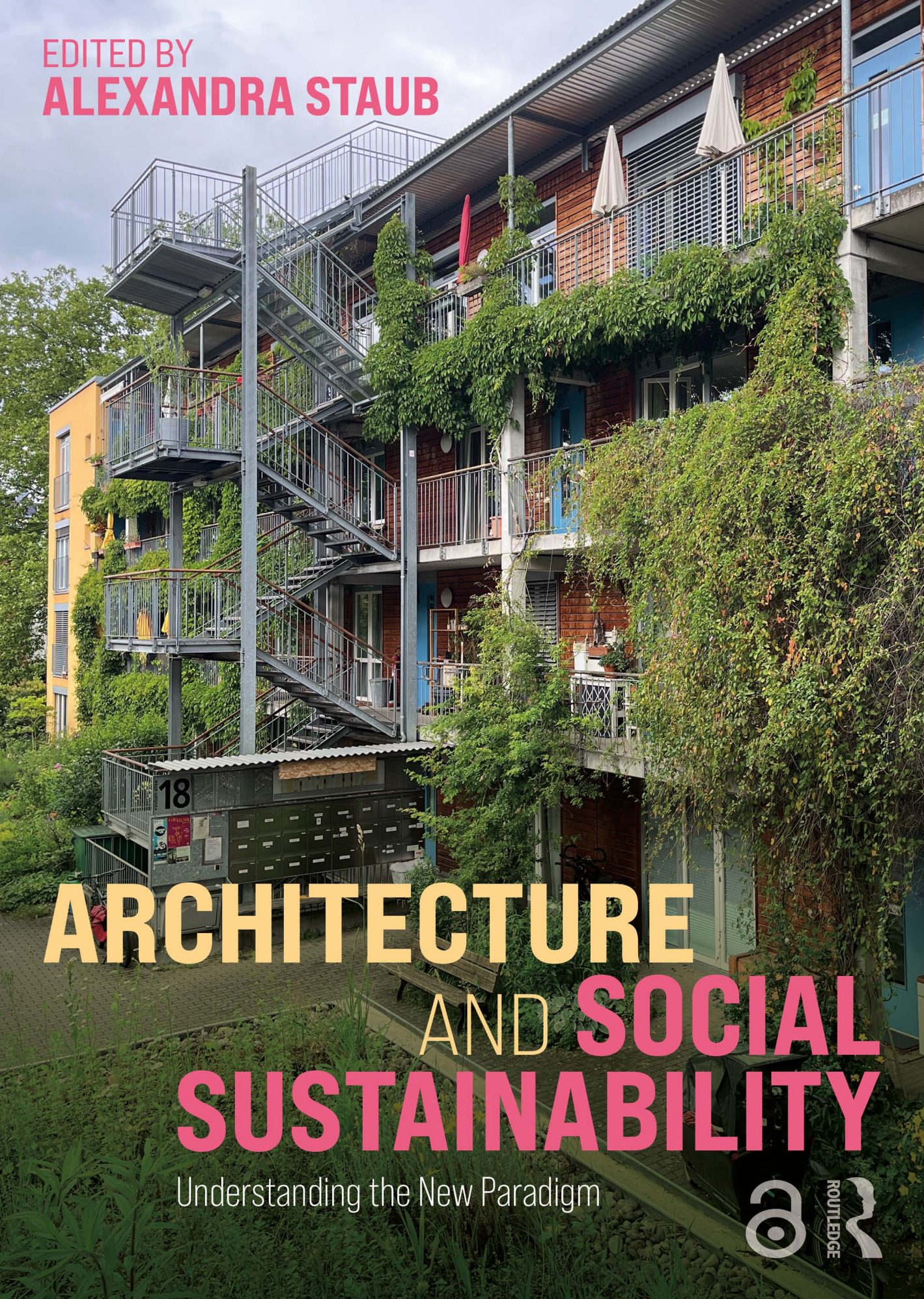
EDITED BY
ALEXANDRA STAUB



ARCHITECTURE AND SOCIAL SUSTAINABILITY

Understanding the New Paradigm

ROUTLEDGE

Architecture and Social Sustainability

Architecture and Social Sustainability shows how we can better design for stakeholder agency, serve historically marginalized populations, and further our theoretical thinking about sustainability writ large.

With chapters exploring both the urban and the building scale, this volume examines the design of buildings and urban settings to illustrate how we can create more inclusive and equitable communities by broadening our design approach. Tracing how the professionalization of architecture and urban design has shut out stakeholder input, this book offers a range of methods and theoretical ideas to re-tool the design process for better social sustainability. The book illustrates these concepts through a series of case studies that have worked around systemic inequalities, recaptured stakeholder voices, and helped promote spatial and social justice. Case studies look at reparative urban and landscape design in the United States, informal market structures in Nigeria, co-designed housing for low-income communities in India and Brazil, and participatory design for housing, schools, and healthcare facilities in Europe and the U.K.

Essential reading for architects and urban designers seeking alternatives to conventional practice, as well as educators and students incorporating social sustainability as a foundational design concept, *Architecture and Social Sustainability* ties together design thinking and action to show architecture's potential for social change.

Alexandra Staub is a professor of Architecture and an affiliate faculty of Penn State's Rock Ethics Institute. Alexandra is the editor of *The Routledge Companion to Modernity, Space and Gender* (2018) and author of *Conflicted Identities: Housing and the Politics of Cultural Representation* (Routledge, 2015).

Architecture and Social Sustainability

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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

PennState
College of Arts
and Architecture

Designed cover image: Alexandra Staub

First published 2025
by Routledge
4 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
605 Third Avenue, New York, NY 10158

Routledge is an imprint of the Taylor & Francis Group, an informa business

This research was supported by Pennsylvania State University.

Open Access was made possible by a Racial Justice, Anti-Discrimination and Democratic Practices Grant from the Penn State College of Arts and Architecture.

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

ISBN: 978-1-032-76931-8 (hbk)
ISBN: 978-1-032-76928-8 (pbk)
ISBN: 978-1-003-48042-6 (ebk)

DOI: 10.4324/9781003480426

Typeset in Univers LT Std
by Apex CoVantage, LLC

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Acknowledgments

This book has been a collaborative project. Working as a group has been fundamental to its development, as designing and building the built environment is also a collaborative process. My first thanks thus go to the wonderful authors who have taken part in this project, the idea for which emerged in the decade I taught a university course titled *Ethics in the Built Environment*.[1] Discussions with the book's authors, and before that with colleagues and many generations of architecture students at Penn State (as well as landscape architecture and engineering students) helped shape my thinking about how design is taught and practiced and how the societies we design for often harbor power systems with hierarchies and protocols that hobble design equity.

It is time to confront those hierarchies, and the authors I have been so fortunate to work with are part of this visionary process.

I would like to thank the many friends and colleagues who have assisted me throughout this project. Penn State University awarded me a year-long sabbatical, which provided me with time to focus on writing and editing this book. The Hamer Center for Community Design at Penn State provided research funding, as did Penn State's Rock Ethics Institute. Penn State's College of Arts and Architecture generously provided financial support that allowed this book on social sustainability to become an open-access volume and thus available to all, irrespective of ability to pay.

Colleagues with specific expertise helped with technical and content questions. I would like to thank Lisa Iulo for reading through drafts of Chapter 1.3 and Rahman Azari for helping me better understand embodied carbon. Anna Livia Brand, Lily Song, and Benjamin A. Bross generously read through and provided insightful comments on early versions of Chapter 1.4, the chapter that I found most challenging to write. Any shortcomings in the work are clearly my own.

Joe Orfant provided information about Elisabeth Herlihy, a pioneering city planner in Boston, for Chapter 1.1, Hung Manh Kyle Long created the maps in Chapter 1.3, my colleague Daniel Purdy consulted his vast library to help with images for Chapter 1.4., Sana Ahrar provided research assistance for the section on Indian urban development in Chapter 1.4, Bethann Rea of the Penn State Library system assisted with using automated translation programs for Chapter 2.9, and Nicolas Staub assisted with the diagrams in Chapter 2.10. Thanks go to Nicola McCarthy for her excellent copy-editing of parts of the text.

Several people generously provided information about the housing projects I discuss in Chapter 2.5. I would like to thank Carsten Sperling, Almut Schuster, and Reinhild Schepers for discussing the history of the Vauban district in Freiburg with me and for providing access to buildings and the district archive. I would also like to thank Helen Johansson and Agneta Timotej for their tours of Malmö's Augustenborg district and Eva Dalman for a further tour of ecological housing projects in Malmö. Thanks go to Lotta Hansson of the Malmö City Planning Office and Bo Christiansen of the Guiding Architects Network, who assisted in setting up tours of key housing projects in Malmö, and Kenji Miyazu for providing information about the Greenhouse Tower project. I would also like to thank Frances Wright of TOWN and Meredith Bowles of Mole Architects for their help as I sought background information about the Marmalade Lane housing project.

My editors at Routledge have been a great source of support. I am grateful for their enthusiasm in taking on this project and for their quick and professional assistance when questions arose.

Most of this book was written as I was living in Berlin, Germany. I would like to acknowledge the many friends and neighbors, old and new, who nourished me with company and insightful conversations during my time there. Finally, I extend my heartfelt gratitude to my family and friends for the support and love they have provided throughout. To you, and to the readers, I dedicate this work.

State College, Pennsylvania
January 20, 2025

NOTE

1 A course blog has recorded some of our discussions, see: https://sites.psu.edu/visionaryarchitecture/

Introduction

Alexandra Staub

Social sustainability has become an ethical imperative. Seen as part of a tripartite sustainability mandate as set forth by the United Nations' 1987 Brundtland Report titled *Our Common Future*,[1] social sustainability joins economic and ecological sustainability as a set of interlinked goals to increase human wellbeing across the globe. This book will examine the topic of sustainability to show how social sustainability is not merely one member of a triad but arguably the foundation upon which the other two sustainabilities stand. Without the social – the common future – the rest is moot.

In built-environment research, especially research focused on technological, construction, or material advances, sustainability is often seen through an environmental lens. This might seem natural since constructing and running buildings requires a great quantity of energy that is often supplied by fossil fuels. Buildings account for a great deal of operational carbon (i.e., emissions due to the running of buildings) as well as embodied carbon (i.e., emissions due to materials and construction considered across the building's life cycle, including maintenance and repairs). Manufacturing building materials, transporting them, installing them, and recycling or disposing of them once they are no longer in use requires energy and environmental loads that contribute to climate problems and that, through optimized design and planning, can be measurably reduced, thus increasing environmental sustainability.

Research on economic sustainability is frequently linked to investment or policy decisions, such as wealth production, market access, and fiscal policies. In architecture and urban design within a market system, economic sustainability is often linked to cost-effectiveness. Discussions center on rates of return for investors, increasing floor-area ratios to maximize potential profit, construction and operational cost efficiencies and, as outlined in Chapter 1.3, using "green building" labels to increase marketability in office and commercial spaces. The term "win-win," in which a measure generates profit and also social benefit, is sometimes used to link economic and social gains.

Social sustainability, the third leg of the sustainability triad, is difficult to measure quantitatively, which is perhaps one reason why it often takes a back seat in built-environment production and research, especially at the architectural scale. Despite the social processes that shape the environment and economics, and despite the influence of environmental and economic changes on social well-being – social defined here as the institutional, political, personal, or other

DOI: 10.4324/9781003480426-1

organizational frameworks that bind people together, as outlined later on – we find that nearly 40 years after the Brundtland Report, social sustainability as a concept remains inadequately defined.[2]

DEFINING SOCIAL SUSTAINABILITY

How can we begin to define social sustainability as a concept? At the core of social sustainability is the idea of "society," with the term understood as having both a commonplace and a more abstract meaning. In everyday language, society consists of the shared values, relationships, and institutions that bind large groups of people together. More abstractly, society defines the conditions that lead to the formation of such structures.[3] Viewed historically, "society" had to do with companionship, fellowship, and the relations between people.[4] The Latin root, *societās*, encompasses ideas of common purpose, partnerships, close relationships, and connections.[5] The underlying concept evokes a social contract, one that allows people to exist together, thus underscoring a sense of security and support. The social can, therefore, be seen as the glue that holds us together, both individually and in partnership with others.

The Brundtland Commission recognized the importance of social sustainability in its 1987 report. In fact, despite its tripartite definition of sustainability, the Report proposed social changes at its heart. Its "global agenda for change" pursued "*co-operation* among developing countries and between countries at different stages of economic and social development [to] lead to the achievement of common and *mutually supportive* objectives that take account of the *interrelationships* between people, resources, environment, and development;" (emphasis mine).[6] The focus on positive physical and economic change through cooperation, mutual support, and interrelationships speaks to a scaled-up version of a society based on companionship or fellowship.

In the late 1980s, when the Brundtland Report was written, there was a sense of urgency in calling for multilateralism and a shared sense of responsibility to address a "common future," especially as the world seemed to be withdrawing from social concerns in favor of economic restructuring and a focus on economic competition. The Brundtland Commission thus encouraged a global project where the world's ecological and economic problems would be tackled via a globally dimensioned social focus to, "[further] the common understanding and common spirit of responsibility so clearly needed in a divided world."[7]

It was the Brundtland Commission that spelled out how entangled social concerns are with the environment and economic systems, especially those harboring systemic inequalities. For example, the Commission saw better administration of both technology and social organization as a key driver of economic growth and ecological wellbeing, in the process seeing poverty as, above all, a social ill:

> Widespread poverty is no longer inevitable ... sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfil their aspirations for a better life. A world in which poverty is endemic will always be prone to ecological and other catastrophes.[8]

The Commission viewed institutions framing financial and social policy as well as political will (which, in democracies, one can see more abstractly as the will of the people and, in republics, the actions of elected officials) as a central tenet of sustainability. Both institutions and political systems are, of course, social frameworks designed through fiat, majorities, or consensus as organizational tools for societies at various scales.

As a United Nations initiative, the Brundtland Report primarily addressed national governments and multinational organizations. In terms of social equity, the Commission encouraged better economic equity (with its corresponding improved standards of living) within countries and amongst the world's nations. It is a concern that endures today. In its role as a major international organization, the United Nations has continued to call for social goal-setting as a measure of sustainability, for example, through the large-scale ESG (environmental, social, and governance) initiative of responsible investing, introduced in 2004.[9]

Despite its international focus, the Brundtland Commission addressed problems at local scales as well. In a section titled "New Approaches to Environment and Development," the Commission notes the connection between environmental and economic problems as well as social and political factors and cautions, "new approaches must involve programmes of social development, particularly to improve the position of women in society, to protect vulnerable groups, and to promote local participation in decision making."[10] Such approaches are at the heart of many projects discussed in this book.

SOCIAL SUSTAINABILITY RESEARCH TODAY

What is the state of social sustainability research today? While much policy research remains context-specific, larger programs have attempted to provide generalized frameworks. The "Living Building Challenge"[11] for example, is a philosophy and certification tool to "[make] the world a better place" (itself a goal that is difficult to define, as "better" can look quite different for different demographics). The program lists various "performance areas," among them "health and happiness," "equity," and "beauty;" all admirable ideals with definitions that are often hard to pin down. A situation contributing to one person's happiness, for example, may result in another's despair. Beauty that, to quote the Living Building concept, "uplifts the human spirit"[12] is hardly a universal metric. One problem with standardizing such goals is that success often involves "quality of life" statements whose metrics remain contextual and thus not universally adaptable (although, as the examples in this book demonstrate, a large-scale change of *methods* towards achieving specific goals can lead to greater quality of life in different contexts as stakeholders attain better agency in realizing outcomes).

At the urban and community scale, there is a great deal of literature that explores sustainable design (using terms such as placemaking, urban humanities, sustainable development, and sustainable communities).[13] Even here, however, there is little consensus on what social sustainability is and how it can be contextualized and measured, especially when dealing with questions of equity or opportunity at interlinked scales, where causes and effects are often shrouded.

The existing literature is certainly an excellent start toward untangling some of these questions, yet it also makes clear that much conceptual work remains to be done.

One way to encourage social sustainability is through developing new methods of designing and producing the built environment. I argue that such methods work best when they approach questions inductively and with nuance rather than taking a "God's-eye view" that tries to engender big theories of universally-valid sustainability. One premise of this book (and a reason for including collaboratively written case studies that focus on specific contexts) is that generalized definitions of social sustainability perpetuate a belief that only a certain type of trained "expert" can recognize and define the concept. As the first sections of this book discuss, this belief stems in part from how design education has traditionally been carried forth: in manners that largely exclude the people we design for and in ways that limit the scope of our endeavors to what we are most familiar with. Working with stakeholders as members of a design team is not typically taught to professional designers and planners, for whom "visionary" creativity is often regarded as sole-authored.

DESIGN ACTIVISM

Notwithstanding a lack of formal standards for the term, design activists have adopted their own, sometimes incremental approach to social sustainability. This approach sees sustainability as a factor of social and economic equity and inclusion that attempts to correct some of the gender, racial, ethnic, and economic imbalances that characterize societies. Many design and planning professionals have come to realize that awareness of and work towards mitigating social imbalances is a (modest) step towards social sustainability that is quite within their power.

