms of policy or housing implementation models were required. To this end, pilot studies were conducted in various locations to understand different settlements. Secondary data was collected from various documents like the City Development Plan, Slum Free City Plan of Action, project status documents, Policy documents of Tamil Nadu Slum Clearance Act 1971 and Basic Services to Urban Poor, Comptroller Auditor General Reports, and newspaper reports on the housing schemes implemented in Coimbatore. This data formed the basis for site selection. Under BSUP, a total of 17 housing projects have been implemented in Coimbatore in 3 phases, starting in 2017, some of which were not yet finalised at the time of this research. 3resettlement projects were pre-selected from this list of slum interventions and underwent closer scrutiny before the following three cases were selected for the indicated reasons:

1. Ammankulam—a recently completed scheme under Jawaharlal Urban Renewal Mission (JNNURM) that employed resettlement mode as a way of slum housing; contrary to other projects, Ammankulam had been occupied already for a while at the time of the study, and it was fully occupied (no vacant buildings)
2. Vellalore—the largest resettlement programme in Coimbatore under JNNURM, built on the city fringes and only partially occupied at the time of the study
3. Siddhapudur—a resettlement colony which had been completed in the early 1970s but was itself notified as a slum at the time of the study

These three cases were selected because they exemplarily stand for different housing policies that developed over time and present a good case for comparative studies and bring to light most of the systematic strengths and weaknesses that resettlement and in situ construction are often confronted with. Care was taken to select schemes of roughly similar socio-economic backgrounds to allow for comparison. Structured household surveys were conducted in all three sites and thoroughly controlled the comparability of households' socio-economic background. Accounts of residents were triangulated with policy document analysis and interviews with municipal staff.

Following Groat and Wang (2013, p. 357), a theoretical replication of multiple cases was followed, wherein, rather than testing precisely the same

outcomes, principles, and predictions as in the initial case, contrasting results are produced but for predictable reasons. As described by Yin (2018), the three case studies combine document analysis and interviews, thereby exploring the lived experiences of residents and framework conditions thereof.

The overall research design for each settlement comprised of two distinct stages:

1. Introductory pilot survey rendering a general picture of each settlement.
2. Semi-structured surveys as well as workshops, focus group discussions, interviews with residents and city officials (triangulation of quantitative and qualitative data).

Stage 1 mainly served to gain a broad understanding of the selected sites' record of policy implementation. During Stage 2, primary data was collected from the affected residents and governmental agencies through surveys, discussions, and interviews. Field visits were conducted regularly for the collection of site data.

Based on the findings of the first phase of this research, possible factors responsible for complications encountered in the investigated housing schemes were identified. This was done through a cause–and–effect analysis. The second phase consisted of a comparative analysis involving developing a matrix based on specific parameters. These parameters were derived from primary data collected in the investigated sites. The matrix was generated from the performance levels of each scheme concerning each of the above parameters. This provided concise information on the strengths and weaknesses of each project.

This analysis contributed to filtering out relevant and generally applicable parameters for residents' satisfaction and identifying specific criticalities and limitations for each housing policy approach under scrutiny.

Furthermore, this analysis allowed for comparison on two axes: first, critical factors for residents' satisfaction could be elaborated. Secondly, looking at the housing policies applied in these three cases through the lens of concepts tested in more prominent megacities, it became clear which of the interdependencies found there do likewise or to a different degree (or not at all) apply for the case of Coimbatore as a medium–sized city.

The Local Context of Housing Policy in Coimbatore, India

Coimbatore, a medium-sized city in Tamil Nadu, is currently confronted with problems providing basic infrastructure and housing in correspondence with its rapid urbanisation. Its rate of development since 2000 has exacerbated the city's urban problems, particularly in the realm of environmental degradation and housing for the urban poor. Though pro-poor reforms, in the form of the Tamil Nadu Slum Clearance Act, have been at large in the city since the 1970s, it was only from 2005 onwards that significant investments were made for developing

the urban infrastructure, the most prominent among these being the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

JNNURM was a nationwide city improvement initiative launched by the Government of India in December 2005. It was initiated to offset the problems associated with urbanisation and ensure organised development in urban areas by providing infrastructure and reforming the governance system. The Mission's duration was initially spread for seven years from 2005 to 2012, which was later extended for another two years till 2014.

The main aim of the Mission was to provide for quality urban infrastructure, improve community participation, ensure accountability of ULBs to its citizens and instil financial sustainability and discipline in the government. There were two submissions under this, namely: (i) Urban Infrastructure and Governance (UIG) and (ii) Basic Services to Urban Poor (BSUP). BSUP focused on integrated slum development by providing housing, basic services and other civic amenities to the urban poor.

While large amounts of funding were made available to the union states and the ULBs for development projects, certain conditions were associated with availing them. The Mission emphasised the compulsory implementation of reforms on the urban level, the most significant amongst these being the implementation of the 74th Amendment of the constitution that devolves powers to the local bodies for their effective functioning.

After concise targets and goals were fixed, the state government and the ULBs, including the parastatal agencies, had to draw up a Memorandum of Agreement with the Government of India. The agreement contained details of the reforms on the urban level to be adopted and the timeline for achieving specific reform agendas. JNNURM also mandated the preparation of a City Development Plan by the ULB to outline the vision and strategies to be adopted in the next decade and identify areas of concern within the city. Further, a Detailed Project Report (DPR) was to be prepared for specific projects.

At the bottom of the hierarchical system, ULBs and parastatal agencies were in charge of preparing project proposals, implementation, and monitoring. These authorities prepared the DPRs, which had to be submitted to the State Level Nodal Agency (SLNA) for further scrutiny. The SLNA supervised the implementation of JNNURM schemes at all stages. In Coimbatore, for BSUP works, the Tamil Nadu Slum Clearance Board (TNSCB) was the primary agency.

The Mission emphasised capacity building and improvement of human resources in ULBs to enhance their overall performance. Finally, a social audit was mandatory by which the performance level of each housing project and grievances could be registered.

BSUP was executed in Coimbatore in three phases through 17 projects with an initial budget of Rs. 443,55 crores (66 million USD) with 22,230 intended beneficiaries. However, only "Notified slums"[3] were considered by the government to be eligible under the BSUP scheme. There were primarily two approaches towards the informal settlements: (i) In situ tenement construction

and infrastructure up-gradation for people with legal land ownership documents and (ii) Resettlement Schemes for the landless. The Coimbatore City Municipal Corporation (CCMC) executed works either by constructing new homes with infrastructure or upgrading existing facilities.

Results: Case Studies

It is to this organisational background that three of the investigated housing projects were implemented. As will be demonstrated, each site's particularities play out differently in each case and need to be studied on a case-by-case basis. Summaries of these particularities are given below.

Ammankulam

This resettlement colony, comprising roughly 800 dwelling units in multi-storey blocks, was constructed on marshy public land reclaimed from a former lake. During the construction phase, some newly built blocks partially sank into the ground. Consequently, the overall site plan had to be revised, and the number of storeys in all blocks was reduced. Accordingly, significantly fewer households could be accommodated in the settlement. Therefore, those who could not be housed here were supposed to be given homes in other resettlement schemes within the city. At the time of this study, many people in Ammankulam were still living with friends and extended families while awaiting their unit allotment in other resettlement schemes.

The beneficiaries eligible for this scheme[4] had to prove their identity through ration cards.[5] However, since many of them lived in joint families, a single ration card would contain up to eight persons. Given the rule of "one unit per ration

FIGURE 10.1 Ammankulam housing colony. Photograph by the authors.

card," a joint family was eligible for only one apartment. However, the colony's units of 26 sqm each were too small for large families. The beneficiaries first had to apply for new ration cards to apply for more units, which was a time-consuming process.