In terms of scale, activist approaches to improving sustainability are often elastic and involve "design as research." Frequently, small-scale, low-budget approaches are explored, analyzed, and scaled up. This inductive approach to designing spaces and places meaningful to those who use them are typically shared endeavors. Finding ways for users of a space to more fully engage with and thus take "ownership" of spatial production – rather than reacting to spaces once completed – is arguably a key aspect of sustainable design practices. In architectural and urban settings that remain endearing throughout generations, we often find that users are able to re-discover their agency in defining spaces across time, connecting users in a community that is rooted to meaningful places rather than simply functional spaces.

A further aspect of social sustainability, and one that is linked to economic sustainability, is stakeholder agency in financing spatial production. As the examples in this book illustrate, the funding mechanisms for designing and building projects remain a key aspect of social sustainability and an example of how economic and social sustainability are interlinked. Funding allows for project control, and designers and planners must ask how both time and money are allotted in the design and building process. Developing alternatives to conventional funding

mechanisms used by developers or individuals relying on traditional means such as bank loans is an area of research with much work yet to be done.

HOW THIS BOOK IS STRUCTURED

This book examines social sustainability as a foundation for sustainability writ large. The following chapters explore how design can serve to increase stakeholder agency and empower historically marginalized populations. I begin with a historical and theoretical examination of methods, followed by a series of case studies to illustrate their power.

Chapter 1.1 examines the professionalization of the planning and design fields at both the urban and the building scales. The chapter explores how, in the nineteenth and early twentieth centuries, the design professions consistently marginalized alternative voices, in the process silencing stakeholders without the capital or political power to join professional ranks in any meaningful way. Examining the effects of such policies on the current professional landscape, the chapter closes by exploring what alternatives to existing categories of built-environment expertise might look like.

Chapter 1.2 looks at sustainability as an ethical mandate. The chapter explores how ethical practice can be re-defined to better involve stakeholders in shaping the built environment. The chapter reviews what professional ethics codes do and do not consider and how their inconsistencies hinder a discussion of what ethical practice could look like. The chapter goes on to discuss user-focused theories, many adapted from other fields such as business management, philosophy, law, education, healthcare, computer technology, and the social sciences. A range of approaches, including stakeholder theory, participatory and co-design, universal design, and value-sensitive design, among others, provide theoretical and practical tools that can be adapted for urban and architectural design.

Chapter 1.3 examines the intersections between ecological and social sustainability, especially at the building scale. Theorizing the United Nation's 1987 Brundtland Report as an example of both a deontological and utilitarian ethical imperative, the chapter analyzes various building codes and ecological certification systems worldwide. The chapter concludes that voluntary certification systems often exacerbate the effects of economic disparities and thus do little to improve ecological and social conditions for the masses, while legislated systems are better able to improve ecological and social conditions across the board. Here again, much analytical work remains to be done.

Chapter 1.4 explores how we might expand our theoretical thinking in considering architecture and urban design, especially as we integrate marginalized groups into design theory. The chapter first explores space as a social phenomenon whose construction is determined by power mechanisms for a given society. Further sections examine how critical theories, including those that examine intersecting and networked phenomena, can be applied to further our understanding of spatial design and planning. This chapter explores Feminist Theory, Modernism and its various concepts, Critical Race Theory, Colonial and Post-Colonial Theory, and a section that theorizes how theory is created to allow us to better understand

design consequences – the sometimes hidden social phenomena resulting in part or in whole from our design decisions. The chapter finishes with several examples of how architectural and urban design practice can be reinterpreted through questioning our hierarchical views, acknowledging power systems, and working to create more inclusive architectural and urban theory.

Part 2 of the book presents nine case studies that examine "doing architecture differently," written by authors with deep knowledge of their subjects. In Chapter 2.1, Euneika Rogers-Sipp explores powerful narratives embedded in a section of the southern United States that W.E.B. Du Bois analyzed in the early twentieth century as the "Black Belt" of post-Civil War African-American rural life. In Chapter 2.2, Yang Yang, Gus Wendel, and Claire Nelischer at UCLA's cityLAB explore how small actions in the city, however informal, temporary, or minor in scale, can catalyze community engagement, uncover shared interests, and serve as prototypes for future urban transformations. In Chapter 2.3, Anna Livia Brand examines New Orleans' Lower Ninth Ward after the devastating floods of Hurricane Katrina in 2005, tracing the anti-Blackness of "sustainable" reconstruction and offering means for pursuing better racial equity in reconstruction efforts. In Chapter 2.4, Chukwuemeka V. Chukwuemeka explores market structures in Onitsha, Nigeria, by tracing how indigenous networking structures have silently superseded colonial ideas of organization and policing.

Chapter 2.5 is the first of a series of chapters that explore housing, educational structures, and healthcare facilities as building types used by almost everyone at some point in their lives. In Chapter 2.5, I trace three housing communities in Germany, Sweden, and the United Kingdom, examining how architects, clients, and users employed participatory design, but also creative financing, to achieve innovative housing solutions. In Chapter 2.6, Clarissa Albrecht, Maristela Siolari, Hung Luong, and Esther Goldberg Karfunkelstein Lima present an innovative architectural project in Brazil that allows low-income women to design and build their own communities, using skills training and creative financing to achieve results. In Chapter 2.7, Sandhya Naidu Janardhan and Sandra Alexander present projects from their own practice in Mumbai, India, in which inclusive design, a place-based approach, and democratized design tools and mechanisms allow low-income citizens to take ownership of safe and vibrant communities.

Chapters 2.8 and 2.9 present the Berlin-based architecture firm *Baupiloten,* where Susanne Hofmann and her team have developed a series of atmospheric visioning techniques and an advanced process for participation in school design. Finally, in Chapter 2.10, Sara Donetto reflects on participatory design in healthcare settings, examining how participation can expand from planning care processes to designing the spaces that contain and enable them.

I conclude this introduction by encouraging the reader to view this collection as an inspiration for the future. As part of a growing body of literature on equity and inclusion in the built environment, this book aims to help readers reconsider the design and building process, work to change design outcomes and shift the canon of our contemporary theoretical thinking.

NOTES

1 The United Nations Brundtland Report defines sustainability as encompassing ecological, economic, and social sustainability as part of a "triple bottom line."
2 Eizenberg and Jabareen 2017; Shirazi and Keivani 2017.
3 Williams 2014.
4 Williams 2014, see also the OED entry for "society."
5 OED n.d.
6 United Nations Brundtland Commission 1987, Foreword.
7 United Nations Brundtland Commission 1987, Forward.
8 United Nations Brundtland Commission 1987, Paragraph 27.
9 United Nations Department of Public Information 2004.
10 United Nations Brundtland Commission 1987, Paragraph 43.
11 https://living-future.org/lbc/
12 Terms are taken from the Living Future website, see https://living-future.org/lbc/
13 C.f. Castello 2010; Cuff et al. 2020; Curwell et al. 2005; Van der Ryn and Calthorpe 1986.

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PART 1

ALEXANDRA STAUB

1.1 Historical Context

The Professionalization of Architecture and Urban Design

Although the built environment is often designed and built "without architects," most countries have formal means of accreditation for the profession. In Europe and North America, industrialization and the shift from agricultural to industrial economies in the nineteenth century set in motion a regulation process that resulted in the architectural and urban planning professions becoming home to an economic and social elite that was largely white and male. As this chapter will argue, professionalization assured safety standards, especially at the building scale, yet also erased the voices and expertise of a large cadre of stakeholders while focusing the profession's interests on serving those with social and economic power.

This chapter begins at the urban scale, tracing the evolution of the planning professions, before shifting to the architectural profession and the building scale. Both experienced vast changes from the late nineteenth century onwards, in a process that seems indelible as architecture and urban design and planning became part of a larger, capitalist-driven economic and social structure. This focus, as part of a larger structure of economic and political power, was reinforced at several levels, from the education of architects and planners to the writing of professional codes and mandates and from definitions of what architecture and planning even encompass to the power to determine the processes of their realization. The chapter concludes with a view into what alternatives to this system might look like.

THE URBAN SCALE: FROM COMMUNITY KNOWLEDGE TO COMMUNITY SILENCE

In a seminal 1992 study, Barbara Hooper challenged the planning profession's claim of "objectivity, opposition, and the 'public' good," pointing out that the objectively produced "reality" is, in effect, a political construct that benefits those in power – who Hooper identifies as male, white, and bourgeois – by serving to maintain the status quo. This system, Hooper posits, has demoted knowledge not held by those at the center of power, as "[t]he theories, practices, and knowledges of those outside this male-defined dominant have not been included as named and legitimate sources of elucidation and expertise."[1]

Feminist[2] thought in planning has existed and been broadcast for centuries. As early as the start of the fifteenth century, Christine de Pizan wrote her treatise

DOI: 10.4324/9781003480426-3

The Book of the City of Ladies, in which she challenged the dominant view of women's inferiority, in the process taking up her pen to construct a "city" of refuge for women against such slander.[3] Hooper traces a lineage of feminist planning thinkers from Pizan onwards, many of them rooted in fields that have informed planning theory across the ages. Material feminists and leaders of the nineteenth-century settlement movement, such as Charlotte Perkins Gilman and Melusina Faye Pierce, and leaders of the nineteenth settlement house and housing reform movements, such as Jane Addams, Florence Kelly, Mary Sayles, and Mary Simkhovich, are but several examples of many planning theorists of the era.

Hooper traces the hegemonic claim the planning profession has made on "reality" back to the nineteenth century and the societal changes brought about through industrialization. As modern planning ideals were introduced based on rapidly developing capitalism, social movements such as anarchism, utopianism, and historical materialism offered frameworks that opposed the emerging capitalist economy. Feminist theories based on social phenomena, however, remained squeezed to the periphery, with women's questions and concerns always seen as subservient to those of men in the various movements (see also the section on Black feminism in Chapter 1.4). Hooper traces "distortions in planning theory and practice" to this persistent exclusion of feminist thought in planning culture to the present day.[4] In dexterous detail, she traces not only how a major body of philosophical thinking was consistently ignored but also what we would stand to gain by bringing this thinking back into planning theory.

Planners – however the field is defined – have come to mold our cities and, with it, our thinking about how society should be shaped, both spatially and socially. In the introduction to a volume that brings to light both gaps and hidden aspects of planning history, Leonie Sandercock further traces how our thinking about the built environment has evolved by examining how planning historians have chronicled the field in the twentieth century.

Sandercock first examines how planning might be defined: either as a rational, engineering, and architecturally based activity designed to bring "order" into cities or as a social activity designed to tackle problems such as poverty through building community support.[5] She then analyzes how this dichotomy has affected our view of the planning profession and its roles in shaping society today. Pointing to a prevalence of the "rational" definition in the planning literature, she critiques the ensuing narrative of planning as a Western, Enlightenment-derived, and modernist endeavor, a series of progressive acts carried out by "great men" who shaped policy related to housing, garden cities, and transportation, among other themes, and brings forth the need to explore movements that have been elided in the standard literature.[6]

One irony of the "great men" narrative is the arbitrary nature of the criteria used to define them. Many, like Ebenezer Howard of the Garden City Movement, had no formal planning-related training at all, while others, such as Daniel Burnham, were trained in related fields, such as architecture. As such, the visions of early "planners" were measured through criteria that were being shaped contemporaneously, leading one to wonder if different criteria – such as direct social outcomes – might have brought forth other names.

Planning history largely omits considerations of power, knowledge, or control in the realm of planning, aspects that might call into question assumptions of the profession's goodwill or even neutrality.[7] In planning history, and contrary to readily available evidence, women as a separate stakeholder group do not exist, and the "underclass" is a "problem" that is to be solved (and frustratingly, has not responded to planners' formulas).[8] Sandercock points to the problematic definition of what has historically counted as "planning" in the first place: "If we define planning as the profession, and its objective as city building, we generate one set of histories. If we define planning as community building, we generate another."[9] The focus of planning history on the former has led to a narrative that women and people of color have had little to no planning influence, despite a rich history of community building women and people of color look back on.

In what Sandercock calls "sins of omission," such one-sided accounts of planning history have foregrounded the state and its institutions, as well as the activities and concerns of the middle-class, white men who largely run them.[10] In many cases, state-run institutions have created policies based on criteria that stigmatize citizens that the institutions then try to "uplift." Shifting our perception of what the "problem" is, for example, from citizens' perceived moral failings to the deficiencies of how their environments serve their needs, creates new opportunities for seeking solutions.[11]

The historical narrative of institutionalized activities and the "great men" behind them has reinforced the profession's power to shape agendas and the theoretical discussion around urban questions at the expense of smaller-scale localized changes that take place largely at the grass-roots level. Both institutional planning decisions and grass-roots activities have profound influences on how we live as a society, yet only one approach is fully acknowledged as authoritative.

DEFINING EXPERTISE

Urban planners require some form of credentialing in many countries today, usually through completing an accredited degree or postgraduate qualification, gaining several years of work experience, and taking an exam. In the U.K., a professional degree and two years of internship experience are required before taking the "Assessment of Professional Competence" exam. In the United States, urban planning does not require licensure, although certification is available through an exam administered by the American Institute of Certified Planners (AICP). Those without a degree in urban planning must demonstrate four years of experience in the field to be considered for certification.[12]

The planning profession looks back on several origins, although most are not discussed as "planning" today. Many early planners were autodidacts or trained as architects, and their inclusion in the canon of planning visionaries already points to the value of diverse approaches in the field. Pierre L'Enfant (1754–1825), who created Washington D.C.'s baroque-inspired plan in 1791, had a military background.[13] Fredrick Law Olmstead (1822–1903) worked as a journalist and farmer before designing New York's Central Park together with the architect Calvert Vaux. Ebenezer Howard (1850–1928), whose groundbreaking book *Garden Cities*

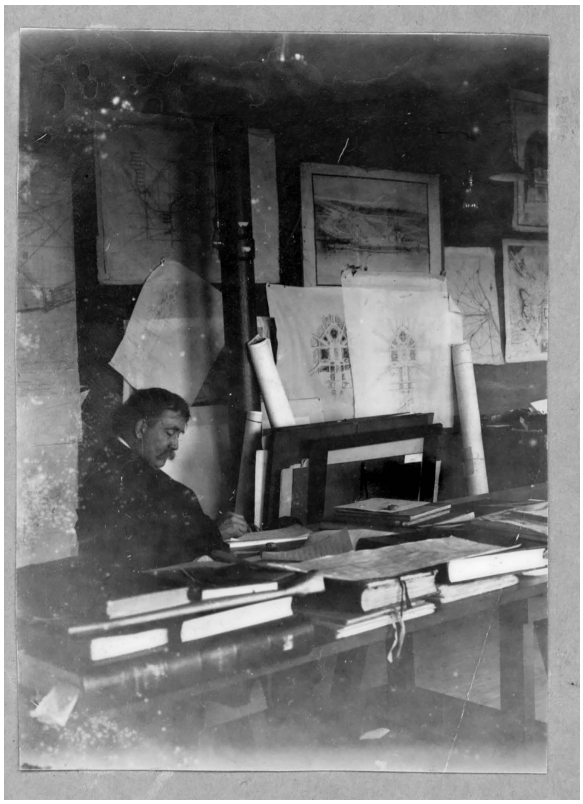

Figure 1.1.1
Daniel Burnham in his Chicago office ca. 1909. Images from the Chicago Master Plan can be seen in the background. Photo by Edward H. Bennett; image courtesy of Lake Forest College Donnelley and Lee Library.

of Tomorrow launched the Garden Cities movement, worked as a stenographer and parliamentary clerk and developed ideas about urban design in his spare time. Elizabeth Herlihy (1880–1953), the first woman member of the American City Planning Institute and widely acknowledged as having shaped Boston's planning for decades, likewise trained as a stenographer and public clerk.[14] Clarence Stein (1882–1975), whose office designed major Garden City "new towns" such as Radburn, New Jersey, Sunnyside Gardens, Queens, and Chatham Village, Pittsburgh, trained as an architect at the École des Beaux Arts in Paris. Further planning measures were fashioned by architects: Daniel Burnham and Edward Bennett published their comprehensive *Plan of Chicago* in 1909, proposing "new parks, lakefront upgrades, new civic and cultural centers, and transportation development"[15] (Figure 1.1.1).

As early as the nineteenth century, cities established planning commissions, usually made up of architects and businesspeople, who worked together to advise the city on planning endeavors. These efforts spanned different scales and had varying aims, from the aesthetic "renewal" of cities to alleviating overcrowded and unsanitary conditions faced by the working class. Washington, D.C.'s McMillan Plan of 1902, for example, updated Pierre Charles L'Enfant's 1791 "City Beautiful" plan for the city, while projects such as Ebenezer Howard's Garden City Movement also received wide interest, as did built examples such as Letchworth, a garden city north of London. While some of these projects from the turn of the

nineteenth to the twentieth century focused on establishing grandeur and showcasing commercial fortitude, others, such as Garden City projects, attempted to better living conditions for the working class.

Perhaps influenced by the social aspects of the Garden City movement and the Settlement movement (described later), the formal planning profession was changing direction by the turn of the nineteenth to twentieth centuries. By the time the American City Planning Institute was founded in 1917, with Fredrick Law Olmstead as its first president, the field was moving away from the aesthetic approach of the "City Beautiful" movement to the scientific one brought in through social scientists.[16]

Despite this change in focus, formal planners did not pursue immersive work. As a precursor to the European Modern movement of the 1920s, educated and/or middle and upper-class reformers' ambitions to improve housing conditions for the working class were done from afar and often maintained a paternalistic attitude towards the workers whose lives they sought to change. Worse still, some projects clearly promoted the interests of wealthier citizens despite claims of benefitting the poor. In a 1918 Boston planning initiative, for example, the City Planning Board demanded "Light and Air for Back-Yard Tenements of the North End" through widening alleys and streets and planning a new, major traffic thoroughfare[17] – measures that were designed for automobile owners rather than the resident poor, who could not afford vehicles.