A substantial part of residents in Ammankulam (those who formed the focus of this case study) had settled in a nearby lake encroachment before being shifted here. Thus, their new homes are located within half a kilometre of their previous settlement. Due to this, the relocation to Ammankulam primarily did not affect these residents' livelihoods, and they were found to continue walking to their respective places of work without being obliged to use and spend their meagre income on public transport.

As executives of TNSCB thought that "nothing is to be gained by involving them [the residents] in the designing," the entire process of project design and implementation was top-down without the involvement of the affected beneficiaries. The layout and design of the whole colony, the building blocks, and single units do not substantially differ from other resettlement schemes implemented in the city during the last decades (as found in case study Siddhapudur, see below). After completing the buildings' construction, residents were given one week to move into their new homes.

The provision of basic services in the colony is beset with several flaws: access roads are deemed unsafe, especially at night, due to poor street lighting and dog infestation. Septic tanks are connected to underground pipes, which release the effluents directly into the nearby Sanganur stream; this has instigated mosquito breeding grounds and foul smell in the neighbourhood.

In interviews conducted in Ammankulam, residents who had been relocated from the investigated departure slum stated that communal activities had been more vibrant in their previous settlements. In this new colony, they now live in a close neighbourhood with dwellers relocated from various other slums across the entire city. These different groups of people only have in common their relatively homogeneous low-income levels (average monthly income per household is Rs. 5,000/75 USD), which qualify all of them under the Economically Weaker Section (EWS).[6]

As evidenced in the interviews, a general atmosphere of mistrust prevails in Ammankulam as an apparent consequence of strangers' conviviality. This mistrust is most evident in forming a residents' association, which will bear infrastructure maintenance and financial management responsibility. This association is required under BSUP; however, although TNSCB has initiated such an association, residents seem to be sceptical about this idea. According to an official, they fear that they have to pay for maintenance and stall the procedure.

An informal resident welfare association called "Nalla Sangam" currently represents the Ammankulam housing colony. It engages in community welfare programmes like cleanliness drives and communicates residents' common grievances to government authorities. Nevertheless, there is opposition from residents to registering this association formally, as it will obligate a monthly maintenance

fee for each household. Residents are unwilling to entrust their money to an association that comprises people practically unknown to them and whom they have no reason to trust. Due to a lack of maintenance by an entrusted association, the entire colony is in an apparent state of disuse and lack of maintenance.

Vellalore

Up to date, the Vellalore colony is the largest resettlement programme in Coimbatore. On 20 acres of land, in 88 blocks of height G+3, it houses over 9,500 people who previously were residents in 24 different slums all over the city. The colony thus brought a plethora of cultures to live together in this one precinct.

This colony is located at the fringe of Coimbatore city. A substantial part of its residents (those who formed this case study's focus) had settled in a much more centrally located slum, 11.6 km from Vellalore, before being shifted here.

A proposal for a large-scale bus depot and lorry-pet (where lorries are stationed for servicing and also designed as resting area for lorry drivers) for the near future in the colony's immediate neighbourhood had initially promised employment opportunities for the displaced dwellers (as drivers, guards, etc.). Necessary skill training in this regard was planned to be provided. Also, a few women were trained to be employed as nurses, tailors, beauticians, and, most of all, entrepreneurs. However, this training programme's outreach was limited only to women from one of the relocated slums, and the lorry-pet had not yet materialised at the time of the study.

Therefore, due to resettlement, most interviewed residents needed to commute to their previous work in the city centre. Thus, interviewees indicated that the costs of travel had increased substantially after the relocation. Women, who had worked as domestic help before relocation, had to give up their jobs since the travel time and costs involved seemed practically unviable. Time spent on travel, infrequent bus services, and added transport costs implicate financial and physical stresses on the colony's residents. Furthermore, they must travel to their departure slums for subsidised rations (since their ration card continues to be accepted only in their previous area of residence), adding to the commuting costs and efforts.

The children of the colony also were found to travel long distances to reach their schools. The time and costs of travel add to the financial pressures on the households. As a remedial measure for increased transport costs, most residents had come together to arrange for private vehicles for pick up and drop services of school children. However, this likewise turned out to be a costly affair. According to the parents, the extended time for travel curtails the children's playtime, and most of the evenings are now spent finishing schoolwork.

The transition to schools located close to Vellalore was not realised for most children because they had attended good-quality schools in their location before rehabilitation. The relocation was oddly timed: shift to other schools

would have led to the loss of a whole academic year; children feared losing their friends. A public school, ration shops, childcare, and the health centre within the Vellalore colony premises remained still non-functional at the time of the study.

According to residents, little decision-making power was vested in their hands for the entire project design and implementation process, mostly without consulting them. Apartments were randomly allotted to them, with preferences for ground-floor flats only given to households with senior citizens or physically disabled.

At the time of this case study, several building blocks remained vacant nearly one year after completing construction work. The interviewed residents perceived unoccupied blocks and vacant lands as unsafe spaces for illegal activities such as drug abuse or alcohol consumption by minors. The diverse social groups housed in the colony and random allotment procedures by the TNSCB disrupted residents' previous social networks. Low interactions between communities were described as being linked to differences in religion or religious practices, caste, etc. Issues of trust and reciprocity hindered the safety and the sense of security among the dwellers.

The residents' concerns were being communicated to block committee members appointed post-relocation. These block committee members were selected based on religion (at least one Hindu, Muslim, Christian, etc.), with female members completely missing. Although the committee organised weekly meetings, the dwellers' participation was weak, revealing a lack of trust. Constant persuasion by the committee to better the living conditions remained futile.

During the study, the colony exhibited a disorderly look at first glance. The reasons ranged from low quality of construction indicated by cracks in the walls, leaking plumbing lines, etc., to insufficient maintenance by the corporation and the dwellers, specifically in waste disposal. Undisposed wastes clogged the rainwater culverts. The dwellers and the municipal corporation engaged in mutual blaming over this lack of maintenance.

Siddhapudur

This resettlement colony was initiated in the early 1970s and completed in 1973 to house people from the Economically Weaker Sections residing nearby. The parastatal body in charge of executing the scheme was the Tamil Nadu Housing Board (TNHB).

The colony is located close to the central commercial zone of Coimbatore with major transportation facilities, thereby providing residents quick and affordable access to job opportunities. The employment scenario of Siddhapudur residents exhibits a particular polarity between those employed as municipal workers and those working as coolies, presenting a picture of the haves and have-nots within the colony.

FIGURE 10.2 Siddhapudur housing colony (encroachments in the foreground). Photograph by the authors.

This colony covers an area of 2.4 hectares and comprises 216 dwelling units in 36 building blocks of G+2. However, over the years, the colony itself developed into a slum due to the unavailability of space for the growing households and migrant population who came to the city in search of new employment opportunities. Extended families, primarily the progeny of the original residents, have constructed an extra of 318 encroached tenements around the TNHB built houses, thereby significantly increasing the colony's residential density.

The encroached houses are constructed as per the space constraint of the particular environment. The older homes near the arterial roads have mud walls, while the more recent ones, located farther inside, are made of brick. Typically, all these homes have one multi-purpose room and kitchen without a toilet.

Today, roughly 50 years after construction, the TNHB built houses display a state of ruin with exposed reinforcements of columns and beams, substantial cracks on walls, run-down paint, and vegetation growth on the building surface. Basic infrastructure, likewise, gravely lacks maintenance and repair.

This colony's responsibility was transferred to the TNSCB after Siddhapudur was officially notified as a slum in 2010. A resident association representing the community and being in charge of the colony's maintenance has never been formed. TNSCB officials stated that "residents' unwillingness to pay towards maintenance was the sole reason that residents' associations weren't formed."

The owners of the dwelling units were entitled to what is termed "Floor Rights." These rights essentially entitle them to own an apartment without rights to the land. Thereby, the local government remains in possession of the land so that redevelopment can be carried out quickly in the future. As found in interviews, the "Floor Rights" system has instilled a sense of alienation among residents. However, from a bureaucratic perspective, the "Floor Rights" system is supposed to have reduced the officials' burden in garnering the community's support for future development and, therefore, is still favoured by governmental agencies (also applied in Ammankulam and Vellalore, as discussed earlier).

The colony currently houses about 2,000 people, most of whose families live here for generations. Though the owners themselves occupy many dwelling units, there are a few renters too. Almost the entire population is affiliated with the Hindu religion except for a few Muslim households. The residents claim that, despite differences in religion, caste, and language, there is participation in all festivities of the colony by all families alike. These claims suggest a certain sense of communal harmony among residents.

There is no space allocated for recreational purposes like community halls, children's play areas, or dedicated green spaces for parks and gardens in the housing layout, and the scarcity of space has been seriously aggravated by the encroachments. This scarcity of space has resulted in residents taking to the adjacent road for their leisurely get-togethers.

As of now, there are proposals to redevelop the Siddhapudur area to accommodate the increased population. Such redevelopment will involve deliberation on beneficiary identification, issues of going high rise, community participation, etc.

Discussion: Comparison of Cases

These three investigated housing colonies lend themselves for comparison as they all, at different points in time, were subject to government interventions with the aim of improving and regularising housing conditions. However, while comparing these three different colonies, some differences have to be kept in mind, e.g., the size or socio-economic profiles of the residents.

Housing and Tenure

Design of Apartments and Blocks, Communal Facilities within Blocks

In all the three colonies, apartments were built by a governmental agency. All colonies provided by authorities display very similar designs of multi-storey building blocks, even though they were respectively constructed over a period of roughly 50 years. This indicates that authorities have hardly assessed these designs' suitability nor have they adapted them to meet residents' needs. Siddhapudur, as the oldest of these colonies, displays the designs' shortcomings most strikingly:

due to the units' minimal size, residents here resorted to encroaching land within the colony's premises to make room for their growing families. As a result of this overcrowding, local authorities are considering proposals to redevelop this area as it has gone back to being notified as a slum.

Tenure

Residents in Ammankulam, Vellalore, and Siddhapudur were provided "floor rights" for their units without the right to land, arguably making future redevelopment easier for the local government which remains in possession of the land.

Location

All of the three colonies are located near the city canter of Coimbatore, thereby enabling most of the residents to walk to work and to access many public amenities. By contrast, the Vellalore colony is situated on the city fringe. Therefore, households' expenses and time spent on travel have increased substantially after relocation. Most residents keep commuting to their previous inner-city jobs in the absence of suitable job opportunities in the new location. Women, who had worked as domestic help before relocation, had to give up their jobs since the travel time and costs seemed practically unviable. Children spent less time playing.

All colonies are built on public land so that it could be provided or regularised by the ULB. However, in both Ammankulam and Vellalore, the land is of low quality—due to its location either on marshy reclamation land, unsuitable for construction, or on the urban outskirts far off the centre, with the city's largest sewage treatment plants located only one kilometre from the settlement.

Construction Process and Construction Material

After 50 years of usage without sufficient maintenance and repair, Siddhapudur showcases how both Ammankulam and Vellalore are likely to end up in the future: overused, encroached structures of dubious construction quality and structural safety as well as poorly functioning basic infrastructure. Some of these problems can be observed in the making in the newly constructed colonies already today.

Relocation Process and Participation

In both Ammankulam and Vellalore, the entire resettlement process, i.e., pre-relocation planning, transitional operations, and post-relocation planning, was primarily implemented without consulting the affected residents. Apartments were randomly allotted without taking residents' social ties from their departure slums into account.

A quote best reflects this lack of participation from a TNSCB official regarding the residents: "They lack knowledge regarding designing or planning. They do not understand the technical difficulties involved in the construction. So, nothing is to be gained by involving them in the designing process."

Conclusion

Most of the concerns raised for both resettlements that had so far primarily been investigated in larger towns and megacities (see Introduction) also apply to the cases under scrutiny here, in the medium-sized city of Coimbatore. To a certain degree, an exemption is location that may be understood as linked to land prices and properties of the local land market, respectively, the availability of land for the ULBs. As demonstrated, this difference to larger cities is gradual rather than principal in nature. For example, Ammankulam—contrary to resettlement in peripheral areas in bigger cities—is centrally located and allows residents to continue walking to work; it is still built on unsuitable, reclaimed land. None of the three resettlement colonies was constructed higher than G+3—unlike structures of G+8 and beyond in the Indian megacities where density is usually very high. However, unit size in the Coimbatore resettlements is still minimal and has prompted residents in Siddhapudur to encroach on colony land, thereby increasing overall residential density.

Given that units are of similar size (and residents display similar demography) in the newer colonies of Vellalore and Ammankulam as they are in Siddhapudur, it is entirely plausible that in the future, residents there may resort to similar means of encroachment to cater for space to extend families. Siddhapudur also showcases what the future might be like for newer colonies regarding the decay of buildings due to lack of maintenance. Fifty years after being built to get residents off the slums they had formerly inhabited, this colony has again turned into a slum.

Contrary to patterns found in the literature, as described above, rebound effects in the Siddhapudur colony's case did not occur by way of residents leaving the resettlement area to go back to other slums. Instead, they remained in the colony, which itself gradually assumed slum-like conditions as material dilapidation could not be or was not hindered from taking place.

Consequences of lack of maintenance are physically visible in all colonies. Lack of maintenance seems closely linked to the fact that no residents' associations were formally established due to a lack of trust in neighbours or to avoid fee payment for such an association and any maintenance work. Furthermore, according to Cronin and Guthrie (2011), those who had no say in what was built generally display a minor willingness to engage in upkeeping and maintenance. This understanding certainly gives an additional clue as to why residents in all three resettlement colonies investigated in this chapter display unwillingness to form residents' associations.

We argue that the degree of agency vested in the residents—or the lack thereof—gravely contributes to this status quo in the different sites. Following

Emirbayer and Mische (1998), we find that residents were not provided with the capacity to imagine alternative possibilities. There was no room in the entire process for them to propose alternatives to plans envisaged by the local authorities. These plans, in consequence, missed the chance to be informed about the residents' past habits.

In Ammankulam and Vellalore, such information brought forward a more active engagement of residents and their participation in decision-making processes before, during, and after construction could have avoided problems such as random allotment of units which unnecessarily destroyed people's social networks and instilled an atmosphere of distrust among the new neighbours.

Contrary to successful experiments in Indian megacities (Appadurai, 2001), none of the cases studied here involved mediation and facilitation of the resettlement plan and process by CBOs and NGOs on behalf of the affected residents. Such mediation could have helped make residents' voices heard and increase their agency over their homes and, consequently, their willingness to contribute to its upkeeping. Thus, this medium-sized city can take advantage of experiences gained elsewhere in this realm. However, such involvement of CBOs and NGOs also requests further capacity building on the part of the ULBs (Ahluwalia, 2019; Véron, 2010).