Although the urban planning profession as we know it today initially borrowed from other fields, such as architecture, engineering, and sociology, the discipline came into its own in the early 1900s, and it is now considered a distinct field with its own theoretical canon. Harvard University's Landscape Architecture department offered a single planning course in 1909, the first in the nation. The university followed by launching the first program in city and regional planning in 1923 and the first in urban design in 1960.[18] Yet planning measures continued to be influenced by other fields. The Newark, New Jersey, 1914 comprehensive city plan was developed by an engineering firm, and Sir Patrick Geddes, whose influential book *Cities in Evolution* was published in 1915 and introduced ideas such as scientific observational methods and civic surveys to city planning, was a sociologist.[19] Social theory thus continued to influence planning activities.

COMMUNITY BUILDERS: THE OTHER PLANNERS

As the planning profession professionalized during the late nineteenth and early twentieth century, it remained male and white in part because women and those not of European descent lacked access to architectural or engineering programs. Yet, shaping the built environment through formal plans constructed by outside experts remained only one aspect of "planning." Building the communities that populate and collectively shape the built environment became a social act from within that often – but not always – took place less formally.

Seen this way, women and residents of non-white communities look back on a rich history of community building that has long been ignored by formal planning histories. Community-building planning activities include the Settlement

House Movement that began in the late nineteenth century, various (often formally planned) communitarian and social movements of the nineteenth and twentieth centuries, and African-American[20] community building from the seventeenth century onwards.

The Settlement House Movement of the late nineteenth century focused on localized neighborhood efforts to improve urban workers' housing conditions. Although the best-known examples were located in the United States and the United Kingdom, the movement became internationally influential.[21] The Settlement Movement's mostly female protagonists were often nurses and early social workers who "settled" in the neighborhoods they were helping as an early form of stakeholder involvement. Many of these settlements offered cultural activities based on music, art, or lectures to foster communication between working and middle-class residents in an attempt to "uplift" the working class. Early settlement houses also offered services such as childcare, English language classes for recent immigrants, and recreational activities that were designed to bring communities together (Figure 1.1.2).[22]

Settlement workers were educated and middle-class and were thus often able to advocate for legislation that would help their clientele.[23] Although the settlement workers' intentions were benevolent, the movement has also been criticized as carrying out a patronizing crusade against immigrant culture, or as sociologist Herbert Gans put it adroitly, "The care takers wanted to change the slum dwellers, not understand them."[24] Clearly, while settlement workers' efforts proposed change from *within* communities, they were at times as removed from stakeholders' realities as were the more formal planners.

Figure 1.1.2
Jane Addams (1860–1935), co-founder of the Hull House, with a group of children in 1933. The Hull House was a settlement house in Chicago that provided educational opportunities and services to working-class immigrants. Photo courtesy of the University of Illinois Chicago Library, Special Collections and University Archives.

The settlement model continued throughout the Great Depression, after which many settlements closed due to funding problems. In part, this was due to the changing nature of the working class in inner cities: as southern Blacks escaping rural poverty and Jim Crow laws migrated to northern cities, traditional settlement movements largely ignored their needs or moved to white neighborhoods.[25] If the settlement workers had been criticized for not understanding the residents of the neighborhoods they worked in when those neighborhoods were filled with European immigrants, the problem intensified as the neighborhoods turned black. The settlement idea was revived in the United States in the 1960s during the federal government's "War on Poverty."[26] Many of the newer settlement houses have continued as community centers or neighborhood houses to the present day.[27]

Community builders such as settlement workers are rarely considered in the planning literature, yet despite some criticism, they had an enormous effect on the communities they served. Major early figures in the movement include Jane Addams, Melusine Fay Pierce, Charlotte Perkins Gilman, Catherine Bauer, Edith Elmer Wood, and Mary Simkhovich.[28] In some cases, these planners went beyond working in existing communities to create new physical spaces as part of a community-building effort, for example, through communal or shared housing projects, cooperative housekeeping projects, public kitchens, or cooked food services. The new communities often focused on alternatives to conventional housekeeping practices in order to free women from domestic tasks, a radical endeavor at the time. Especially where women planners were involved, project authors understood the disproportionate burdens women carry through such tasks and so focused their efforts on reforming those practices.[29]

Just as women's contributions to urban planning and design have been downplayed through defining "planning" as a technical rather than a social process, contributions by other groups have been similarly minimized or glossed over in the design and planning literature. In a 2020 meta-study of how Black geographies have influenced urban planning in the United States, Anna Livia Brand and Charles Miller conclude that the literature that would help us understand links between the social and the physical world is often missing or repressed, including literature that documents the enormous material and social experience of racial difference.

Racialized landscapes are as ubiquitous in the United States as elsewhere. As a consequence, not only have Black communities been politically relegated to endure fewer material opportunities and infrastructure than many white communities, but a largely white planning profession has achieved little understanding of the historical complexities that underlie Black communities. Spatial projects, as put forth by planners, are not only designed to "isolate, exclude, and denigrate people of color,"[30] but the continued labeling of such communities as "poor" or (especially in urban contexts) "crime-ridden"[31] has led policymakers and planners to devalue such communities and largely overlook a rich range of formal and informal community-building that has shaped community members' lives.[32]

As a major contribution to understanding how communities are created and function, the sub-field of Black geography, through spatial analysis and historical

and ethnographic research, has explored relationships between race, racism, and space – and, by extension, spatial planning and design. Early texts include W.E.B. Du Bois's 1899 study of Philadelphia's Seventh Ward, which incorporated urban ethnography and social history to portray (segregated) Black life in the urban confines of a northern U.S. city, and his 1903 essay collection, *The Souls of Black Folk,* which examined rural life in the southern U.S. Black Belt and the African American experience of existing as "the other" (see also Chapter 2.1). More recently, scholars such as Katherine McKittrick, George Lipsitz, and Clyde Woods, among others, have explored how forms of resistance and Black community building manifest themselves,[33] how communities of color, deterred from the prosperity of homeownership, have come to prioritize use value over exchange value,[34] and how society's disavowal and disremembering of violence and displacement have affected Black communities and especially Black women.[35]

Tellingly, the many texts that explore Black community structures and community building are centered in fields such as sociology or geography, making them less readily accessible to conventionally trained planners and urban designers. As in feminist urban theory, the technical nature of the accredited urban design and planning fields narrows them to largely exclude scholarship on social aspects of community-led planning in Black communities. In ways that parallel how settlement projects, carried forth by women, provided a counterpoint to formal urban master-planning activities that remained unacknowledged in the mainstream planning literature, community building in African-American contexts has remained largely invisible to formal planning agencies, who have oftentimes literally bulldozed community efforts.

In recent decades, cities in many countries have become the site of neoliberal economic policies, many of which have inherently embedded racial components.[36] As early as 1965, the United States Department of Labor published "The Negro Family: The Case for National Action" (also known as the Moynihan Report), which controversially blamed social problems in U.S. cities on the "crumbling" of Black nuclear families, without considering how government policies based on economic considerations, such as forced relocation of Black families in the name of "urban renewal" and the consequential breaking up of social support networks based on friendships and extended family ties contributed to community instability. Neighborhoods, with their churches and other facilities for informal communication, such as childcare facilities, corner stores, and services such as beauty parlors and barbershops, provide a spatial framework for communication, networking, and sometimes activism, a concept that has historically been passed over by planners guided by conventional planning theories.[37]

Numerous interrelated processes have led to race-based segregation of opportunity in the United States: formal measures of segregation prior to 1964, redlining (not offering mortgages for properties in Black neighborhoods), disinvestment and displacement of residents in the name of urban renewal, shoddy public housing developments, suburbanization, gentrification, and more recently, enterprise zones and public-private partnerships.[38] All of these measures are linked to urban planning measures and urban design ideas. Enterprise zones and public-private partnerships have been used to foster urban development via free-market

ideals, yet their initiators have largely failed to consider how they contribute to racial inequities.

Sandercock has noted that despite a steady emphasis on conventional planners' power to shape urban life, planning histories ascribe almost no responsibility to planners when things go wrong. Just as a ubiquitous "underclass" continues to vex conventional planners in their efforts to shape urban life, so do historical accounts fail to hold planners accountable for their role in racist policies and continuing urban poverty.[39] At the very least, one could argue, trained planners would have been able to recognize that historical practices such as redlining, racial covenants that banned property sales to Jews, Blacks, or other ethnic groups, or freeway construction through historically black neighborhoods in the name of "progress," were morally wrong.

A review of how planning has been conceptualized and defined brings to light how planning efforts through social engagement and activism have often been downplayed in favor of a far narrower epistemological approach to both scholarship and practice. Broadening the field will require revising theoretical frameworks and expanding the range of lenses through which we analyze the built environment. As Sandercock cautions, "simply adding new stories is not enough. There is a difference between re-writing history ... and retheorizing history by using gender or race as categories of analysis."[40] It is this shift in theoretical perspective that will allow voices that reflect the diverse spectrum of our society to be fully heard.

THE ARCHITECTURAL SCALE: DEFINING THE PROFESSION

The architectural profession evolved from the realm of craftspeople and master builders, often members of guilds or other trade organizations that were prevalent from medieval times onwards. In the American colonies, tradesmen and builders were often successful entrepreneurs, although typically not regarded as "gentleman architects" who would be considered their clients' social peers.[41] Even where early architects provided detailed drawings for a structure, those on site often did not see them as binding and made major changes as they worked.[42]

The United States has a fraught history with regulations, and professional regulations are no exception. The few restrictions on various professions that had been established by the early nineteenth century were loosened in the 1820s, leading to an influx of untrained individuals in fields such as medicine and finance. The new rush of competition from what trained practitioners saw as incompetent interlopers led individuals trained in fields such as medicine, finance, and the building trades to organize into professional organizations that pushed for limitations on who could claim professional status. Although such restrictions guaranteed a certain standard of competency, the view that professional organizations were using regulatory measures to stifle competition remained.[43]

At the architectural scale, the AIA (American Institute of Architects) is the major professional organization in the United States today. The AIA was founded in 1857 with 13 members, although precursor organizations had been founded as early as the 1820s, in part to counter a perceived dilettantism in the building trades and to further "architectural science" that included systematic learning

through both practical and theoretical training.[44] The early AIA served to further the interests of its members, yet it did not have explicit membership qualifications or professional standards. Additional members were selected based on recommendations by those already in the organization. Selectivity and perceived building artistry were important touchstones of the new organization, which quickly became an exclusive gentlemen's club that sought to distance itself from builders and contractors.[45] The organization remained inward-focused, with fees and competition for public work being major concerns among AIA members.[46]

Indicating the ambivalent nature of criteria for professional organizations, a competing organization, the Western Association of Architects (WWA), was established in 1884 in Chicago to represent 100 architects from 14 midwestern states.[47] The WAA accepted any architect currently practicing in the United States, including Louise Blanchard Bethune in 1885, the first woman practitioner admitted to an American architectural association.[48] The WWA quickly became business-oriented; however, it placed great value on clients' testimonials when choosing candidates for membership.[49]

In 1897, the year the first state licensing requirement was passed, AIA membership was 469, and by 1913, it had reached 1,000.[50] Regulating the U.S. architectural trade remained tricky, however, and architectural organizations often required several rounds of lobbying to persuade state legislators to pass licensure bills. In 1897, thanks in large part to WWA lobbying,[51] Illinois passed the first of the nation's professional licensing requirements for architects. California and New Jersey followed in 1901 and 1902, with New York finally passing licensing laws in 1915. In 1919, NCARB (the National Council of Architectural Registration Boards) was formed to help create a federal standard for licensure.[52] Not surprisingly, with professional requirements now closely defined through training not typically open to women or minorities, the architectural field remained almost entirely white and male (Figure 1.1.3).

Licensure went hand in hand with new building codes. Catastrophic events, such as the 1903 fire that killed 600 people in Chicago's Iroquois Theater or the collapse of a theater roof in Washington, D.C. in 1922, highlighted the need for better regulation to ensure building safety. The building trade was thus regulated in two interrelated ways: architects had to prove their competency and their understanding of building codes through licensure, while building codes were often reactively updated to ensure better building safety.[53]

Figure 1.1.3
The 52nd Annual Convention of the American Institute of Architects in 1919. The photo shows that AIA members were overwhelmingly white and male. Photo courtesy of The Tennessee Historical Society.

With professional licensure regulated and technical requirements becoming more complex, the next step was to standardize architectural education. NCARB founded the NAAB (National Architectural Accrediting Board) in 1940. Over the next 40 years, the board systematized professional degree requirements.[54] Before this time, architects often learned under the apprenticeship model by serving as apprentices in established firms. With the new requirements, design and technical education through a college or university degree became a necessary step toward licensure. Such requirements continued to be controversial as late as the 1960s and 1970s, with some architects arguing that the degree requirements would hinder non-traditional candidates from achieving licensure, while others argued that formal degrees were necessary for public safety. A national degree requirement was passed in 1984, although opinions on the issue remained divided.[55]

Despite formal degree requirements, vestiges of the apprenticeship model remain. Internship training programs, which over the years took on different names such as "Mentorship Plan," "Intern-Architect Development Program," and "Architectural Experience Program," were introduced in 1929 and were made mandatory in 1996.[56] This added a hands-on "internship" phase in addition to the required university degree, effectively adding time and redundancy to the process of licensure.

A final licensure step was testing. NCARB launched a nationally uniform exam in 1965, yet with only some candidates having graduated from NAAB-accredited programs, NCARB initially developed two versions of the exam. Many licensing boards required candidates to take both versions, adding yet another hurdle toward professional qualification that was not resolved until 1983, when a single exam was developed. This exam was a four-day process, with nine divisions covering a range of topics from practice (office) management to project planning and design to construction and evaluation. The standardized exam greatly assisted architects who practiced in several states, as previously, they had to pass exams in each jurisdiction in which they worked.[57]

CAPITALISM AND THE POWER TO DESIGN THE PROGRAM

The narrow definition of who is authorized to plan the spaces we live and work in has served to limit who plans the spaces that frame our lives. Regulatory efforts have focused on "competency," yet that competency has largely been defined as safety-related, i.e., knowledge of codes and technical knowledge of safe building practices and, as a byproduct of the regulatory process, competency in business practices, including rules of competition. Competency in social aspects of the built environment has not been part of the equation. Early AIA codes of ethics, for example, largely focused on how firms should interact with other firms to avoid "unfair competition" (see Chapter 1.2), and early efforts to regulate the profession through licensure were often regarded as an attempt to exclude competing trades, such as builders and craftspeople.[58] The power to define the profession went hand in hand with the power to define its priorities as business-related and serving the interests of its members – who were overwhelmingly upper-middle class, white, and male.

While guaranteeing building safety remained a major reason for regulating the industry, this factor alone cannot explain the multi-step process developed between 1897 and 1965 to regulate who is considered competent to make architectural decisions. A perceived focus on safety suggests an "objectivity" that belies a broader consideration of stakeholder needs, especially needs associated with potential users of what is designed. Similar to what occurred at the urban scale, specific experiences, aims, and ideas of the working class, women, and people of color were largely eliminated within the profession, with no formal process in place to regain this knowledge. Theoretical considerations, including canonical texts developed to educate new generations of architects, have largely reflected this limited viewpoint (see also Chapter 1.4). In practice, architectural knowledge and experience have thus become rather narrowly focused, often on technical and financial aspects of the trade.

The limitations imposed by the architectural licensure process have led to consequences that have only recently been more widely acknowledged. Universities, especially, have scrambled to provide a more diverse learning experience, both in terms of content and delivery.[59] In Western countries, the architectural profession has come under fire for remaining too uniformly male and white, reflecting but a small section of increasingly diverse societies. While firms and universities bemoan a so-called "pipeline problem," in which institutions wishing to increase diversity find there are too few credentialed candidates, this obscures the real problem of obstacles to training, especially for those without the financial means to pursue credentialing.[60]

Educators are beginning to speak out, both about the difficulties that women and people of color, in particular, experience on the road to licensure and about the need for educational and professional requirements to better reflect diversity and social justice issues.[61] Casius Pealer, an architect who directs the Real Estate Development program at Tulane University, has called some of the licensure requirements for architects "irrelevant" and notes that they are much more rigorous than those for lawyers or engineers, professions with arguably similar complexity.[62] Monica Ponce de León, dean of the School of Architecture at Princeton University since 2015, has called the process to achieve licensure (in the United States) "not a path but a series of roadblocks," many of them financial.[63] These include tuition for a professional degree, time spent in poorly paid internships, and a series of exams that require funds for test preparation and exam fees. Educators note that students are increasingly interested in social justice issues as well as environmental engagement, such as LEED certification, topics that are not (yet) required in accredited programs.[64]

One factor in the diversity problem is that the accomplishments and project authorship of women and people of color do exist, yet have been downplayed for decades. Professional awards, such as the prestigious Pritzker Architectural Prize, have historically been given only to a male partner of a firm with an equal female partner, while scholarship and other reporting about projects designed by women or people of color is largely absent.[65] In one instance, Patty Hopkins, the female partner of a prominent British architectural firm, was digitally removed from a promotional image for a BBC documentary on "The Brits Who Built the Modern

World," literally rendering her invisible.[66] Professional authorship by women and people of color thus remains vastly undercounted, while a "starchitect" system that has made architects' names household words has resulted in the work of hundreds or even thousands of professionals discussed as if it were the work of a single person.[67] Ascribing the creative work of many to a select, privileged few further robs the profession of the role models that would encourage more diversity in the field and, with it, more varied ideas of design.

INTERLINKED SCALES, INTERLINKED PROBLEMS

Although planning, urban design, and architecture operate at different scales, they are spatially and socially intertwined. While licensing requirements have helped make practitioners more competent in technical and safety issues, degree requirements and exam content have come to determine what students learn and what topics the fields consider meritorious. Requirements on the road to practice, while appearing to be "neutral" and based on technological and public safety needs, have continually ignored the ideologies embedded within them.

At the urban scale, planning ideologies took various tracks. "City Beautiful" plans, often created by architects with Beaux-Arts training, highlighted the aesthetic sensibilities of their economically privileged authors. Poverty was visually erased, as vistas were created to highlight monumental buildings and squares that championed the ruling elite. This resulted in the negation of interests that were more specific to the marginalized, including members of various ethnic groups and the working class, a condition that extended from the academy to the professional arena.

Social and political activists of the late nineteenth and twentieth centuries, many from outside the architecture and urban planning professions, saw overcrowded housing quarters as a human predicament to be solved. Yet, while activists in the Settler movement in countries such as the United States or Great Britain immersed themselves in the areas they aimed to reform or help, many reformers, including those in the planning profession, practiced social engineering that stripped the working class of any formal agency.

At the architectural scale, social issues have historically been absent in curricula or qualifying exams. This came to a head in 1968, as civil rights leader Whitney Young famously chastised the U.S. architectural community for its ignorance of civil rights issues and its unwillingness to work towards social justice in favor of maintaining a status quo that favored the privileged. Speaking at the AIA Convention to an audience that included some of the nation's most prominent architects and that was almost entirely white and male, he spoke of the public housing they designed that many Blacks in urban areas were forced into by housing agencies, pointedly asking how an architect

> could even compromise his own profession and his own sense of values to have built 35- or 40-story buildings, these vertical slums, and not even put a restroom in the basement and leave enough recreational space for about 10 kids when there must be 5,000 in the building. That architects ... wouldn't as a group stand up and say something about this, is disturbing.[68]

With that vivid example, Young castigated the profession for its insulated worldview and for the social consequences that resulted, summing up the profession's shortcomings: "You are not a profession that has distinguished itself by your social and civic contributions to the cause of civil rights .... You are most distinguished by your thunderous silence and your complete irrelevance."[69]

The architecture and urban design and planning fields have been criticized as part of a power structure shaped through late capitalism, with both practice and theoretical writings helping to maintain this status quo. Elisabeth Hooper's 1992 analysis of how alternative voices have been systematically erased from the professional planning canon remains but the tip of the iceberg. The structure and expense of educational programs, internships, and exam content continue to privilege those with means and power rather than the people they plan for.

WHAT WOULD ALTERNATIVES LOOK LIKE?

Alternative readings of spatial phenomena – the theories behind spatial production – have existed for decades, even if they have not always been considered part of the mainstream canon. In part, these alternatives are based on socially-derived theory; in part, they are technologically based, such as when improving ecological building practices leads to better health for users and a reduction in a building's CO_2 emissions.

Only recently has there been a more concerted effort to introduce alternatives to conventional spatial production more widely. Participatory design practices (see also Chapters 1.2 and examples in Part 2 of this book) or, at the university level, programs such as Auburn University's Rural Studio are examples of how stakeholders have been brought into the design process. Finding socially sustainable answers, however, is but one part of the equation – the other is asking better questions to begin with. More research and design questions must be developed from the perspective of stakeholders who the professions have traditionally overlooked rather than from the limited perspective of those within the professional system.

The examples in the second half of this book present a shift in this thinking. Other alternative models abound, even if they are often dispersed or only partly documented. For example, a collective planning firm, *Col·lectiu Punt 6*, based in Barcelona, prefaces design activities with exploratory qualitative methods to access specific experiences of those caring for children or the elderly. Activities include awareness workshops, exploratory walks, photo documentation, journaling, network assessments, community mapping, safety audit walks, and more.[70] Such methods, which firms often avoid for not producing "billable hours," are nevertheless an important way to communicate with future users.

In the United States, geographer Camilla Hawthorne has reframed scholarly questions by highlighting Black geographies as a field of inquiry, examining the "radical interdisciplinary interventions this body of scholarship has made into the mainstream."[71] In an analysis similar to that made by Hooper about how feminist theory has been obliterated from a professional canon, Hawthorne points out that

"Black geographic thought has existed (though under other names) for centuries, in formal academic environments, political struggles, and everyday practices of Black space-making. It simply has not always been legible to scholars working within the discipline of geography."[72] Hawthorne points out the possibility of using a "colonial curriculum" as an intellectual basis for creating an "against the grain" reading of events to understand and then consider alternatives to how Western European-based practices have ordered the world.[73]

Reading existing texts against the grain to uncover missing material can also make visible how power expressed through racism and white dominance have been linked to capitalist systems and why Black liberation movements have often been linked to anti-capitalism. Adam Bledsoe and Willie Jamaal Wright trace many instances where capitalist demands have gone hand in hand with anti-Blackness, such as in St. Louis, Missouri, where in the 1940s, white owners of inner-city businesses sought to have adjoining Black neighborhoods razed to redevelop the land and increase white-owned property values. The authors further trace how Black St. Louis residents were once again displaced in the 1990s, as the city deindustrialized and residents of predominantly Black neighborhoods were forced out due to gentrification.[74]

Other scholars have reframed social analyses to "look beyond the factory floor to the plantation" as a site of capitalist exploitation.[75] In this reading, the plantation presents itself as an "organizing principle through which present-day forms of capital accumulation, spatial organization, and racialization emerged."[76] This principle has been recognized in theories that provide a foundation for Black studies curricula. The spatial politics of race and capital have been studied largely in the North American and Caribbean contexts. Such connections exist globally, however, and theorizing the pluralities of Black geographies worldwide will provide further awareness of how race, space, and capital intersect, a topic that is further explored in Chapter 1.4.[77]

The preceding include but a few ways in which professional and scholarly understanding might be expanded in the architectural and urban planning fields. Key to this process is to understand and question existing power structures, recognize how social and built-environment systems interact, and seek out ways to listen to and understand project stakeholders to generate greater social value. The following chapters examine some of these processes in more detail.

NOTES

1 Hooper 1992, 48.
2 Feminism in this text is defined as the belief or narrative that all genders should be valued equally.
3 Pizan 1999.
4 Hooper 1992, 49.
5 Sandercock 1998, 1 ff.
6 Sandercock 1998, 3.
7 Sandercock 1998, 4; see also Beauregard 1998.
8 Sandercock 1998, 5.
9 Sandercock 1998, 6.
10 Sandercock 1998, 7.

11 For an example of how official planning policies pathologized and tried to control young working-class women in early twentieth-century Philadelphia, see Wirka 1998.
12 APA n.d. So ... No Planning Degree? https://www.planning.org/blog/blogpost/9133362/.
13 Woods 1999, 15.
14 *Daily Boston Globe* 1953.
15 APA n.d. Planning History Timeline. https://www.planning.org/timeline/.
16 APA n.d. Planning History Timeline. https://www.planning.org/timeline/.
17 *The Boston Globe*, December 8, 1918, 25.
18 APA n.d. Planning History Timeline. https://www.planning.org/timeline/.
19 APA n.d. Planning History Timeline. https://www.planning.org/timeline/.
20 I use the term "African-American" to specifically mean Blacks in the United States who are descendant from enslaved people.
21 Gal, Köngeter, and Vicary 2021.
22 Da Costa Nunez and Sribnick 2013.
23 Gans 1964.
24 Gans 1964, 5; see also Carson 1990.
25 Lasch-Quinn 1993.
26 Gans 1964.
27 For an overview, see Koerin 2003.
28 Sandercock 1998, 8.
29 See Hayden 1976, 1982.
30 Brand and Miller 2020, 1.
31 See Kendi 2019.
32 See Brand 2015.
33 McKittrick and Woods 2007.
34 Lipsitz 2007.
35 McKittrick 2006.
36 For a broader discussion, see Peck and Tickell 2003.
37 See Small and Gose 2020; Harris-Lacewell 2004.
38 Brand and Miller 2020; Mele 2013; Rothstein 2017.
39 Sandercock 1998, 10; see also Beauregard 1998.
40 Sandercock 1998, 14.
41 Woods 1999, 10 ff.
42 Woods 1999, 18–20.
43 Woods 1999, 28.
44 Woods 1999, 30–32.
45 Woods 1999, 34.
46 Woods 1999, 36.
47 Woods 1999, 38.
48 Woods 1999, 39.
49 Woods 1999, 40.
50 Internal documentation provided by AIA archivist Nancy Hadley on November 3, 2023.
51 Woods 1999, 40.
52 NCARB n.d. Licensure. https://centennial.ncarb.org/pillars-of-licensure/examination/.
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59 Examples include https://bit.ly/spaceraceplace, Dark Matter University https://dark-matteru.org/about, and Design as Protest https://www.dapcollective.com/.
60 See also Amelar 2020.

61 See, for example, Sen et al. 2017.
62 Russell 2020.
63 Quoted in Russell 2020.
64 Russell 2020.
65 Álvarez and Gómez 2017.
66 Álvarez and Gómez 2017; Waite and Mark 2014.
67 Álvarez and Gómez 2017.
68 AIA 1968.
69 AIA 1968.
70 Escalante and Valdivia 2015.
71 Hawthorne 2019.
72 Hawthorne 2019, 3.
73 Hawthorne 2019, 4.
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1.2 Ethical Practice

Involving Stakeholders in Shaping the Built Environment

PROFESSIONAL ETHICS CODES

Professional architectural organizations worldwide have developed codes of conduct that are meant to guide professional behavior. Far from remaining static over time, such codes reflect the dominant social concerns of the societies they are embedded within and provide a snapshot of how architects engage with – or turn away from – social issues.

Depending on how architectural "ethics" is defined, codes that outline ethical conduct can be quite thin on social values. The International Union of Architects (UIA), for example, uses only a few lines in their 2017 "Accord on Recommended International Standards of Professionalism in Architectural Practice" to point architects towards codes in "each jurisdiction in which they practice," while acknowledging that, "[r]ules of ethics and conduct have as their primary object the protection of the public, caring for the less powerful and the general social welfare, as well as the advancement of the interest of the profession of architecture."[1] The UIA thus sets the stage for various architecture boards to merge general social ideals with other rules that serve the profession itself. And while some countries' architectural organizations do provide some sort of guidance on ethics for architects registered within their jurisdiction, many, it must be noted, do not.

Where national architecture boards and professional organizations maintain their own ethics codes, they typically provide general advice on both broad social issues and specific professional questions, yet with no means of evaluation or enforcement. The Royal Architectural Institute of Canada, for example, has published a document outlining "Professional Conduct and Ethics" that states that professional practice requires a "higher standard of responsibility to the public" as part of a professional moral code. The document leans on the Hippocratic oath (typically limited to medicine) to summarize what constitutes professional conduct: to do no harm, to maintain client confidentiality, and to pass this knowledge on to the next generation (through internships and mentoring). A section titled "Emerging Trends" can be seen as most closely aligned to the "do no harm" mandate. Here, the Canadian ethics code discusses social responsibility, social clauses (such as demands for fair competition and support for local social enterprises), environmental rights, and human rights, including cultural rights, housing rights, and the rights of construction workers.[2]

DOI: 10.4324/9781003480426-4

National ethics codes that address social issues rarely provide practical steps to achieve such goals. In Britain, the RIBA (Royal Institute of British Architects) has prepared a "Code of Professional Conduct" divided into three sections titled "integrity," "competence," and "relationships," the latter of which briefly touches on social issues such as "equality, diversity and inclusion" and, in a nod to working conditions on some international sites, "modern slavery." In the guidelines on "equality, diversity and inclusion," the first article states, "Members shall provide their professional services and conduct their professional activities in a manner that encourages and promotes equality of opportunity and diversity." No clarifying definition of "diversity" is offered, nor are standards for a diverse workforce or client or community interactions proposed. Under the section on "Modern Slavery," the RIBA guidelines stipulate, "Members should seek to raise awareness of the issues of Modern Slavery in construction," with no further guidance offered.[3]

Such language leaves much to interpretation: should RIBA members control the working conditions on their job sites, thus potentially angering clients and risking lucrative commissions? Should they prominently place statements about fair employment practices on their websites? Above all, why should individual RIBA members be asked to raise awareness about modern slavery when the national organization itself is in a better position to do so? RIBA's ethics guidelines, while raising social concerns, place all responsibility for action on individual firms that are poorly equipped to initiate meaningful social policies. As such, the national organization can point to its seemingly progressive guidelines while evading responsibility for their fulfillment.

In the United States, both the AIA (American Institute of Architects) and NCARB (National Council of Architectural Registration Boards) offer codes of conduct similar in organization to the Canadian code. The "AIA Code of Ethics and Professional Conduct" is divided into six canons covering "general obligations," "obligations to the public," "obligations to the client," "obligations to the profession," "obligations to colleagues," and "obligations to the environment," with sub-sections divided into "standards" that architects should aspire to, and "rules" which can lead to disciplinary action if violated. NCARB's shorter "Model Rules of Conduct" has a collection of five "rules," including "competence," "conflict of interest," "full disclosure," "compliance with laws," and "signing and sealing documents" (formerly "professional conduct"). Although social issues are tangentially addressed, the documents largely examine inter- and intra-office concerns.[4]

The AIA code suffers from similarly ambiguous terms as the British code, although annotations attempt to clarify key thoughts. Under "General Obligations," Rule 1.402 states, "Members shall not engage in conduct involving wanton disregard of the rights of others." A further clarification confirms that such disregard "includes, but is not limited to, sexual misconduct, bullying, intimidation, or retaliation." Under "Obligations to the Public," Rule 2.101 simply states that members should not "knowingly violate the law," while further rules prohibit taking bribes or acting fraudulently, mandates that seem self-evident as they are already covered by common law.[5]

Two rules in the AIA "Code of Ethics" discuss environmental concerns. Rule 6.501 states, for example, that "[m]embers shall consider with their clients the

environmental effects of their project decisions." It is unclear what actions architects or clients should take, however, or where the threshold for unacceptable environmental damage should lie.[6]

The national ethics codes described previously show some awareness of social issues such as worker rights, environmental concerns, and the effect of buildings on the communities they serve, yet the ethics codes presented seem feebly phrased. In some cases, professional ethics codes re-state existing laws. Frequently, they bring up social issues but give little direction on how to address them, leaving it up to individual member firms to interpret what few actionable guidelines there are.

ETHICS AS "BUILDING CULTURE"

In lieu of ethics codes, many European governments have written official guidelines, policy documents, or legal mandates that regulate what is allowed under the mantle of "building culture." The focus of these documents points to a concern with retaining local cultural traditions and landscapes at various scales in the face of increasing globalization and standardization. In many cases, achieving building quality and cultural tradition is seen as a joint endeavor involving both practitioners and the general public in an effort to increase the involvement of cultural stakeholders. One of the earliest such policy documents, *Building Culture in Germany*, stressed the need for architecture and building culture to be "discussed in the public domain." The reason given is that building culture "always manifests itself locally" and provides citizens "a place to lay roots and create a sense of home."[7]

Across Europe, concerns about "building culture" have increasingly taken hold. The *Davos Declaration of 2018*, an international document signed by a conglomeration of European ministers and cultural delegates, "highlights pathways for politically and strategically promoting the concept of a high-quality *Baukultur* [Building Culture] in Europe."[8]

A more recent national example, Spain's "Bill on the Quality of Architecture," published in January of 2022, discusses architecture as an "asset of public interest" that touches upon cultural identity, quality of life, social cohesion and inclusion, health and safety, climate change, and economics. It is described as a "legislative instrument to consolidate a new model of economic, energy and ecological transition that promotes greater social inclusion and cohesion."[9]

Other European countries have written their own ministerial treatises on building culture, including Austria, Belgium, Croatia, the Czech Republic, Denmark, Estonia, France, Ireland, Luxemburg, Latvia, the Netherlands, Norway, Poland, Portugal, Sweden, and Slovenia. While these treatises take on various forms, with some outlining practical matters such as certification, insurance, office organization, and contracts,[10] many focus specifically on "building culture" and the need to produce "high quality buildings" or the need to improve "public awareness" of architecture as central to creating well-designed buildings and urban settings.[11] The focus is on "good architecture" as a social good, whereas standards for evaluating such architecture and urban design remain unaddressed.