Soft versus Hard City Aspects

Transplanted from their former informal living environments to different forms of resettlements, residents in the colonies studied here found themselves confronted with various kinds of challenges, ranging from failing infrastructure provision to distance to jobs and lack of access to public transport and resulting time poverty due to long hours spent commuting to far-away city centres, to disruption of pre-established networks and children's educational careers, etc. They grapple to cope with the devastating impacts of these challenges on their daily lives. The case of the long-established colony in this study sample impressively demonstrates how, over the decades of its existence, residents found ways to cope with its physical deficiencies—such as the lack of space for family extension—by literally adapting the physical environment to their needs, albeit at the expense of their settlement being labelled as "slum" anew.

Notes

1 Following Emirbayer and Mische (1998), we here understand agency as a "temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualize past habits and future projects within the contingencies of the moment" (p. 963). Actions are thus "caused by their (anticipated) consequences." Therein, actors are conceived of "not as atomized individuals, but rather as active respondents within nested and overlapping systems" (p. 969).

2 In a cursory literature search on Scopus database, it was found that for 67 investigated second-tier cities in India, only on 9 of them articles on resettlement housing interventions have been published to date.

3 A neighbourhood that is notified as such by the state, union territory (UT), or local government under the Slum Act.

4 Residents of Ammankulam had previously lived in several other slums. For the purpose of this study, the situation of residents from one particular departure slum was investigated in detail.

5 Ration cards: In India, ration cards are an official document issued by state governments to households that are eligible to purchase subsidised food from the public distribution system under the National Food Security Act. Groceries are availed by surveyed households at subsidised rates through government-provided ration shops with proof of a ration card.

6 Economically weaker section (EWS): In India, this is a subcategory of people belonging to the General Category having an annual family income less than Rs. 800,000 (11,000 USD) and who do not belong to any category such as SC (Scheduled Caste), ST (Scheduled Tribe), or OBC (Other Backward Class).

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11

THE VERTICAL VERSUS HORIZONTAL CITY: WHY VERTICAL RESETTLEMENT (MOSTLY) DOES NOT WORK FOR THE URBAN POOR

Tania Berger

Resettlement and relocation schemes implemented by national governments often encompass demolitions of slums and replacement with multi-storey housing schemes on the outskirts of cities. This policy is found not to work efficiently for several reasons, as demonstrated in several chapters of this section. Let us here recap the most salient points of these deliberations from the people's perspective. Thereupon, it becomes clear why a lack of participation of those affected in resettlement programmes contributes to these programmes' failure to accommodate people's lived experiences. However, approaches of how to overcome this failure remain to be devised.

Local and regional authorities may give a bundle of reasons for wanting to relocate slum dwellers from inner-city locations. Dismantling overcrowded, unhygienic, and, therefore, unhealthy living quarters constitutes one such frequently cited motivation as well as the aim of removing residents from hazardous and risk-prone sites in a bid to safeguard their health and well-being. Furthermore, these valuable inner-city lands are seen to be put to more productive use when replacing low-rise slums by high-rise developments. Ultimately, these economic reasons, favoured by the entrepreneurial state, may often be the most compelling ones for the relocation of slums. However, the vertical resettlement, the preferred mode of relocation, was repeatedly found to (mostly) not work for the urban poor for several reasons.

Firstly, multi-storey buildings involve the appliance of construction techniques—such as reinforced concrete—which, predominantly, are not locally sourced and produced, capital-intensive, and consequently comparatively expensive. Vertical living is, therefore, generally expensive for low-income earners. In line with these findings, scholars have observed rebound effects on occupants after relocation to vertical resettlement colonies (Debnath et al., 2019). These occupants are often unable to afford the total costs related to their new homes,

regardless of the specific financing options and mechanisms in place in a particular programme. Consequently, residents often opt to move back to housing in (more centrally located) slums because these options are more affordable. At the same time, they sell or rent their flats in resettlement colonies. Therefore, resettlement policies are argued to fuel the further proliferation of informality (Bardhan et al., 2015).

Secondly, low-income earners are often engaged in low-skilled, manual work that requires access to spaces on the ground for storing of materials and manufacturing or vending products, goods, and services. As extensively demonstrated in several chapters in this section, people often find it hard or impossible to transfer such income-generating activities to upper-storey apartments. Many of their daily activities, be they related to livelihood or household, depend upon the availability of, and access to, public or semi-public outdoor spaces as the homes of the urban poor mostly are too small to accommodate all these activities indoors, and access to potential customers in the public sphere is vital. Multi-storey building blocks seldom provide access to these spaces and thus hamper residents' established livelihoods and daily routines.

Additionally, slum dwellers rehoused far away from their prior location and city centres frequently lose their established jobs and sources of income in centrally located areas or pay significant proportions of their income for commuting to these places. They also spend long hours travelling, inflicting severe time poverty upon them. Similarly, children's education may be jeopardised due to changes in school, long travel times, and reduced time budgets for exercise.

Finally, given the rapid urbanisation witnessed by most cities in the Global South, significant parts of cities' inhabitants are of rural migrant origin, albeit often already of the second or third generation. While aspirations for "modern" urban lifestyles certainly exist (Erka, 2013; Haliloglu Kahraman, 2013), the inability to afford these and the necessity to entertain locally self-sufficient safety nets of sustenance often prevail among informal settlers as well as inclinations to stick to "traditional," somewhat rural lifestyles. Therein, relations to the land and the immediate surroundings and the neighbourhood play critical roles. However, these rural lifestyles are difficult to sustain in vertical housing. They are strongly linked to many practices performed on the ground, such as animal slaughtering, vegetable growing, or cooking on an open fire, and other cultural and religious practices. Such practices are essential to sustain social networks, which may be destroyed after resettlement to the vertical city. In the resettlement process, existing communities with strong social ties and networks of mutual support so vital for residents' daily survival are often torn apart.

Lived Experiences of Horizontal versus Vertical Housing in the City

One could be tempted to discern a certain dichotomy here: highly skilled, well-paid urbanites residing in high-rise buildings and adhering to a "globalised,"

"modern" lifestyle on one hand side, set in juxtaposition to low-skilled, low-wage-earning migrants from the countryside, living in makeshift, low-rise huts and squats, engaged in all sorts of activities generally linked to what is deemed a "rural" lifestyle.

Of course, realities on the ground are much more complex. When individuals, as well as groups of people, decide for whatever reason to move from their rural homes to cities and big urban agglomerations, multiple processes of change on both the individual and group level can take place over the years and decades to come. Physical changes in the housing environment are often profound, frequently involving increased population density. However, changes may not be limited to the migrants alone, as the receiving communities may also be affected by change. Sociocultural adaptation is predicted by cultural knowledge, degree of contact, and intergroup attitudes (Berry, 1997).

For those newly migrated to urban environments, contacts with kin and other migrant groups of similar origin tend to be more crucial than access to the urban population. Being primarily low-skilled and thus low-wage-earning, migrants frequently need to harness economic options of living with friends and family to save on housing costs. They also often rely on their acquaintances to find work and sustain themselves in the new environment (Erman, 1997).

In the long and complex process of adaptation, different spheres of migrants' lives may change more than others: in more private domains (such as the home, the extended family, the ethnic community), more cultural maintenance may be sought than in rather public spheres (such as the workplace or politics) (Berry, 1997). The length of residence in the city represents a key figure in the adjustment process. While migrants' poverty does not necessarily decrease over time, their access to knowledge and information about the local job market undoubtedly improves. This can enable them to access better-paying jobs (Gupta & Mitra, 2002).