SOCIAL GOOD VS. INDIVIDUAL PROFIT: INTERPRETING ETHICS CODES

Despite written codes in many jurisdictions, practitioners often feel that they operate in an ethical void.[12] The changing nature of the architectural profession, where increasing commodification of services has left public interest activities by the wayside, has shifted architects' focus from social thinking that benefits a broader community to professional opportunities that benefit the firm and its clients.[13] The one exception is perhaps the topic of climate change and ecological sustainability, where western developers and firms have seen economic opportunities through the marketing of "green" buildings, merged with design opportunities that partially fulfill a public-service imperative to combat the ravages of climate change.[14]

National approaches to climate change, as seen through the lens of the building sector, vary widely. Some governments have altered building codes to combat the built environment's CO_2 footprint.[15] In other cases, codes have been re-written to better protect citizens from climate disasters such as storms, flooding, or temperature extremes.[16] While in some cases, governments have written codes or policy documents that encourage the building industry to act on climate challenges, in other cases, private organizations have developed incentives for builders to adopt climate-neutral measures. Countries such as the United States have used voluntary, fee-based systems, such as LEED, to encourage ecologically sustainable buildings.[17] This approach encourages individual firms to pursue a climate-neutral standard at their discretion (and, one may assume, after considering the effects on their bottom line). By contrast, writing such standards into the building code treats climate-neutral buildings as an issue of public interest that is, therefore, to be regulated through a public agency (see also Chapter 1.3).

Not surprisingly, many architectural ethics codes were historically developed to serve professional interests rather than the society at large. In an analysis of the AIA "Code of Ethics and Professional Conduct," architect Marc Maxey notes that early versions of the AIA code, first published in 1909, were designed to prevent unfair competition between firms, including through advertising their services. This changed with the 1964 code, which reflected architects' expanding roles as developers and even contractors. Maxey cites John Portman's construction projects in downtown Atlanta, in which he acted as a large-scale developer who hired himself as the architect, as a watershed moment that was initially deemed unethical by the AIA.[18] Portman's business model prevailed and ushered in a new era in which the architect became primarily a businessperson rather than merely a service provider.

Portman saw this new businessman-architect as someone who would "design the city and not just individual buildings," indicating his vision of having the architect serve, above all, as a social constructor.[19] For Portman, this social vision included downtown business districts containing expansive glassed-in and air-conditioned atriums with elevators designed to enjoy the view, as well as skywalks between office towers that allowed white-collar workers to segregate themselves from a predominantly African-American city just beyond. Both in terms of energy use and attempted racial sequestering, Portman's social vision has become ethically discredited while his business model continues to thrive.

ETHICS: ADVISING THE ARCHITECT

To make up for the scant guidance provided by professional organizations, columns and "advice books" that discuss ethical questions have sometimes provided lighthearted counsel for professionals. Thomas Fisher, an architecture professor and administrator, published *Ethics for Architects: 50 Dilemmas of Professional Practice* in 2010, while in 2019, Martin Düchs, a German architecture professor who holds degrees in both architecture and philosophy, published (in German) *50+1 Architectural Moral Issues*.

Fisher's book follows the structure of the AIA Code, illustrating canons through examples from practice. In the section "Obligations to the Public," for example, he writes about an architect in a large firm who is concerned about the firm's frequent specification of polyvinyl chloride (PVC) as a building material. Worried about the material's toxic effects, the architect first spoke with the firm's lead specifier about her concerns before bringing the matter up with her boss, who was a partner in the firm.

Fisher analyzes the situation by invoking philosophy, using Immanuel Kant's categorical imperative that a person should only perform actions that she or he would consider a universal law (or, in other words, that actions are only right for one person if they are right for everyone). Fisher brings this view into the twentieth century by quoting Martin Luther King's observation that we are all "caught in an inescapable network of mutuality." Using Kant's maxim, Fisher advises that universally, using PVC would harm everyone, while using a non-toxic substitute would benefit everyone. He thus concludes that the "right thing" would be to use the non-toxic material, even if it is more expensive, and to educate others as to the material's benefits. Fisher points out that with increased (universal) use, the non-toxic alternatives could even become less costly than the toxic alternatives.[20]

Düchs's book, written in German, is the sum of a monthly column that appeared in the Bavarian edition of *Deutsches Architektenblatt*, the official publication of Germany's Chamber of Architects. The book is divided into sections similar to the AIA canons. Reader questions present opportunities to examine ethical choices architects face in their daily practice. Two sections, "Architecture and Society" and "Sustainability," deal with social questions more generally.

"Architecture is always political. This is something architects and clients should be aware of," Düchs writes in the introduction to the first section.[21] The questions that follow deal with virtue, equity, and solidarity, for example: "Can we accept the construction of 'cultural temples' in an era of pressing social problems?" or: "How should we house people in crisis situations?" (by which he means refugees). Several questions probe professional questions of conscience, for example: "In an era of great social inequalities, how should I, as an architect, deal with luxury buildings?" Two questions address how architects should address the reminders of difficult histories, in this case, iconic buildings of the Nazi era.

The section on sustainability defines the term as dealing with "nature," and Düchs cautions, "It doesn't take an Einstein to recognize that architecture has a special role when it comes to a responsible interaction with nature."[22] In this section, too, social principles predominate. An employee in a firm has misgivings

about designing a 4,300 sq. ft. villa for two people and sees such spaces as unsustainable even if built to strict energy standards. Another asks why valuable historical buildings a friend wants to buy and restore are too costly to save while new construction proliferates and leads to sprawl. Düchs's answers to such questions mix philosophical musings with the gentle nudging of an advice-giver: "If you have to tell your friend uncomfortable truths, then you must do so bravely and not be sad if your friend calls you a spoilsport."[23]

Fisher's and Düchs's books, anecdotally written, illustrate the yearning that at least some architects feel when it comes to social sustainability in their professional lives. The books strike a friendly, personal tone as they fill some of the ethical void left by formal bodies such as professional organizations. Such books make clear that architects see themselves as engaging in often unspoken social contracts. As virtuous humans who build for societies at large, architects desire to do the "right thing," however that may be defined.

The personal approach to ethical case studies illustrated by Fisher's and Düchs's books stands in stark contrast to the more abstract approach taken by professional governing boards. The former takes an intuitive and inductive approach, attempting to define ethical tenets through analyzing real-world examples. The latter has largely attempted to provide big-picture mandates, often by reacting to changes that have already occurred. The AIA, for example, continued to grapple with the changing landscape of architectural practice in the 1960s and 1970s, while their "Code of Ethics" commented on those changes and the ensuing financial models.[24] The profession's restructuring, which saw the field transition from a self-protected gentlemen's club to a free-for-all industry, helps explain why the current AIA Code of Ethics and Professional Conduct remains focused on common-law and intra-industry contractual issues rather than moving on to shape architects' ethical and moral obligations to the society beyond.

BEYOND ETHICS CODES: USER-FOCUSED THEORIES VERSUS AESTHETICS AS A FORM OF ETHICS

While professional organizations have often left ethical conduct questions largely unanswered, scholars and practitioners have stepped in to explore architectural ethics through writings about design processes and project outcomes. In many cases, such writings do not use the word "ethics"; rather, they describe alternatives to common business models by promoting user-centered approaches to design and practice as a more egalitarian way of producing design at all scales. User-focused theories that have been developed over the years include stakeholder-based methods such as universal design, participatory design, and value-sensitive design. (Stakeholders are defined here as any person or group with an interest in the issue, process, or outcome at hand.) In these approaches, the practitioner shifts her or his focus to meet the needs of users and sometimes other stakeholders, either by following established guidelines, as in universal design, or through engaging in a certain mode of practice, as in participatory design.

"Ethics" as user-centered design is in direct contrast to "ethics" based on interpreting architecture philosophically in a way that is aesthetically valid for our time.[25] Conceptually, ethics, as a function of the philosophy of aesthetics, treats the user as a passive recipient of the designer's will. As such, the idea of ethics as a function of aesthetics is geared wholly towards the designer's actions, with a design outcome that is legible largely to participants who can "read" the designer's intent. The ability to "read" architectural intent often requires knowledge of architectural history, leading to conflicts between design specialists and the laypeople for whom buildings are designed.

AESTHETICS, OR THE ETHICS OF BUILDING FOR AN ERA

Debates over how to assess buildings aesthetically – and how this should tie into a fraught ethical discussion – arise frequently. Alison and Peter Smithson's Robin Hood Garden social housing complex in East London (Figure 1.2.1) provides an example of how diverse stakeholders can interpret and evaluate a building quite differently. A Brutalist structure whose construction was completed in 1972, the project seemed aesthetically dated by the 2010s. Developers and politicians were eager to tear down and redevelop the housing site for profit, as architectural historians argued for its conservation as a historically significant icon of its era. While politicians, developers, and design experts debated the complex's fate, no one consulted the working- and lower-middle-class residents who called it home, many of whom were people of color.

Demolition of the site began in 2017. An online exhibit organized by researchers at the University of Manchester in 2023, "chronicling the lived experience and architecture of the Robin Hood Gardens council estate in its last years before demolition," finally gave voice to the residents. Not surprisingly, their stories mirrored the common experiences of those affected by profit-driven urban renewal. Many residents had owned their apartments, a notable financial achievement. Many commented positively about living in the estate and expressed dismay at being forced to relocate to much more expensive housing in the area. Residents criticized the complex itself as not having been well maintained yet expressed appreciation of the many initial design ideas, such as a careful layering of thresholds between open spaces and private apartments and the verdant courtyard as a child-friendly space for recreation.[26]

Figure 1.2.1 The Robin Hood Garden housing estate in London (constructed 1972, demolished 2017). While some criticized the brutalist architecture, residents lauded the thoughtful design elements, including the verdant courtyard where children could play. Photo courtesy of Jens Kristian Seier.

Robin Hood Gardens, in the words of its residents, had functioned well for many of its users, yet functionality had not played a role in deciding the project's fate. Instead, the project's demise was arguably due to developers' interest in the inner-city site, while critics of its aesthetic expression saw its New Brutalist architecture as an example of the movement's "concrete monstrosities."[27] Even the architects, whose careful spatial considerations had created a livable complex, conceded style and philosophical underpinnings as the New Brutalist's defining features, with Allison Smithson famously stating in a 1957 essay, "[U]p to now Brutalism has been discussed stylistically, whereas its essence is ethical."[28] While photos of and interviews with the residents documented the housing complex as a living space, both architectural experts and developers continued to project aesthetic concerns to the forefront, with the latter conflating the developer's financial desires with ideals of aesthetic "renewal."

Although housing is, above all, a space for users' daily and most intimate lives, planners' disregard for their views in favor of financial or aesthetic and conceptual considerations is not unusual. Professional business models are not designed to accommodate user-focused design approaches, since the hours working with and studying user groups are difficult to account for under typical billing structures. Instead, architectural ethics derived from philosophy and based on aesthetics provides a seemingly easier approach to design decision-making. Relying on spatialized aesthetic concerns conforms to the ideals of high design, where conceptual frameworks drive spatial production. User-centered theories thus face two considerable hurdles in their implementation: existing business models and commonly applied theoretical frameworks. This holds true even when planning housing, a building type that is so innately connected to user's lives and identities.

USER-CENTERED DESIGN

How has user-centered design, such as universal design, participatory design, and value-sensitive design, influenced the design professions? For one, all three approaches recognize the user as a key stakeholder in the design process. They implicitly recognize that design and professional activities framed primarily as business ventures provide fodder for a capitalist narrative that defines "success" as written largely through the bottom line. This situation is exacerbated by an existing "starchitect" system that evolved in the latter part of the twentieth century and rewards individual heads of firms with status based on daring and iconic design projects and successful competition entries. The ambivalence with which many professional organizations approach questions of ethics and the unease expressed by individuals seeking advice on the "right" thing to do is testimony that architects walk a fine line when defining professional success.

UNIVERSAL DESIGN AND ACCESSIBILITY: BUILDING FOR DIFFERENT PHYSICAL ABILITIES

Of the three user-focused approaches I will discuss here, universal design has been the most straightforward as a basis for architectural and urban-design

applications. Universal design (or Inclusive Design, as it is called in some contexts) has been defined by the United Nations as

> the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. "Universal design" shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.[29]

Universal design thus encompasses products that are tangible (such as physical environments, objects, landscapes, or buildings) as well as abstract (such as programs or processes) and includes the design of assistive devices in these contexts.

While universal design principles go beyond the physical design of the built environment, important principles were codified in the United States in 1990 through the ADA (Americans with Disabilities Act). A piece of wide-reaching civil rights legislation, the ADA prohibits "discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public."[30] The ADA's legal obligations translated into both policy and built-environment mandates. The most visible change in buildings was accessibility for wheelchair users, including vertical access (ramps and elevators), corridor and door widths, and restroom designs, precise specifications for which are now written into building codes and taught in all accredited professional programs. The ADA also addressed equity concerns, for example, by stipulating wheelchair users' access to auditorium seating (a choice of seating must be provided) or in mandating signage to allow sight-impaired users independence in wayfinding.

As of 2000, about half of all countries internationally had building codes that included accessibility criteria of some sort.[31] In addition, the ISO (International Standards Association) published an international building standards document on accessibility in 2021 and is, as of 2023, developing accessibility standards for retrofitting cultural heritage structures "to ensure usability for the widest range of people."[32] The list of specific concerns is detailed and includes access routes, doorways, fire safety, handrails, parking, restrooms, signage, and workstations. All of these measures increase equitable access to and through the built environment for users of all abilities.

While accessibility codes are typically laced with safety concerns, the focus on easing use and standardizing "best practices" for accessibility in architecture is heartening for its inclusion of social aims as well. Egress features are designed to keep wheelchair users and others safe in case of fire, and access routes and doorway specifications guarantee safe passage. Other features improve social equity. For example, stipulations concerning accessible parking and restrooms or access to seating with adequate sight lines in auditoria are designed to allow differently abled users to better enjoy a building. While accessibility codes can thus be considered a logical outgrowth of laws that guarantee user safety, a secondary effect has been to throw social equity concerns into the mix.

STAKEHOLDER THEORY

A key aspect of user-centered design is understanding users as the primary stakeholders in whatever is designed and built. Stakeholder theory is one way to conceptualize greater stakeholder involvement in the building process, with the aim of achieving better outcomes for multiple players or, in the original aim of the theory, greater overall value creation.

Stakeholder theory was originally presented in R. Edward Freeman's 1984 book *Strategic Management: A stakeholder approach*. Designed as a business management tool, the theory aimed to increase a firm's potential value by considering the long-range satisfaction of its stakeholders (as opposed to only considering the firm's shareholders). The theory has since been expanded to address social value ideals and has been adopted in business ethics and in fields as diverse as law and healthcare.[33]

As presented, Freeman's definition of stakeholders was broad and consisted of "internal" stakeholders, described as owners, customers, employees, and suppliers, and "external" stakeholders, meaning governments, competitors, consumer advocates, environmentalists, special interest groups, and the media.[34] As might be expected, the degree of consideration each of these stakeholders should receive has been the topic of some discussion.[35] Despite this, the internal/external division translates well to the architectural and urban design process, where architects, urban designers, landscape architects, engineers, clients, and users of a building can be considered "internal" stakeholders, while governments (especially regulating bodies), environmentalists, special interest groups, community members, and non-human beings such as flora and fauna are "external" members.

In a professional sense, most architectural practices are firms, making the case for using management theories in business dealings commonsense. This extends to questions such as how stakeholders influence firms, in what situations stakeholder groups mobilize, and when and how stakeholders support firms.[36] Anyone who has seen a citizen group hinder a planned building project can attest to the power that stakeholders can wield, while angry citizens demonstrate that thwarting stakeholders can lead to ill will.

The stakeholder literature includes many articles that discuss how firms can gain stakeholder support, manage stakeholders, and balance stakeholder interests.[37] Not surprisingly, building trust between stakeholders and the firm itself is high on this list, as is looking at longer-term values and avoiding opportunistic relationships. Indirectly discussed is how to give stakeholders a voice, for example, through including them on organizational boards. The literature also warns against common tactics used to manipulate stakeholders, such as playing one group off against another or ignoring legal obstacles to the point of no return.[38]

Importantly, critics of stakeholder theory used as a normative foundation for practice emphasize that approaches based on ethical considerations such as feminist ethics, deontology, libertarianism, or organizational justice, to name but a few, must keep in mind the realities of existing corporate practices. At least one author has stressed the importance of understanding strategic corporate processes if one is to attempt meaningful social change.[39]

Stakeholder theory has not typically been discussed in the context of architecture or urban design, yet the concepts and methods of stakeholder analysis would lend themselves well to such work, especially in situations where participatory or co-design have become important aims. Paradoxically, the term "stakeholder" is frequently used in such processes without reference to the theory from which the term emerged. A better understanding of stakeholder theory and its development can help open up new thinking in both participatory design and design pedagogy.

PARTICIPATORY, COLLABORATIVE, AND CO-DESIGN: INCORPORATING STAKEHOLDERS INTO THE DESIGN PROCESS

Participatory and collaborative design processes (sometimes called co-design) incorporate project stakeholders by nature. While conventional design practices allow design experts (architects, landscape architects, urban designers, engineers, and related fields) to work with the client in determining design outcomes, participatory and co-design allow diverse users of the end product to bring in expertise about their experiences, wants, and needs, thus furthering inclusivity in the decision-making process. The definitiveness of the terms "participatory" and "co-design" is misleading, as a quick review of the literature shows that both involve a wide range of processes and methods.

Participatory design has a longstanding tradition in urban design, where it is frequently employed to solicit community input (or at least inform community members of impeding measures – see Sherry Arnstein's "ladder of citizen participation," described later). Participatory design methods have also been used to gain stakeholder input in building designs, particularly in school and healthcare projects.