Over time, migrants may eventually orientate towards urban role models and lifestyles. In this process, urban housing styles start to be regarded as a gain in socio-economic status to be aspired to. At the same time, strong local networks in their immediate urban neighbourhoods may well remain extremely important for these new urbanites (Erka, 2013). Finding job opportunities nearby is crucial for them to avoid excessive daily expenses for commuting (Gupta & Mitra, 2002).

Specific local conditions strongly influence these general trajectories in different countries and cities. Lack of economic possibilities, exclusion, and marginalisation can render upward social mobility extremely difficult, even for those who have moved to the city long ago. While migrants may aspire for "modern" urban housing, it can remain simply unaffordable to them. Their established "traditional" lifestyle, relying on tight social networks in a local community within the city fabric, thus represents an economic necessity, with low-rise housing forming an integral part thereof. For example, Drummond and Granotier (1981) have demonstrated for Brazilian "favelas" how rural migrants to the cities gradually start adapting their makeshift huts to more urban housing models, thereby

gradually integrating into the houses' interior activities which they had origi-nally performed outdoors, such as bathing and cooking. As shown by Erka (2013) for Erman (1997) and Haliloglu Kahraman (2013) for Turkey, many migrants continue to cherish low-rise housing as a way of life, entertaining a strong rela-tionship with the immediate outdoor surroundings. Being able to grow vegeta-bles and rear livestock leaves them with a sentiment of being in charge of their own actions while sustaining frequent exchanges with their neighbours.

Both Erman (1997) and Haliloglu Kahraman (2013) find that attitudes of previously rural migrants towards "modern" housing in high-rise buildings can differ significantly; for example, (young) women may perceive such housing as a liberation from tedious household chores which are difficult to perform in underserviced low-rise squatters. Thus, they welcome modern apartments to allow them to take up jobs and entertain an emancipated way of life. Contrary to them, women in conservative families may value the privacy in low-rise hut-ments and even enjoy the closeness to nature related to these.

For the case of Ahmedabad in India, Desai and Sanghvi (2018) investigated the case of circular migrants who keep commuting between the city and their far-away ancestral lands for years and decades. She found that these migrants see their stay in the city—which is often burdened by extremely precarious housing conditions—as a means of sustaining their rural lifestyles back in their villages. Being excluded from and kept out of the city society while, as construction workers, they are, in fact, building the very same city with their own hands, these mostly male migrants have given up on finding a foothold in the city. They keep going back to their families in the villages during harvest season.

The Vertical City and Participation

For India specifically, Sunikka-Blank et al. (2019) identify a significant disjunc-ture between the occupants' realities and the policy objectives in rehabilitation schemes that employ relocation and resettlement. The lack of agency vested in residents during the planning and implementation of vertical resettlement colonies and condominiums gravely contributes to the described deficiencies as housing policies continue to fall short in acknowledging residents' expertise in handling their daily needs and challenges regarding housing.

In general, frequent failure of rehabilitation schemes can largely be attrib-uted to the lack of participation of directly affected stakeholders (Bardhan et al., 2015). Residents usually are neither consulted on their needs nor are their opin-ions and preferences considered. In many cases, even information on what is to happen to them is only sparsely handed down to them, without offering them any compelling alternative. In consequence, while programmes such as the Indian "Jawaharlal Nehru National Urban Renewal Mission" (JNNURM), in theory, aim at the participation of affected residents in rehabilitation schemes, in practice, they often face outright resistance from slum dwellers (Geest & Nys-Ketels 2019).

Participation is often seen as challenging, requiring the lengthy engagement of institutions that implement housing schemes. Especially when affected residents in rehabilitation and redevelopment projects comprise different and heterogeneous communities, participatory processes tend to become complicated and tedious (Dupont et al., 2014). This effort linked to participation acts as a significant deterrent to implementation at the local level, as well as a lack of experience in implementing such processes.

Patel (2013), amongst others, points out that inadequacies of what was built directly relate to not involving slum dwellers in the design and planning of their new homes. In the long run, residents' lack of engagement also impacts the management of entire rehabilitation sites: those who had no say in what was built display a minor willingness to engage in upkeeping and maintenance (Cronin & Guthrie, 2011). Quick decay and disintegration of buildings and infrastructure may be seen consequently, as highlighted in Shankavaram and Thiagarajan's chapter in this section. Similarly, Keluskar also demonstrates the overall insufficient quality of buildings' design and construction.

Have Lessons Not Been Learnt?

Given extensive experiences in resettlement over the last decades (see Ackerman, 1971; Turner & Ward, 1977; Davis, 2007 and Lim, 1987; among many others), it is astonishing that resettlement of slum settlers to new—often peripheral—locations still represents a fairly common practice throughout cities of the Global South.

It appears that lessons learnt from the past have still not been attended to. As Coelho (2016) states:

> The approach of mass resettlement in peripheral tenements, despite its proven failure, has resurfaced as the favored technology of slum clearance, driven by the exigencies of real estate urbanism. These findings bring into question the role of evidence-based policy in state actions.

The scientific community focused on housing research thus needs to critically assess its relevance in contributing to policy changes. Even a substantial body of scientific literature documenting severe shortcomings of the resettlement housing approach could not, so far, keep policymakers and local authorities around the globe from further applying it despite concerns of those directly affected. This body of knowledge frequently finds itself in opposition to dominant political influences and powerful social groups focused on extracting revenue from prime real-estate lands.

In India, as a point in case, especially for medium-sized cities and smaller cities, studies indicate that the capacities of urban local bodies (ULBs) have not been strengthened enough for them to take on their responsibilities in implementing housing policies and programmes (Véron, 2010, Kamath, 2012). Officially, ULBs

are in charge of environmental protection, provision of amenities, sanitation, solid waste management, and safeguarding the interests of the weaker sections of society. In reality, however, local authorities often lack the capacity to implement ambitious housing projects in an ordered and timely manner (Ahluwalia, 2019), let alone to do so in a participatory manner. In many instances, NGOs need to facilitate such programmes on the ground.

For local politicians, prominent national housing schemes were found to offer opportunities to distribute favours amongst different urban groups and thus build up their sphere of influence (Hagn, 2016). Personal networks and corruption play a crucial role in the process. It should also be noted that due to the advent of prominent and large-scale national housing schemes, even real-estate markets of medium-sized cities and smaller towns have been opened to the influences of the neoliberal market logic[1] (Hagn, 2016).

However, to conclude these rather critical observations on the impacts of rehabilitation through relocation and resettlement, we also need to consider that some facts may still render relocation and resettlement a viable option for the affected dwellers in specific instances. Firstly, residents are likely to inhabit more sound constructions after rehabilitation to new multi-storey buildings than they did before in makeshift and self-built houses (even though infrastructure provision is often faulty). Together with the tenure security attached to the new flats, this fact is likely to yield a significantly higher market value of residents' property compared to their previous situation (Mukhija, 2001).

When analysing the seemingly paradoxical persistence of the resettlement approach, one needs to have a closer look at the policy implementation processes. Approaches to understanding the overall process that governments and other agents engage in regarding housing policy distinguish a strand focused on analysing specific political processes. These processes involve bargaining and negotiating agreements between the parties involved (Lindblom, 1993). In this pluralistic bargaining between interest groups, empirical research results and outcomes can be debated and contested as part of ongoing negotiations. Clapham (2018) argues that in this setting, research can improve the impact of housing policies by changing the nature of the bargaining involved by improving the information on which the debate is based.