Participatory design has been described as inherently power-sharing,[40] and I highlight this factor here. To effectively incorporate stakeholders, designers with professional knowledge must be willing to acknowledge the different types of expertise that users and other stakeholders bring to the table. In the course of the design process, designers must then find ways to tap into and incorporate this expertise. Design programs, especially those teaching architectural design, rarely teach these skills, and design professionals do not typically seek out ways to challenge existing professional paradigms or their power structures.

Educational settings have started to make inroads to change existing design processes. Some universities, for example, offer community design programs where students can work with community groups, often on small-scale projects appropriate for a semester setting. Examples from the United States include UCLA's cityLAB (featured in Part 2 of this volume) and Penn State University's Hamer Center, both of which work with community groups in different ways. In other cases, university faculty have initiated individual courses to explore power-sharing concepts. An innovative example within a pedagogical setting is the "CoDesign Field Lab: Black Belt Study for the Green New Deal," a 2021 design seminar blending together teams of professional master's students at Harvard University's Graduate School of Design and representatives of Afro-descendant communities in the Black Belt South (specifically, communities near

Atlanta, Georgia). The Atlanta community members and their "youth elders" (9- to 17-year-old students) guided much of the design decision process. This innovative co-design studio was showcased in the Landscape Architecture Foundation's *Superstudio Showcase* exhibit at the National Building Museum in Washington, D.C., in April 2022.[41] Further projects using some of the methods developed in the course are presented in the second half of this volume.

PARTICIPATORY DESIGN IN URBAN DESIGN PROJECTS

In the United States, participatory principles in urban design were introduced through a groundbreaking 1969 article by Sherry R. Arnstein titled "A Ladder of Citizen Participation" (Figure 1.2.2).[42] In the years since, the APA (American Planning Association), a professional organization, has developed extensive guidelines for involving stakeholders in the urban planning and design process.

Arnstein worked for the "Model Cities Program" at HUD (the U.S. Department of Housing and Urban Development) from 1967–1968. This experience helped shape her community advocacy for pragmatic change as well as her vision of citizen participation in planning. In addition to her citizen participation work, Arnstein championed local governments in building long-term partnerships with community groups to better facilitate citizen involvement in social equity work.[43]

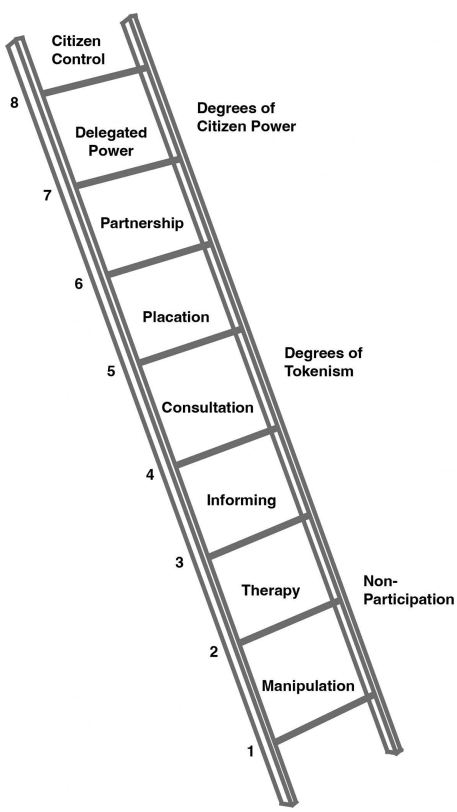

Figure 1.2.2
Sherry Arnstein's "Ladder of Citizen Participation" (1969) illustrates a gradient of citizen involvement in planning measures. Figure redrawn after Arnstein 1969.

Arnstein saw the type and degree of citizen involvement and outcome control as a hierarchy, her "ladder." At the lowest level, called "nonparticipation," are projects where citizen-stakeholders have no means to participate in planning decisions. In the middle rungs of the ladder, called "degrees of tokenism," officials might inform or even consult with citizen stakeholders, who still have limited agency to affect outcomes. At the top rungs are categories such as "partnership," "delegated power," and "citizen control," where citizen-stakeholders have agency in the planning process.[44]

The idea of "citizen control," perhaps radical sounding today, resulted from the activities of young, liberal policymakers involved with the PCJD (President's Committee on Juvenile Delinquency), initiated in 1961 under President John F. Kennedy. This program experimented with improving federal programs to promote youth welfare, in part by working directly with local constituencies. Arnstein, who worked with PCJD from 1963–1965, was deeply influenced by this community work and by the realization of how communities and their citizens so closely intersect.[45] Going further, she saw the participation of citizens, and especially "have not" citizens, as she called them, as a fundamental part of forming strong communities:

> [C]itizen participation is a categorical term for citizen power. It is the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future.[46]

Perhaps unimaginable today, the United States of the 1960s saw the federal government as a driving force behind citizen participation in programs that affected them. It was the federal government's HUD that issued a five-point "Checklist for Action" to guide partnerships between local governments and community groups, using financial levers to enforce compliance.[47] Despite this, factions within HUD were already working against further expanding citizen power in making local community decisions, thus effectively taking away a major tool by which to effect social change.[48]

As Arnstein so presciently noted, power-sharing and greater citizen agency require those who have historically held political and economic power to agree to share that power, at least tacitly. This proved difficult, in part due to a lack of agreement over which stakeholders should be at the table. Over time, "citizens" and "community members" were sometimes defined as the grass-roots stakeholders who were traditionally excluded from control processes, and sometimes as local government and private sector representatives.[49] This – perhaps inadvertent and possibly purposeful – non-alignment of definitions might explain some of the continuing dissonance over whose voices should be involved in participatory design processes.

Arnstein's ladder of participation remains a valuable tool with which to analyze participatory programs, especially at the neighborhood level, and her concepts provide a checklist for those involved. Are planners and designers merely trying to "educate" community members through presentations? In the spirit of "tokenism," are community members able to voice their opinions with no guarantees

that their voices will be heeded? Are "have nots" "placated" through a perceived involvement in design matters that does not include real decision-making power? Or do citizens engage in real managerial power "to make the target institutions responsive to their views, aspirations, and needs" through what Arnstein calls "partnerships," "delegated power," or "citizen control"?[50] Although Arnstein's ladder was developed from her experience with U.S.-based programs of the 1960s, the concept transcends both place and time, an important consideration as participatory principles expand in other cultural and national contexts.

Citizen participation, sometimes rising to the level of participatory design, remains an important ideal for urban planners today. Theoreticians continue to discuss the "participatory turn" in urban planning, urban design, and architecture as emanating from the political and social movements of the 1960s.[51] While many social problems of the 1960s continue to exist in various forms today, and stakeholder input is as valuable as ever, participation methods in large-scale urban projects have evolved over the years, incorporating new technologies that have, at least on paper, expanded the potential for participatory processes.

NEW METHODS OF PARTICIPATION

As technological advances have entered the participatory toolbox, planners have increasingly experimented with social and digital tools, even to the point of developing ideas for novel "smart city" projects, where the physical environment reacts to user input in real time.[52] Such interactive digitalization has been touted as increasing participation in urban settings by allowing citizens to engage with and alter their environment as needed. "Smart" technologies, however, have also been criticized for perpetuating social biases, as the algorithms they depend on are designed around biased and often exclusionary data sets.[53]

Despite this drawback, software applications have helped push new forms of participation in more conventional design and planning scenarios, for example, through multi-player online urban games.[54] The increase in participatory software holds promise for expanding access to user groups who have traditionally been excluded from the participation process, such as those with caregiving responsibilities or with impaired mobility, who might find it difficult to attend conventional workshops or meetings. Digital tools are also a logical way to involve younger groups of stakeholders, whose familiarity with software and digital platforms can ease involvement in participatory processes that are digitally based.

The Covid-19 pandemic accelerated the push toward digital and remote data collection methods. As the pandemic forced urban researchers to rethink how to communicate with their study participants, they developed creative uses of video-conferencing and remote data collection methods.[55] Researchers studying participation found that remote data collection had many advantages and that participants often felt more at ease and in control of the data collection process.[56] Many of the innovative data-collection tools developed and tested during this time, including video journaling and other forms of visual and spatial data collection, could be adapted to participatory or co-design processes – if the will to engage stakeholders is there.

At their heart, the demands for participatory processes continue to stand for more decentralized and democratic versus centralized and top-down power structures.[57] It is difficult to assess the final outcomes of participatory design processes without establishing clear metrics for success. If we accept that stakeholder agency and Arnstein's concept of "have-not" citizen power are good starting points for measuring design and planning success, then we are also on our way toward discovering how participation or co-design might intersect with ideas of social sustainability.

PARTICIPATORY AND COLLABORATIVE PROCESSES IN BUILDING DESIGN

Urban design and architecture operate at different scales, and so participatory processes are by nature different. In architectural projects, where a building design emerges, participation processes are fairly focused, and many are adapted from other design fields, such as the design of workflows. Architects most frequently use participatory design in educational settings and healthcare facilities, although participatory techniques have sometimes been used in the design of housing projects as well. While there is often overlap between specific participatory or co-design methods, the field is rapidly developing, with guidelines, manuals, and even proprietary "kits" available for a wide range of contexts. For the most part, participatory design processes have not been systematically evaluated, and the list of offerings developed by those who use them remains fluid.

The word "design" describes a methodological approach to problem solving that is iterative. Most participatory methods expand this technique by incorporating stakeholders in the iterative design process, using specific techniques to develop goals and ideas, and then reviewing them. Approaches to such participatory design activities tend to vary, with many designers acknowledging that "designing the design process itself is just as important as designing the artefact."[58]

Participatory or co-design exercises thus take on many forms. These include semantic explorations to clarify values, games that explore possible design scenarios, and future visioning exercises, or, as one designer put it, "the making of things, the telling of stories and the enactment of possible futures together."[59]

PARTICIPATORY DESIGN IN HOUSING

Although housing is a universally needed commodity, much of it is designed without user input. Architects recreate standard floor plans for apartment living, while developers typically focus on providing amenities and finishes that suggest aspirational living. User input is often limited to owner-determined renovations or updates, with websites or magazines suggesting aspirational "trends."[60]

Projects that are designed for users to align spaces to their needs are rare. A classic example is Herman Hertzberger's 1967–70 Diagoon Housing project in Delft, Netherlands, which offers split-level row housing that can be adapted at will.[61] Paradoxically, informal housing of the Global South presents a vast and

understudied case of user-determined (and often self-built) housing that reflects ongoing user needs. Such projects are examples of "Architecture without Architects," examples of which are presented in Bernard Rudofsky's 1964 book of the same name. Several more recent user-led housing projects in Europe, Brazil, and India are presented in Part 2 of this volume.

PARTICIPATORY DESIGN IN EDUCATIONAL SETTINGS

School design lends itself well to participatory and co-design processes since stakeholders are easily identified and, with the welfare of children involved, often very motivated to create an exemplary outcome. Stakeholders identified are typically teachers, administrators, municipal representatives, parents, and students, although this list could easily be expanded to include support staff, technicians, cleaners, lunchtime supervisors, and the community at large.[62] Multiple studies have shown the benefits of including stakeholders in the design of school buildings, both for learning outcomes and for student and staff happiness.[63]

Despite the easy identification of stakeholder groups, participatory (or collaborative) design in educational facilities is still not common. This is all the more striking, as current pedagogical approaches used in schools often stress group thinking in the form of collaborative skills and lifelong learning.[64] With the learning process *within* educational spaces increasingly focused on collaboration and shared expertise, it stands to reason that shaping spaces *for* such collaborative processes should also be a team effort that includes the diverse stakeholders who will use the space. Various design tools have been developed to cooperatively visualize educational processes and their corresponding environments, and several are introduced here.

"Action research," involving the setting of planning goals, implementation, observation, and reflection in the educational process, is one participatory method. First proposed by Ortun Zuber-Skerritt in 1992, the action research cycle describes an iterative model – much like the architectural design process – that involves setting goals and then implementing, observing, and reflecting on them in a cyclical loop.[65]

A further tool is "laddering" (not to be confused with Arnstein's use of the term), designed to bridge the different types of expertise between stakeholders. Stakeholders who are not professional designers are understandably challenged in asking for things they have never seen or experienced. The laddering tool, adapted from the field of psychology, allows a diverse range of stakeholders to develop and understand each other's hierarchy of goals – from highest-ranking "identity goals" to mid-level "principle goals" to lower-ranking goals that are specifically associated with individual acts. Identifying various stakeholders' goals allows them to be synchronized into an overarching system that can help set design priorities.[66]

The "building block tool" is a further process that helps stakeholders design a learning environment that is in alignment with educational methods. This tool allows a problem, goal, or situation to be broken down into modules that can then be recombined and allow stakeholders to generate multiple design alternatives for

a given problem – be it the pedagogical process or the physical spaces to accommodate it.[67]

Finally, several organizations have developed kits or systems specifically used to incorporate stakeholders in school design. A "Co-Designing School Toolkit," released online in 2020, provides 40 activities developed by a consortium of educator organizations in the United States to "increase accessibility to a design-driven, equity-centered, and collaborative process."[68] With steps defined as teambuilding, defining aspirations, understanding student stakeholders, "hacking" (i.e., design steps), evaluating impact, and showcasing, the steps provide an iterative process, albeit one that is self-led, without access to an experienced facilitator.[69]

By contrast, the Berlin architectural firm *Baupiloten* (see Chapters 2.8 and 2.9) has developed a facilitator-led "School Visioning" process that the firm's design experts use to develop ideas with project stakeholders. Various exercises help stakeholders envision and express spatial and atmospheric elements of the building. The architects accompany these exercises and couple them with feasibility studies that include urban planning proposals and architectural results. During the building construction phase, stakeholders' views are again solicited to make sure visions are being translated accurately.[70]

The architects note that buildings planned with the visioning game better meet users' needs and achieve higher levels of user satisfaction than buildings designed conventionally, without participatory design methods. They hypothesize that users are better able to identify with buildings they have helped design, and that this involvement makes for a better design process and better acceptance of the results.[71]

PARTICIPATORY DESIGN IN HEALTHCARE FACILITIES

In healthcare facility design, stakeholders are typically healthcare staff (doctors, nurses, technicians, therapists) and administrators and support staff. In some cases, patient advocates are also involved. Much of the participatory design literature in healthcare applies to care processes rather than building design, with "design tools and ways of thinking in order to bring healthcare staff and patients together to improve the quality of care."[72] The current tendency to see medical care as a participatory process, including collaborations between patients and professionals in decision-making processes, is perhaps a precursor for increased participation in the planning process of healthcare buildings.[73] The framing of healthcare processes as a design problem[74] points to the close relationship between built structures and the actions that take place within them. This synopsis is especially pronounced in sites that provide healthcare, where evaluation and treatment protocols typically require spaces for highly choreographed processes.

Some architects designing healthcare settings do make use of participatory design methods, although the methods used are far from fully developed. In Australia and New Zealand, for example, interdisciplinary user groups are consulted when project clients and funding agencies develop ideas for healthcare

facilities.[75] A 2020 analysis of this process, however, found that knowledge asymmetries, uneven workloads between participants, and the quality of resources available to guide co-design processes in healthcare building design created missed opportunities for innovation.[76]

Studies have generally noted positive outcomes when "stakeholder experiential knowledge" is integrated into the healthcare facility design process, as evidenced by post-occupancy evaluations.[77] Put another way, since healthcare workers, administrators, and patients have direct experience with the healthcare *process*, their experiences provide a knowledge base that is invaluable to the designers of healthcare settings (see also Chapter 2.10).

Two further methods for communicating within the design process should be mentioned for their potential as participatory design tools: BIM (Building Information Modeling) and mockups, or digital simulation. BIM is already in widespread use to facilitate interactions between architects and engineers in building designs. Project participants use the ease of a common digital platform to add components to an overall building project, making communication seamless and more efficient. Expanding BIM visualization to incorporate additional stakeholders, such as building users, would expand this tool as part of a co-design process.[78]

A design tool already used in building design is full-scale mockups or digital simulation tools as a testing phase in the iterative design process.[79] While mockups are typically full-scale models, digital mockups using augmented or virtual reality promise new means for laypeople to understand spaces that are still being projected. While mockups are also used as a visualization method in the co-design of schools, the highly technical environment of healthcare facilities means the functionality of the spaces is under particular scrutiny that simulations can often address.[80]

VALUE SENSITIVE DESIGN: FURTHERING THE PARTICIPATORY TOOLKIT

Using Sherry Arnstein's "Ladder of Participation" as a theoretical framework, it becomes clear that participatory or co-design is also an expression of values. The implicit morality in Arnstein's concept is that broad stakeholder agency such as partnership and citizen control increases democratic values and is therefore good, while tokenism or non-participation decrease democratic values and are thus problematic. As a set of methods that deal specifically with the question of values, Value Sensitive Design becomes a further step with which to engage stakeholders in an ethical design process.

Value Sensitive Design was developed by Batya Friedman, Peter H. Kahn, and David G. Hendry in the 1990s. Initially conceived as a tripartite method to be used in computer technology and social-science fields,[81] the concept brings moral thinking to technological development under the premise that we shape technologies and technological practices, after which they shape us.[82] Because the methods engage stakeholders in the design process, the concept has some relationship to participatory and co-design.

While value-sensitive design has not been directly applied to architecture or urban design, the method could easily be applied to such fields, especially as we increasingly regard both buildings and urban structures as *systems*. As Friedman and Hendry write in the introduction to their 2019 volume:

> [Value Sensitive Design] is about bringing our moral and technical imaginations into the designing and making of technology writ large. It is about expanding our imaginations and opportunities, our toolsets and methods, and our criteria for judging the quality of systems we build.[83]

Values, the authors propose, imbue our design intentions, and value-sensitive design provides a tool with which to peel back the covers on this process.