However, this can only happen if all the information generated by scientific research reaches the arena of bargaining in the first place. The fact that empirical findings in the case of resettlement policy, as discussed above, remain largely unheeded in practical terms renders it questionable if research findings form the basis of political debate on housing policies in many regions of the Global South. It seems that policymakers are not aware of or do not take eminent research findings into account as they continue to implement resettlement and relocation schemes whose deficiencies have been highlighted repeatedly.

Other theoretical approaches to housing policy identify a strand focused on structural analysis. It is important to note that some parties may be powerful, resourceful and well organised and able to set the terms of the debate, while

others are powerless and disorganised (Clapham, 2018). Governments often use different strategies and mechanisms to promote dominant classes' interests and sustain a particular discourse and policy direction. To counter this power imbalance, the concept of "advocacy planning" was developed: this approach aims to help powerless people enter the process and impact policy (Lindblom, 1993).

In such a setting of advocacy planning, evidence-based research findings can offer valuable guidance and recommendations for selecting suitable housing options by local authorities. Such findings can also equip NGOs and CBOs on the ground with reliable data and sound arguments when advocating for the interests of affected residents. Therefore, the information generated by research needs to leave the purely scientific arena to take a stance in political bargaining over housing approaches which attend to the needs of those affected. Advocacy planning approaches also demand research results on informally housed groups to be shared first and foremost with these communities themselves, thereby empowering them to have their voice heard in the planning and housing policy discourse.

Soft versus Hard City Aspects

One may be tempted to diagnose a clear-cut distinction between the "hard" and the "soft" city along the line of the vertical versus the horizontal city, as elaborated hitherto. The mighty physical structures of the vertical city are products of a highly regulated, resource-intensive planning and construction process as opposed to the organically grown, seemingly unorderly hutments of the poor, built from scant materials, and mostly in breach of zoning and building bylaws.

Beyond these quick and easy distinctions, however, the picture often is much more blurred: not only may what looks like a "slum"[2] be perfectly formal, as demonstrated in the case of "kebele" housing in Ethiopia in this section. Globally, there also exists an entire plethora of nuanced legal arrangements in what Payne (1997) terms the "continuum of tenure," whereby even seemingly formal, "hard city" structures may lack a freeholder title or be constructed in contradiction to norms and laws. So, features of the formal, hard city—such as basic infrastructure—can still display a piecemeal presence even in largely informal districts. At the same time, soft aspects—residents' daily lived experiences, their mechanisms to cope with flaws and failures in both the built environment and the formal city governance, and the complex social webs they establish with the physical landscape—are constantly played out in formal as well as informal quarters.

Notes

1 In terms of housing, an important aspect of this neoliberal market logic is financialization of housing which has become commodified as a financial asset. This asset can be easily traded in financial markets for profit-seeking purposes, often detached from the social and lived value of housing as a source of shelter and social life (Aalbers, 2016). This means that housing (land, flats, houses etc.) is sold or rented on markets,

and not offered as a basic human need. People in precariousness such as daily wage earners and those working in the informal economy lack resources to access commodified housing markets and therefore often rely on non-commodified forms to secure their livelihoods (Bolt & Czirfusz, 2021).

2 A term widely regarded as derogative and thus avoided by many scholars, activists, and residents while consciously used as a means of identification and pride by others.

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12

CONCLUSION

Towards Just Resilience

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Cities of the world are in the midst of a complex jigsaw puzzle, so far unresolved. On the one hand, cities are in the throes of advanced global capitalism and an attendant "technological urbiquity" (a neologism that describes "a fast-emerging techno-social condition that facilitates remote access to almost everything that once was the reason for the city to exist and endorses the process of planetary urbanization"; Tripodi, 2020 p. 2). On the other hand, cities face enormous specific, granular challenges arising from climate change and its escalating impact on the lives of people everywhere. The lopsided attention on hard city, including huge investments in mega urban infrastructural projects like expressways, metro railways, bullet trains, and smart cities, is the prevalent imagination of city design and planning. This, in turn, misses out on the story of the soft city that each of the chapters in this volume highlights. Cases discussed in this book, in cities both in the Northern and Southern hemispheres, stress the importance of life worlds (the crucial interconnections between place, people, and culture), social capital, and networks. Resilience is experienced as a constant negotiation between the hard city and soft city on an everyday basis. Each of the cases discussed in this volume point out how the hard city has failed its citizens on several fronts and how people deploy the soft city to respond to that failure and, in turn, build their own resilience.

Contrasting the mighty physical structures and well-established organisational entities of the hard city with residents' daily lived experiences, their mechanisms to cope with flaws and failures in the built environment, and the complex social webs they establish within the physical landscape, the chapters look at the intersections and intertwining of spatial, social, and institutional housing conditions from (poor) people's perspective.

While concepts such as the "15 minute city" and the "city of short distances" are gaining new prominence in planning debates, especially in the Global North,

under the paradigm of sustainability, we are yet to acknowledge that the underlying ideas of such approaches are often a daily reality—and necessity!—in many slums and informal settlements of the Global South. Walkable distances to places of work and day-to-day necessities make these places the ultimate choice for their inhabitants who cannot afford to spend on individual cars or even public transport.

To a high degree, residents of such settlements already live in the post-oil city today. This is partly due to the extreme residential density in many slums. As detrimental as the resulting cramped living conditions may be to residents' health, they are, at the same time, what makes living in confined, inner-city locations affordable for poor and low-income households. However, pressures of land and real-estate markets also render slums and informal settlements in such locations vulnerable to displacement and eviction. Furthermore, the paradigm of the car-friendly city still looms large around the globe, and this orientation towards individual car ownership in urban planning increasingly excludes pedestrians and cyclists from the public realm, making it difficult for the urban poor to uphold an affordable and—at the same time—sustainable way of life.

Thus, while many cities of the Global North slowly come to realise that decades of car-oriented planning not only forced their residents into petrol-consuming and CO_2-emitting vehicles, endorsing highly unsustainable transport patterns, but also dehumanised its public spaces, cities in the Global South often still strongly strive for what they have come to perceive as "world-class cities" which encompass grand transport infrastructure schemes. These, however, tend to largely bypass and neglect poor residents' needs. The challenge, therefore, will be to realise that the car-friendly city ideal largely was, in fact, an error of the past—one which should not be continued into a more sustainable future.

Tied to this realisation is the further acknowledgement that uncontrolled, land-consuming urban sprawl likewise needs to be reconsidered. While there is no doubt that urban agglomerations, especially in the Global South, will continue to grow substantially, more sustainable and, therefore, more compact ways to accommodate this growth need to be found. In this respect, urban planning has still a lot to learn from dense slums and informal settlements. The United Nation's Sustainable Development Goal 11 "Sustainable Cities and Communities" in its target 11.1 aims to ensure access for all to adequate, safe, and affordable housing and basic services and to upgrade slums by 2030. To this end, this book sets out to demonstrate that slums and informal settlements in cities of the Global South, in many ways, do not only present considerable challenges.

At the same time, these settlements already constitute part of possible solutions vis-à-vis an all-encompassing shortage of affordable housing for the urban poor. Under present conditions, many slums and informal settlements offer the only real chance of a home for marginalised and low-income groups—as dire as overall living conditions in these places may be. They leave residents with some, albeit limited, options for earning a living near home while saving on costs for both housing and transport. With residents often resorting to self-building, they can exert some

agency over their own housing situation and adapt it to their economic possibilities and actual housing needs. The challenge for urban planning and policy then is to devise ways of including these settlements into the overall urban fabric by offering them options for improved basic infrastructure—both physical and social—as well as upgrading unsafe and unhygienic building stock and connecting them to efficient and affordable public transport. Enabling people to stay in their accustomed neighbourhoods and maintain their often thick and supportive social networks must figure as a key priority in any approach to such upgrading.