Value-sensitive design encompasses a variety of methods borrowed from fields such as anthropology, social psychology, and counseling, as well as fields that use participatory design, such as healthcare design. Many are qualitative methods and work specifically with stakeholders. The movement began as a combination of work communities that used new technologies to increase cooperation, and participatory design communities seeking to empower workers in system design and development processes.[84]

Friedman and Hendry have developed a list of 17 methods to engage in Value Sensitive Design.[85] These methods often link design activities, such as developing mockups or narratives of use, with activities to elicit social information, such as charting stakeholder values to make them more visible, using survey techniques to visualize and compare participants' values, using analytic methods to reduce tensions between stakeholders' differing values, or probing longer-term design thinking with a focus on both societal and technological change. Certain methods, such as "envisioning cards," present physical toolkits that can be used for generating ideas, designing collaboratively, and evaluating generated design ideas. Others, such as "value source analysis" methods, tease apart discrepancies between designers' personal values and other project values – an important consideration, for example, when designers come from a demographic different from the people for whom they are designing or when encountering competing values, such as ecological preservation in a land-use project versus rapid economic development.

As an example of a method that would lend itself well to the built-environment design process, one of the Value Sensitive Design methods outlined is "Multi-lifespan Co-design," a method that allows "participants to work alongside experienced designers to contribute ideas through constructing solutions."[86] In the multi-lifespan scenario presented, participants envision situations 20 to 35 years in the future as a generational process. This method examines situations at the timescale of the built environment (since most buildings are designed to last years if not decades) while at the same time addressing the social aspect of sustainability, defined by the United Nations' Brundtland Commission in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[87]

ASSESSING PARTICIPATORY AND COLLABORATIVE DESIGN

How much difference do participatory design processes make in the final project outcome, and where do the challenges lie? Surprisingly, there is scant information on the topic, and the information that exists is often anecdotal. One 2014 study of a large urban development project (the Great Park) in Orange County, California, with a decades-long construction timeline, examined the participatory design process used and analyzed the ensuing outcome.[88]

Developers of the Great Park project based decisions on both expert input in the form of professional designers' competition entries and citizen input. As a first step towards gathering citizen input, ballot measures were proposed to determine large-scale planning ideals. Community leaders and representatives of major area demographics were then invited to participate in focus group interviews as part of a "visioning" process. In a further step, the project planners organized a stakeholder conference, with names suggested by the focus group members. This conference included further visioning exercises based on specific themes such as sports, business interests, education, and so on. Conference participants also filled out two questionnaires and summarized information to develop what, for them, were the most salient features desired in the park. The information gained at the conference was then used to develop a countywide telephone survey to solicit ideas from a larger group of citizens. As a final step, all Orange County residents were invited to rank the competition proposals developed by the invited design firms.[89]

The qualitative data gathered throughout the visioning process for the Great Park was extensive. The project's large scope and long-range realization timeline meant that planning would take place over years, making ongoing community involvement more feasible. Many of the methods used are typical for a community design process, including public hearings, surveys, workshops, or other events with community representatives. Citizen participation started well before the design competitions for the park, and in fact, citizen input became the impetus for holding an international design competition in the first place.[90]

Participatory design in some form is a typical process in urban projects and is sometimes even mandated by local laws. Despite planners' best efforts, however, participatory design is often criticized for not reflecting community demographics since families with caretaking responsibilities or those who work long hours or who have several jobs are often unable to find time to participate in community workshops or surveys. The Great Park project illustrated this problem clearly. The majority of community members in the participation process were white and affluent; many were senior citizens. The community at large, however, was much younger and proportionately more Hispanic. Additionally, researchers found that business leaders were able to influence public opinion through advertising and other measures.[91] Although the project's professional designers elected to integrate many of the design ideas discussed by the public in participation measures, a lack of true community representation calls the ideals of existing participatory processes into question.

Community participation presented the project's developers with another challenge: The professional designers presented visionary and creative ideas in

their competition entries, whereas the public proposed more conventional scenarios based on what they were already familiar with.[92] This means that participatory methods themselves are not enough to develop design elements that improve social sustainability. In addition to challenges in finding across-the-board community representation for the participation process, organizers might find that community members re-create scenarios that can indirectly or directly hinder equity and inclusion simply because such scenarios are so familiar to the community members involved. Simply giving community members a voice in design projects does not guarantee better social outcomes, especially for marginalized community demographics.

Despite this cautionary tale of how large-scale citizen involvement can fall short, participation processes remain an important opportunity to involve diverse stakeholders in designing the spaces they live and work in. Evaluation metrics for participation, such as Arnstein's "ladder," can help communities assess if stakeholders have truly become integrated into major planning decisions or if their involvement is simply an example of tokenism. The work of Arnstein and other theorists of participatory design offers policymakers and designers a foundation that can help decentralize and thus democratize decision-making processes.

Large-scale participatory design remains complicated. On the one hand, stakeholder expertise should not be downplayed. Who better than the citizens affected know the details of what they want or need? On the other hand, stakeholders' imaginations are sometimes limited by the commercialized offerings with which they are already familiar. When business leaders then use their financial clout to advocate for their preferred solutions, this lack of imagined alternatives is compounded. In addition to the challenges of guaranteeing true demographic representation, exploring design solutions beyond the often commercialized conventions stakeholders are typically familiar with is a challenge designers must address if social sustainability is to be improved.

NOTES

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63 Fishman and Krajcik 2003; Kali, McKenney, and Sagy 2015; Könings, Seidel, and Van Merriënboer 2014.
64 Könings and McKenney 2017.
65 Könings and McKenney 2017; see also Zuber-Skerritt 1992.
66 Janssen et al. 2017.
67 Janssen et al. 2017.
68 Co-Designing Schools Toolkit n.d.a.
69 Co-Designing Schools Appendix n.d.b.

70 Hofmann 2014; Baupiloten n.d.
71 Baupiloten n.d.
72 Donetto et al. 2015, 227; see also Hamzah and Wahid 2016; Palmer 2020.
73 Palmer 2020.
74 Donetto et al. 2015.
75 Carthey 2020a.
76 Carthey 2020b.
77 Kpamma, Mensah, and Sadick 2023; see also Gawlak and Stankiewicz 2022.
78 Koutamanis, Heuer, and Könings 2017.
79 Königs et al. 2017.
80 Watkins, Myers, and Villasante 2008.
81 Friedman and Hendry 2019.
82 Friedman and Hendry 2019, 3; see also Winner 1986.
83 Friedman and Hendry 2019, 2.
84 Friedman and Hendry 2019, 13–14.
85 Friedman and Hendry 2019, 61 ff.
86 Friedman and Hendry 2019, 83.
87 United Nations Brundtland Commission 1987, 16 f.
88 Garde 2014.
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1.3 Architecture and the Ethics of Sustainability

In 1987, the United Nations Brundtland Commission's report titled "Our Common Future" put forth a definition of sustainability that went beyond an interlinked classification system to instead make the concept an ethical mandate. Defining sustainability as meeting "the needs of the present without compromising the ability of future generations to meet their own needs,"[1] sustainability, especially in a world already threatened by environmental degradation and widespread poverty, became an actionable responsibility across all actors and generations.

There is a similarity between the Brundtland Report's call to sustainability and philosophical calls for ethical behavior. The Brundtland Report called for today's actors to assume universal responsibility for current and future generations, meaning that everyone must hold themselves to the same ethical standards for all time. This mandate can be compared to Immanuel Kant's Categorical Imperative, "Act only according to that maxim whereby you can at the same time will that it should become a universal law."[2] Like the Brundtland Report, Kant's maxim makes it the responsibility of each person to act in a manner that one would wish others to act; the choice to act in a specific way becomes a "universal law" applicable to all. Using the Categorical Imperative as a guide, the Brundtland Commission's mandate could be restated as follows: We must act today (for example, use resources responsibly) according to ways that are universally valid (applicable to all and across all times) so that future generations will not be compromised in their own needs.

While Kant's deontological maxim provides a clear frame of reference for a broadly defined notion of sustainability, Jeremy Bentham's principle of utilitarianism provides another useful template. Utilitarianism regards ethics as a function of quantifiable happiness: "It is the greatest happiness of the greatest number that is the measure of right and wrong."[3] Seen through this lens, the Brundtland Commission would caution that only if future generations are included in our calculation of happiness will our actions to assure our own happiness be ethically right.

The Brundtland Commission, whose definition of "sustainability" has become a standard, has thus turned the concept into a moral calling. Initially asked by the General Assembly of the United Nations to develop "a global agenda for change" in response to the world's environmental challenges, the commission soon linked environmental challenges to developmental ones: "Environmental degradation, first seen as mainly a problem of the rich nations and a side effect of industrial wealth, has become a survival issue for developing nations."[4] With those words,

DOI: 10.4324/9781003480426-5

a social issue became evident in the sustainability question, one that begged for an ethically channeled response.

In pushing for answers to the world's most pressing challenges, the Brundtland Report defined sustainability as three interlinked concerns: economic, ecological, and social. Economic sustainability is defined as an assurance that economic growth, especially in majority poor nations, takes place in an equitable manner aided by democratic political systems.[5] Ecological sustainability is defined as adopting lifestyles that do not place undue pressure on energy sources or natural resources.[6] The report defines social sustainability more indirectly, including factors such as the equal position of women in a given society, the protection of vulnerable groups, and local participation in decision-making.[7]

In the years after publishing the Brundtland Report, the United Nations expanded its definition of social sustainability to include a more specific set of "17 Goals" adopted in 2015, including "no poverty," "zero hunger," "good health and well-being," "quality education," and "gender equity," among others. Goals frame actionable items such as "Targets," "Events," "Publications," and "Actions," with periodical reviews tracking progress in each area.[8]

Throughout the Brundtland Report, social sustainability and social tensions are closely linked to environmental and economic issues. The report asserts that "the distribution of power and influence within society lies at the heart of most environment and development [i.e., economic] challenges,"[9] making social considerations both the yardstick and the outcome of sustainability as a whole. While the Brundtland Report examined sustainability at an international scale, the power of the concepts discussed is that they remain forward-looking no matter what the scale, from global to local.

Although architectural and urban design literature on sustainability often cites the Brundtland Report, social sustainability has taken a back seat to ecological and economic considerations in those publications, with many building programs barely mentioning the concept.[10] This is perhaps because ecological and economic sustainability are quantifiable and thus seemingly easier to measure, while the criteria for social sustainability, typically measured using qualitative data, is less clear. Social sustainability thus remains under-theorized, with attempts to define the term in various contexts often linked to political agendas rather than conceptual explorations.[11] As one author put it:

> [U]ubiquitous references to social sustainability have created a rather messy conceptual field in which there is a good deal of uncertainty about the term's many meanings and applications. Though one response to this is to try and impose a singular, all-encompassing, definition, this denies much of the concept's complexity.[12]

This chapter will explore ecological sustainability in architecture, expressed through CO_2 reductions and, more holistically, through "green" buildings, and how this might intersect (or fail to intersect) with measures of social sustainability. I define social sustainability in architecture as improving the life quality of building users and the community at large, either directly or indirectly, today and in the

future. I use definitions of both ecological and social sustainability broadly with the caveat that these are shifting concepts whose definitions can change. True sustainability in the manner of the Brundtland Report would mean an economy in which, ecologically and socially, nothing is wasted and everything is regenerated, a status we are still far from achieving.

This chapter aligns with the ideas presented in the Brundtland Report that economic, ecological, and social sustainability are interconnected and must be considered together – much like a three-legged stool, where if one leg fails, the whole stool collapses. At a global scale, ecological sustainability policies pursued in countries with developed economies benefit the entire planet as they help slow the consequences of problems such as global warming. At a national or local scale, ecological sustainability policies largely take two paths. Voluntary "green building" certification programs aim for resource efficiency and have begun addressing social inequities within cities and between communities. By contrast, legislative approaches to ecological sustainability codify energy efficiency measures in new and existing buildings, thus affecting a broader range of buildings and, arguably, people. The chapter closes with an examination of social consequences resulting from the manner in which sustainability efforts are implemented, such as who benefits from ecological sustainability efforts and how.

BUILDING CODES AND CERTIFICATION SYSTEMS

The building and construction sector accounts for over 34% of energy demand and around 37% of energy and process-related CO_2 emissions worldwide.[13] Reducing energy use has been seen as a key factor (although not the only one) in reducing CO_2 emissions and is often used as a proxy for ecological sustainability measures in buildings. Reducing CO_2 production and energy use in both constructing and running buildings has thus been a priority in setting ecological sustainability goals,[14] with anticipated benefits defined as "prioritize[ing] resource efficiency [while reducing] negative impacts on human health and the environment."[15] While a direct connection between energy use and CO_2 production (as a factor of ecological sustainability) and human health (as a factor of social sustainability) is thus clear, establishing the magnitude of the connection has been more difficult to model and measure and the consequences are prone to political interpretation.

Environmental benefits do not play out the same everywhere. Per-capita energy consumption varies greatly across the globe (highly industrialized nations tend to use the most energy), while the effects of energy use and associated greenhouse gas production (especially CO_2), including flooding, droughts, or extreme weather events, often disproportionately affect poorer countries. Put another way, poorer countries often pay the price for the energy sins committed elsewhere.[16] Even at a national level, poorer residents often have less recourse when natural disasters threaten their lives and livelihoods, even as they use less energy and produce fewer greenhouse gasses per capita than their wealthier compatriots.[17]

In architecture, when we speak about "sustainability," we often mean ecological sustainability. This is in part due to ecological problems presented through

the building industry. The construction and use of buildings, as well as their material, heating, cooling, water, and electrical requirements, immensely contribute to global warming and associated environmental problems. Reducing CO_2 emissions, for example, through selecting local and renewable materials and designing energy-efficient buildings, can make a real difference.

While ecological sustainability, as defined by the Brundtland Report, would require a resource-neutral world, we are far from this situation. Sustainability efforts have thus typically been defined through a jurisdiction's energy codes for buildings (which do not cover all aspects of ecological sustainability) or guidelines developed by formal organizations, such as the ones listed later on. Since some countries lie in more extreme climate zones than others, the ability of codes to influence energy use and its associated CO_2 production rates varies from country to country, making a holistic approach to energy consumption important.[18]

Of the world's largest economies, only a handful have set mandatory building energy codes for both housing and commercial buildings. Australia, France, Germany, Japan, South Korea, Spain, and the U.K. have the most comprehensive codes, as they have mandatory codes for single-family and multi-family housing, as well as for commercial and public buildings. Brazil is at the other end of the spectrum, with only voluntary energy codes for housing and none for commercial buildings. China, Canada, and the United States do not have federal laws, although many individual states or provinces have their own energy codes.[19]

Codes are difficult to compare across different jurisdictions. In some cases, they provide detailed specifications for building components such as insulation, windows, and air sealing; in others, they specify building performance after construction. If the latter, buildings are generally evaluated with reference to a "standard" building. In addition, the age of a country's building stock can affect how energy-efficient buildings are overall since not all countries require older buildings to be retrofitted to new standards. The European Union, for example, requires all buildings to have an "energy passport" that indicates energy use and energy improvement guidelines for existing structures. This allows consumers to estimate how energy efficient a building is and has greatly helped evaluate the efficiency of a country's buildings overall.[20] In some jurisdictions' building codes, design requirements are mandated as well, for example, with regard to daylighting, indoor air quality, and acoustic quality.[21] Factors such as daylight and air and acoustic quality are geared towards user health and comfort, an aspect of sustainability that is arguably social in nature.

Simply having building codes (including those covering energy use) does not indicate that they are stringent or even enforced. While Brazil, Mexico, and India had no technical requirements for residential structures as of 2014, and the United States had some, Australia, Germany, Italy, South Korea, Spain, and the U.K. had many, from design, position, and orientation guidelines to technical installation requirements. Energy requirements for commercial structures also varied, with Australia, Germany, India, South Korea, Spain, and the U.K. having the most and Brazil, Italy, Mexico, Russia, and the United States near the bottom of the scale. While in some countries, enforcement comes through incentives, occupancy

restrictions, or fines for non-compliance, in others, enforcement is often local, if it exists at all.[22]

While energy use in the production and use of buildings is an important criterion for ecological sustainability, "green" buildings go further. Green buildings are largely based on voluntary guidelines or certification systems, although some countries have mandated building qualities that are considered "green." "Green" buildings are typically defined as holistically conceived systems that go beyond mere energy-use calculations. A 2022 study summarized 14 of the world's largest "ecolabel" certification systems for the built environment,[23] although many smaller systems exist as well, with a 2019 study listing 37 international certificates and 54 used in the European Union alone.[24]

One of the largest certificate systems is LEED (Leadership in Energy and Environmental Design), developed by the U.S. Green Building Council (USGBC)[25] in 1998 and often regarded as the industry standard. BREEAM (The Building Research Establishment Environmental Assessment Method) is a British-based assessment method designed to provide benefits to owners and users as well as the environment (and thus society in general). LEED and BREEAM offer certifications based on the age and type of building, making their systems wide-ranging.