This implies leaving people with real choices over their living conditions. Therefore, SDG target 11.3 calls for enhancing inclusive and sustainable urbanisation and capacity for participatory, integrated, and sustainable human settlement planning and management. Participation is thus at the very core of any kind of inclusivity in urban planning. This requires planning with affected residents of slums rather than for them. Such planning approaches must go beyond pure information or limited consultation of the affected population. Rather, it needs to fully involve this population in crucial decisions concerning their own habitat—such as the specifications of infrastructure provision, path and road layout, modifications of built structure, and—most prominently—questions of land tenure. These are no easy tasks to accomplish under the pressures of dynamic urban land markets in rapidly growing megacities. They require strong dedication for inclusivity from national, regional, and city authorities as well as engagement of civil society and the third sector.

Social Contract and Justice as the Edifice of Resilience

The urge for decisive action on inclusivity is further accentuated by the impacts of climate change upon vulnerable urban spaces and their residents. When it comes to building resilience to these impacts, many scholars maintain that this resilience must be "just." It is not enough to let individuals and communities "rebound" after disasters hit and label them resilient. These communities (as discussed in the case studies in this volume) face increasing vulnerabilities to climate risks triggered by the very processes of urbanisation over the last decades. Gradual retraction of state agencies from welfare functions and basic services like housing, water, and electricity in many countries around the world as well as informalisation of labour, living, and working conditions, have only made things worse.

Today's development models are still largely dependent on fossil fuels; high consumption of ecological resources, including land, water, and forests; and place too much focus on hard infrastructure to the total neglect of soft infrastructure. The ramifications of urbanisation processes guided by such models are visible in growing inequalities and violence across societies. It is time that we critically understand the dialectics

> between bottom-up and top-down approaches to equitable resilience, which are frequently aligned with focusing on equity of process and equity

of outcome, respectively. Top-down equity of outcome approaches privilege well-structured, planned, and data-informed institutions, and may fall short of identifying the full range of outcomes that matter most to all constituents. Bottom-up equity of process orientations, by contrast, emphasise local knowledge, deep engagement, and plural understandings of risk. Second (and relatedly), there are tensions between the need for holistic planning and design and the siloed nature of governance institutions. Third, there may be tensions between reducing the immediate manifestations of vulnerability and addressing deeper structural drivers. Finally, there can be tensions in research between a desire for critical assessment and the need for aspirational guidance.[1]

It is time to revisit the classical concept of social contract and justice and bring their relevance into the growing knowledge system around resilience. Social contract is an agreement or a contract between two parties—people and a legitimate authority who guarantees the protection of people's rights. In exchange, people will also be offered political obligation. This idea was first discussed by Greek sophists as well as ancient Indian thinkers in different ways. However, the idea got its reckoning during the 17th and 18th centuries through the works of Thomas Hobbes, John Locke, and Jean Jacques Rousseau. They tried to provide a justification for limits of political authority on the grounds of individual interests and reason. In a way, they aimed to create a just political order based on the foundations of rights and duties.

A social contract, subsequently developed as a hypothetical tool to justify the exercise of powers, limits the exercise of political authority and the extent of individual liberty, and eventually aims to create a just society premised on the principle of equality. The idea of a social contract is an important creation of human intellect to design a society rooted in justice. It valorises human reason, appreciates the cooperative instincts of humanity, pins faith in limits on the exercise of power, and believes that the common good can be discussed collectively and is achievable through cooperation. All these features of a social contract make it an important idea in the context of humanity's quest to create a society based on justice.

The idea of social contract has also been used by 20th-century philosopher John Rawls. Rawls has always occupied a position of providence among the galaxy of philosophers of the 20th century. He reinvigorated the social contact traditions to defend the moral and normative foundations of the idea of justice. Rawls' theory of justice does not focus on foreseeable results of an action or right or wrong principles motivating an action or on virtues of character. He rather directs his focus on social institutions within which actions and policies are to be determined. Some social institutions can provoke envy and resentment, while others can foster alienation and exploitation. Is there a way of organising

a society that can keep these problems within liveable limits? Can society be organised around fair principles of cooperation?

Rawls attempts to answer these questions by offering a workable and systematic moral conception to oppose utilitarianism. Egalitarian liberalism and reasonable pluralism are defining features of his paradigm of justice. To construct a paradigm of justice, he uses hypothetical tools such as original position and veil of ignorance and justifies his famous principles of justice. The idea of original position assures that each party to the choice is equally or symmetrically situated, with none enjoying greater power (or "threat advantage") than any other.

The veil of ignorance blinds the party to the choice of his or her realities such as race, caste, religion, talents, and abilities and thus creates an equal playing field for the process of choosing principles of justice. Rawls calls his conception "justice as fairness." His aim in designing the original position is to describe an agreement situation that is fair among all the parties to the hypothetical social contract. He assumes that if the parties to the social contract are fairly situated and all relevant information is considered, then the principles that would be agreed to are also fair. The fairness of the agreement situation transfers to the principles agreed to so that whatever laws or institutions required by the principles of justice are also fair. The principles of justice chosen in the original position are the result of a choice procedure designed to "incorporate pure procedural justice at the highest level."

The veil of ignorance conceals our identities, gender, age, occupation, the conception of the good, ability or disability, or social class. According to Rawls, people, while choosing the principles of justice, will want more, rather than less, of the so-called primary social goods and, at the same time, will also choose conservatively by trying to maximise the minimum that they will receive. This finally leads the people to choose the three most important principles—liberty, equality, and difference to govern their societies. Rawls arranges his principles of justice lexically. The first principle is called liberty principle—each person has an equal right to a fully adequate scheme of equal basic liberties, which is compatible with a similar scheme of liberties for all. The second principle has two components. According to this, social and economic inequalities must satisfy two conditions: (a) they are to be attached to offices and positions open to all under conditions of fair equality of opportunity (equality principle) and (b) they are to be to the greatest benefit of the least-advantaged members of society (the difference principle). Rawls attempted to offer an ideal, anti-utilitarian, and liberal understanding of justice premised on the idea of mutual social cooperation among rational individuals. He effectively also managed to address the concerns of distributive justice by juxtaposing the three celebrated principles of his theory, that is, the liberty principle, the equality principle, and the difference principle, in his paradigm of justice as fairness.[2]

Locally Led Climate Adaptation

As slums and informal settlements are frequently found in urban areas most exposed to impacts of climate change, SDG target 11.5 demands to significantly reduce the number of deaths and the number of people affected by disasters, with a focus on protecting the poor and people in vulnerable situations.

Resilience amidst communities is a function of their ability to negotiate and overcome such chronic stresses as well as immediate shocks. For instance, communities in the arid and semi-arid zones of India have been managing and coping with water scarcity effectively in the historical past. Settlements, which have evolved over centuries in organic spatial patterns, display certain inherent factors that deal with externalities like slow onset and extreme weather events.

Within the framework of the UN Sustainable Development Goals (especially SDG 1, 11, 13), putting forward such kind of indigenous knowledge and tacit anthropological systems to co-exist with formal political structures can help to improve the present condition and harness the appropriate traditional approaches used in the past to survive the impacts of disasters.

This especially applies to urban heat, the most devastating but "silent" killer of all climate change-induced disasters. To counter its effects, well-known measures such as greening the city and its public spaces need to go along with improvements at the building scale such as insulation, improved ventilation, increased thermal mass, and flexible but efficient shading. Scaling such endeavours to city and even nationwide programmes constitutes an enormous challenge for the decades to come.

State-developed tools and mechanisms often fail to protect the urban fabric or actively abet a biased unrealistic development model. In this context, methods to safeguard the cultural identity embedded in built heritage and the land-use patterns of historic towns are very much required both in people's imagination as well as the state's vision. There needs to be an inclination of "resilience thinking" towards acknowledging the plurality and investigating interconnections and interdependencies within and beyond cities.

Resilience Equity Index

We are gradually inching towards realising the importance of people, social practices, and culture being at the centre of the narrative on resilience. The UN-Habitat II City Summit in 1996 linked culture with people's well-being, local development, equity and diversity in heritages and values. The Global Taskforce of Local and Regional Governments (facilitated by United Cities and Local Governments—UCLG) acknowledges the need to explicitly include culture in policies for sustainable development, as without culture, there is no future

for cities. Cities need vitality, meaning, identity, and innovation, and citizens need to widen their freedoms (Source: Global Taskforce of Local and Regional Governments, 2016). Later, the #culture2015goal campaign pointed out that national strategies need to be adapted to their cultural context to be effective and that a broad understanding of skills and capacities should prevail. This includes the ability of key stakeholders to be sensitive to cultural aspects, recognise cultural diversity and heritage, and embrace creativity (for details, see www.findit-nearme.co/resources/culture-2015-goal.html).

The new wave of urbanisation currently underway in the Global South (of which India occupies a large part) unfolds under conditions of great "uncertainty" characteristically different from the 19th- and 20th-century urbanisation in the Western/Northern Hemisphere. Most of this new wave urbanisation runs the risk of repeating the unsustainable patterns of the earlier phases after World War II, the environmental and social costs of which would be tremendous. We take forward from our prior research published in the volumes *Resilience and Southern Urbanism* (Singh & Parmar, 2019) and *The Divided City* (Singh, 2018) that proposed a Resilience Index and an Urban Equity Index, respectively. Drawing from the classical ideas of Justice of John Rawls and the Social Contract Theory, we seek to draw the contours of this index for wide applicability.

The Resilience Equity Index can be customised to the specificities of any geography. We imagine this index neither as a static document nor as a canonical rule book. It must be updated regularly based on its ability of prioritising effective responses to external forces and uncertain events. The constant feedback from its application will help to reorganise the priorities and strategies through the cycle of time. The dynamic nature of operation ensures the effectiveness of this Index.
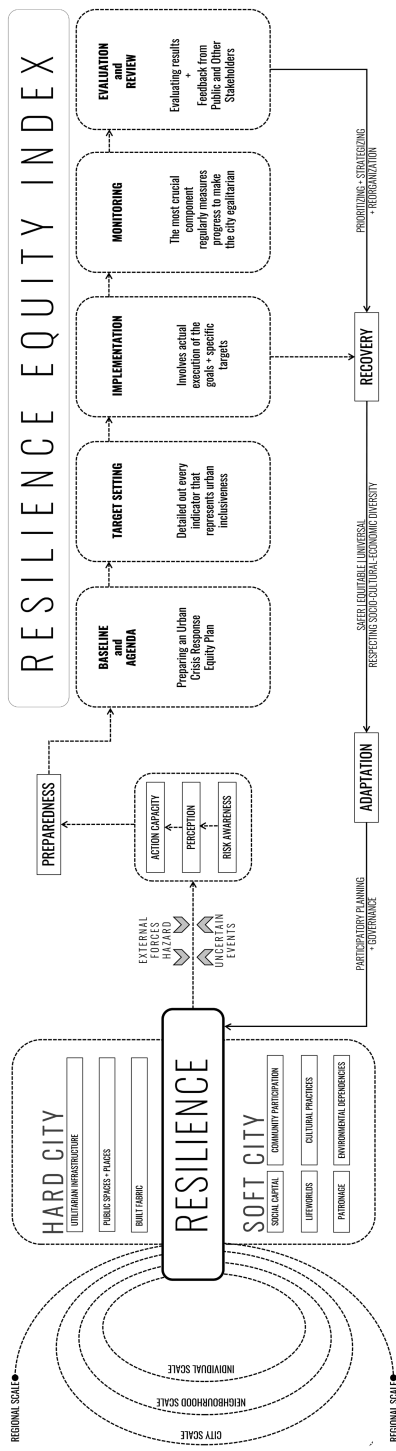
FIGURE 12.1 Resilience Equity Index.

The Role of Academia in Building Resilience

Efforts in pursuit of resilience building need to include a paradigmatic shift in how academia places and understands its role and function in relation to the wider society. Today, scientists do not engage much with local, poor communities: scientific papers can hardly ever be read by ordinary people and do not reach their daily practices. On the other side, the latter are seldom reviewed by research and science, let alone for research results being reported back to affected communities to inform and empower them.

For educational institutions and researchers, producing knowledge that cross-examines scientific understanding with tested practices on the ground needs to gain relevance in the context of universities' Third Mission, the targeted use and transfer of academic knowledge to help resolve a wide range of diverse societal challenges such as the large looming, all-encompassing necessity to build resilience to impacts of global climate change.

It is in the context of this mission for universities' societal responsibility that the scientific community focused on housing research needs to critically assess its—hitherto rather sobering—track record in contributing to policy changes on the ground. Frequently, the vast body of knowledge established by housing scholars also finds itself in opposition to dominant political influences and powerful social groups focused on extracting revenue from prime real-estate land. Under these framework conditions, facilitating transdisciplinary processes that also cater to the needs of those whose voices are seldom heard in policy and planning discourses undoubtedly represents a considerable challenge for socially responsible science in future.

Education for Resilience

Responsible science also needs to initiate paradigmatic shifts in the education of future urban professionals in institutions of higher education. This education must acknowledge lived experiences of those affected directly by planning. Students and future urban professionals need to learn how to work with communities, empower them, prioritise necessary improvements based on data-backed findings and advocate, negotiate, and implement them as well as support decision-making processes for locally led adaptation and resilience building.

This book is largely based on academic work undertaken within three international cooperation projects funded under the European Union's Erasmus+ programme on "Capacity Building in Higher Education."

- Building Inclusive Urban Communities (BInUCom; https://mdl.donau-uni .ac.at/binucom/)
- Building Resilient Urban Communities (BReUCom; https://www.breu-com.eu/)
- Social Inclusion and Energy Management for Informal Urban Settlements (SES; https://mdl.donau-uni.ac.at/ses/)

While BInUCom and BReUCom projects brought together universities and NGOs from Europe and India, SES engaged partners from Ethiopia. Within the framework of these projects, Open Educational Resources and comparative case studies in the context of resilience to climate change impacts were produced; new courses for graduate students on urban resilience as well as new Professional Development Programmes (PDPs) for urban professionals from different backgrounds and working experiences were piloted.

Around the globe, learning also implies harnessing the potential of South–North exchange over the eminent issue of affordable and sustainable housing, this being one of the most pressing societal challenges of our times. Given the Global South's long-standing experience and expertise with all sorts of difficult housing situations, a broad exchange of knowledge in this area is highly commendable, promising extremely helpful insights, especially for students and young professionals in both the Global North and the Global South. They most probably will see themselves confronted with these pressing questions throughout their professional careers.

Notes

1 Equitable resilience: A necessary and under investigated aspect of sustainable urban systems; MIT, 2019: p. 6. https://lcau.mit.edu/conference/equitable-resilience-necessary-and-under-investigated-aspect-sustainable-urban-systems
2 Inputs from Dr Sanhita Joshi, Assistant Professor, Department of Civics and Politics, University of Mumbai.

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