Other certification systems have followed suit, including the international WELL that focuses on health and wellbeing for a building's users, Green Star Australia, with criteria based on both user and societal wellbeing, Green Mark Singapore, which covers several southeast Asian countries, Green Globes, which certifies in the United States and Canada, DGNB (German Sustainable Business Council), which aims for all-around building quality, BEAM (Building Environmental Assessment Method) which certifies buildings in Hong Kong, Three Star China, operated by the Chinese Ministry of Construction, the French HQE (Haute Qualité Environnementale), the southern African Green Star South Africa which is based on the Green Star Australia system, CASBEE (Comprehensive Assessment System for Built Environment Efficiency) under the Japanese Ministry of Land, Infrastructure, Transport, and Tourism; the U.K.-based EDGE (Excellence in Design for Greater Efficiencies) which certifies in southeast Asia and Latin America, and the U.S.-based Living Building Challenge, established in 2006.

Rating and certification systems have a mix of sponsors. Some are sponsored by governments, others by national or international organizations, still others by industry groups.[26] All have a series of criteria on which buildings are scored, and some have different tiers of achievement. Most of these programs base their rating systems on energy efficiency, water efficiency, and materials and resource use to different scoring degrees.[27] Criteria are variously focused on user benefits (healthier building atmospheres), environmental benefits (for example, lower CO_2 emissions), and even benefits to the building owner (such as a larger return on investment or the ability to charge higher rents). The private-sector guidelines for "green" buildings, especially, often account for rates on return, with marketing-based benefits an important incentive for developers.[28] At least one program (Green Star Australia) has been criticized for its clear focus on increasing investor profits.[29]

The mix of reasons for seeking certification is evident in the advertising discourse. The U.K. Green Building Council, for example, highlights the "market

premium, in both rents and prices" that "sustainable" buildings command.[30] U.S. investors have also emphasized the marketing potential of a LEED-certified building, including increased worker productivity in green-rated buildings as a marketing tool.[31] Commenting on the role of the U.S. Green Building Council's LEED rating as a marketing mechanism, Douglas Durst, a major U.S. real estate developer, has noted: "Today's marketing forces virtually require that an upgraded building offer the green-benefits guarantee of a LEED rating."[32]

Energy codes and "green" certification processes thus play different roles in the quest for ecological and social sustainability. Building energy codes can help reduce overall CO_2 levels by lowering a building's energy consumption, although this benefit is minimized if users, for example, choose to set a building's thermostat to a more "comfortable" level, resulting in increased energy use overall. In addition, energy codes generally affect new construction differently from existing buildings, thus benefitting those who are able to occupy a newer building differently from those who are not. Energy codes by themselves, then, can help with ecological issues but do not address many social matters. "Green building" certification systems, while they go beyond energy codes to more holistically reduce a building's CO_2 footprint, have also not adequately addressed many social factors associated with their building's construction, including benefits to all income groups vs. those directly involved with the building's construction and use.

How, then, do norms of ecological sustainability intersect with those of social sustainability? How can we better measure who benefits from ecological measures, both directly and indirectly? Can we ethically pursue ecological sustainability without stipulating a socially based foundation in the interest of maximizing the number of people advantaged? Above all, who should be tasked with pursuing this ethical agenda? Interestingly enough, as of 2022, a large percentage of voluntarily green-certified buildings were not commissioned by private investors at all but by non-profits and government agencies.[33] This indicates that despite the touted benefits of "green" buildings for a firm's bottom line, even financial incentives are not enough to persuade the corporate world to build "green."

One way of measuring social sustainability is to regard the public good that a building provides, such as cleaner air or less atmospheric carbon. Public goods are accessible to anyone, regardless of ability to pay.[34] Conversely, privatized sustainability criteria benefit only those granted access, for example, tenants of a building with cleaner interior air. While some certification systems have been faulted for focusing on investor benefits, a more fine-grained analysis conducted in 2022 of buildings certified through LEED showed that it is sometimes difficult to determine levels of social sustainability simply by assessing certification levels. For example, one building might make use of many LEED criteria that overwhelmingly benefit the owner and users of the building, such as ample daylight and clean indoor air, while another building might make use of fewer criteria that primarily benefit the general public, such as reduced emissions.[35] One could argue that the first building, with a higher LEED rating, is more ecologically sustainable because it meets more certification criteria but less socially sustainable because it provides benefits to fewer people.

Certification systems are attempting to remedy this uncertainty by expanding definitions of social criteria. In 2014, the USGBC introduced a pilot program for three "social equity" LEED credits. The three credits address equity within the project team, the community, and the supply chain and are designed to "address social equity from the perspective of everyone who is touched or impacted by a building."[36]

The "social equity within the community" credit aims to "help projects address disparities in access and social inequities within a project's own community."[37] In essence, the credit encourages improved communication between the design team and the community, as designers are encouraged to better understand the community's needs while giving community members more voice in issues that affect them. Because building up community relationships can take years, USGBC allows designers to take one of two pathways towards the credit: through the SEED (Social Economic Environmental Design) documentation system or in partnership with local organizations that have established community relationships. Communities are described as people who live and work in the vicinity of a building project, people who engage with the building in some capacity, or, more generally, all people in a town, city, or county. If partnering with a community organization, designers are asked to define a vulnerable community and work with one or more non-profit organizations that serve that community. Criteria for qualifying organizations help guide designers in their choice.[38]

Issues suggested for focus through the social equity credit include jobs, housing, homelessness, education and training, small business support for women and minority-owned businesses, health care, public health and safety, mental health, and food. Strategies suggested include provision or improvement of space, equipment, or services, local hiring, training and benefits for workers, regular programming or events, financial contributions, provision of pro-bono services, and donation of excess materials from construction or deconstruction.[39] While some of these strategies provide one-time material or financial assistance, some are ongoing efforts that promise to influence the nature of the building itself. Evaluations of the "social equity" credits are lacking despite their introduction over a decade ago. This points to the difficulty the design community has in defining the metrics of "social equity," especially at the building scale.

How does social equity work in other certification programs? Enterprise, a US-based non-profit that has addressed the nation's shortage of affordable housing, has launched a green building program for the affordable housing sector. In addition to policy advocation, the non-profit provides grants and technical assistance as well as a certification system that is regularly updated. Nominal fees are required for certification, and certified projects receive a plaque to advertise their compliance. To date, however, no studies have evaluated the impact of this program.[40]

The USGBC offers a LEED program at the neighborhood scale, the Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) program. Social equity in this program is promoted through encouraging developers to build mixed-income communities with good pedestrian and transit access.[41] Yet the incentives offered have not been enough to encourage

developers, especially for-profit developers, to construct affordable housing, as few certification "points" are offered for affordable housing and the points – in contrast to those for other criteria, such as "walkable streets" – are not required for certification. As of 2016, only 40% of LEED-ND-certified projects included affordable housing. When questioned about this, planning and design professionals who had sought LEED-ND certification for their projects confirmed that, given a choice, developers did not wish to lower their profits by offering affordable housing and that the bottom line remained the developers' priority.[42] The LEED Neighborhood Development program thus falls into a pattern of programs that, on the surface, appear to be ecologically or socially progressive, such as "smart growth" and "New Urbanism" projects, yet on further analysis, contribute little to battling social inequality.[43]

Newer certification systems, such as the Living Building Challenge (established in 2006), the Living Community Challenge (2014), Envision (established in 2012), and EcoDistricts (established in 2013) do address social equity as clear program mandates.[44] The Living Building Challenge, for example, stipulates procedural equity, such as a certain percentage of building project members being from organizations with the JUST label, which tracks performance on social justice and equity issues.[45] While many certification programs are written with a stipulation that opportunities created should be accessible to or economically benefit "all people" or the "local community," one critic notes that a process for evaluating equity outcomes is often missing and cautions, "[e]xtensive stakeholder engagement processes that poorly define stakeholders may lead to poor project outcomes under the guise of equitable inclusion."[46] With other words, equity criteria are frequently too vague to be of much use in effectively guiding developers and practitioners, a situation compounded by the multidimensional complexity of the issues involved and the often concealed nature of equity problems. The problem of defining social equity and, with it, social sustainability remains an ethical challenge in many national contexts, even in those with a strong history of government support.[47]

Persuading clients and developers to "go green" through the bottom line is often presented as a win-win situation that aligns with the corporate value-creation theorized through early versions of stakeholder theory (see Chapter 1.2). Yet developers' continued focus on short-term profit maximization through "green" certification, both at the building and at the neighborhood level, hardly encourages the kind of long-range thinking that sustainability requires, nor does it generally scale up to a national or global policy level. To achieve larger-scale effects, sustainability must be seen systemically, where the whole becomes more than the sum of the parts.

In voluntary systems such as LEED, reducing a building's ecological footprint is often seen as a "spillover" effect, a public relations perk for developers seeking to maximize profits through going "green."[48] This is in contrast to governmentally mandated ecological performance systems, where societal benefits are foregrounded. Whereas in voluntary systems, society receives the "spillover" from more ecological buildings, in the mandated systems, states require smaller ecological footprints for greater societal good, with any profit to individual developers remaining secondary.

The incentive question – public good or private profit – also plays a role in how new building technologies for ecological sustainability are developed. In a system where "green" building technology is investor-driven and certified through a third-party agency, the cost of research and development lies with private firms, while the developed technical knowledge becomes a public good.[49] The effect of this research model, where private companies develop products that provide a profit opportunity and knowledge that does not, remains understudied. When a public or non-profit agency funds research, there is more incentive to do basic research that goes beyond developing technical knowledge. Such research can consider the impacts and social benefits that technology research generates. Only then can we expect sustainability research to consider ecological and social thinking jointly and through a farther-reaching lens.

BEYOND VOLUNTARY MEASURES: LEGISLATING ENERGY EFFICIENCY

In what ways have governments legislated ecological sustainability, and what role has this played in increasing social sustainability? Data on the second question is limited, while the first question is easier to answer, at least for individual national contexts. At the building level, governments largely regulate ecological efficiency through energy codes for various building types, while related systems, such as air and water quality, incentives for certain materials or processes, and waste management, provide direct ways of influencing CO_2 production and the reduction of environmental contaminants.

When governments do legislate energy efficiency, they frequently use one of four energy compliance paths: 1) prescriptive paths that specify performance standards for individual building components, 2) trade-off compliance that allows some substitutions among building components, 3) simulated performance compliance that uses energy simulation software to test a building's energy compliance, and 4) point systems, similar to many voluntary green-building systems. Compliance standards are evolving, however, and additional systems, such as post-construction rating systems, are in development. Because countries across the globe have vastly different climate conditions that strongly influence a building's energy use, it is difficult to compare climate legislation across different countries.[50]

The way codes are written can also make comparisons across systems difficult. In the United States, for example, codes cover more building components than in many other countries, although standards for the individual components are less strict than in some other countries. In some cases, comparisons help point to possibilities for improvement, especially where energy-saving technologies and processes already exist. For example, Brazil and Mexico had no formal energy codes as of 2017, while Germany and France regularly tighten existing energy codes, especially as technology becomes more readily available.[51] Some countries have codes only for new construction, while others have requirements for retrofitting existing buildings. Especially where housing is concerned, this can greatly influence social equity, as we shall see later on.

A final point in assessing comparisons is that implementation levels can vary across countries. The best climate laws are of no use if they are easily circumvented.[52] Energy codes, available technologies, and policy questions are thus closely intertwined with each other and with social sustainability, especially when one considers who benefits most from energy-conscious design. How do energy policies affect questions of social equity? A few examples help provide some clarity about how energy codes are written and applied and how we might assess the results.

Energy codes in the United States are determined by states or municipalities. Since the late 1970s, energy codes have become increasingly more stringent, yet at the same time, the median house size has increased, reducing the levels of energy savings. While homes built in 1975 had a median size of 1,660 square feet (154 m^2),[53] by 2022, the median home was 2,300 square feet (214 m^2), an almost 40% increase.[54] Larger homes require more energy for heating and cooling. In addition, the average number of household appliances and electronics has also risen, leading to a rise in electrical use. A possible "rebound effect" (also known as a "Jevrons paradox") – when residents with energy-saving features that "save money" increase their energy use by adjusting heating or cooling levels to a more comfortable level – can also account for increased energy consumption.[55]

Newer and more expensive homes with energy-saving features are available only to those who can afford them. This means that lower-income residents are consigned to older homes in a "filtering down" process of the housing market. Low-income residents – already disproportionately burdened by high housing costs relative to their income – are thus also burdened by extra energy costs while being cut off from the health, comfort, and other benefits of code improvements for new construction.[56] In countries like the United States and the United Kingdom, where homeownership rates are high, lower-income residents are also more likely to be renters, and landlords often have little incentive to invest in energy-saving features.[57] While stricter energy regulation is often seen as inhibiting the construction of new affordable housing,[58] relying on the free market to provide homes with up-to-date energy-saving features to a low-income clientele has proven to be illusory.

One answer to this predicament would be for governments to offer financial instruments, such as generous subsidies for retrofitting older homes to better energy standards. This would allow governments to pursue policies of reducing overall energy use and CO_2 emissions while allowing lower-income residents in older homes to benefit from housing that requires less energy to heat, cool, and run.

MIXING LEGISLATIVE EFFORTS WITH FINANCIAL INCENTIVES

Some countries regulate energy efficiency directly through building codes that require energy efficiency across the board. Such broad measures better target buildings such as affordable housing or modernizations of older housing. Often, legislative mandates go hand-in-hand with financial incentives for builders or owners of buildings, using a variety of measures to achieve CO_2 reductions – and

subsequently, economic savings and social benefits. Several examples from Germany – one of the largest economies in Europe, with a population of over 80 million, as well as internationally stringent energy standards – are illustrative.

Germany's climate policy is set by both federal and state governments, and building codes regarding energy efficiency are considered strict. The country has a "building energy law" (*Gebäude-Energie-Gesetz*) that is used for all buildings that are heated or cooled. Energy use is calculated in several ways and includes the energy needed to harvest and transport building materials as well as the energy needed to run the building itself. A certain percentage of a building's energy must come through renewable sources. The government uses generous grants to encourage builders to go beyond the law's requirements, for example, if a builder decides to build to *Passive House* standards.[59] Building modernizations must also conform to existing energy law standards. Finally, HVAC (heating, ventilation, and air conditioning) systems are regularly evaluated by state inspectors, who can inform the authorities if there are code violations.[60]

Germany uses several methods to encourage and enforce better building energy standards. Some are requirements, such as mandatory performance standards for new buildings and renovations, mandatory energy retrofits of apartment buildings, compulsory energy performance certificates (*Energieausweis*) for buildings that are sold or rented, and an energy or carbon tax on electrical use. Some are state-initiated financial incentives, such as subsidized loans for energy-saving modernizations, tax relief for energy-reducing renovations,[61] and widespread training and education campaigns to advise citizens on energy-saving measures and available programs.[62]

Evaluating policy measures on a regular basis is important for gauging their effectiveness. Energy codes, for example, present a mandated incentive for landlords to modernize rental housing to be more energy-efficient. A small-scale study conducted in 2022 in the German city of Wuppertal suggests that tenants are less willing to pay higher rental prices for energy efficiency than for other, more visible amenities and that landlords simply seeking to maximize profits are thus less inclined to invest in energy-saving features such as increased insulation, improved heating systems, or newer windows. The authors suggest that strong policy action is a better means to incentivize landlords to act.[63]

Further studies have pointed towards effective ways to increase energy savings. A 2019 study found that Germany's legally mandated energy performance certificates are a useful tool for providing transparency to tenants regarding possible energy costs.[64] Another study examined an incentive program administered by the publicly held KfW Bank[65] to provide low-cost loans to improve the energy efficiency of buildings. While the incentives have allowed building owners to update or retrofit their buildings and thus reduce CO_2 emissions, the study found that the public funds are well invested from an economic standpoint as well, as investments allow for more tax revenues and social security contributions.[66]

Germany's aim has been to reduce building energy use as much as possible, with the country's "Energy Concept" of 2010 requiring that by 2050, the primary energy demand of buildings be reduced by 80%,[67] although this target, like many energy targets, now seems unrealistic. Like many other countries, Germany has

had difficulty meeting its energy-reduction targets in the building sector, yet the multi-pronged approach of regulating buildings (including older ones) through code requirements and providing owners with financial incentives to make their buildings more energy efficient, as well as broad educational and referral programs, has provided useful tools in the fight for more energy efficiency.

Although the literature regarding energy use often focuses on housing as one of the most widespread building types that serves a clear social need, other building types also embody energy and other ecological aspects that have a clear social impact. For example, energy use and waste management in healthcare facilities, as part of a larger economic and ecological effort, affect the social aspects of the communities around them in several ways. Some of these are direct, as when increased heating, cooling, or electrical use affects a power grid. Some affect land use and pollution levels, for example, when hospital waste goes to a landfill or sewage facility. Clarifying links between a building's ecological performance and possible consequences for the surrounding community is essential if ecological, economic, and social sustainability are to be jointly considered.

As in many countries, Germany's healthcare system has experienced considerable financial pressures in recent years, partly due to rising costs.[68] As one example of how economic, ecological, and social factors are interlinked, sharply reducing energy costs makes healthcare centers more viable, thus guaranteeing access to care – a core aspect of social sustainability. Although the placement and size of medical services are based on many factors, robust energy concepts can do their part to keep hospitals financially healthy and thus available to the communities they serve.[69]

Several mechanisms have helped healthcare facilities in Germany save on energy costs. Required energy audits provide building owners with a roadmap for improvements that can save 30–40% of yearly energy costs.[70] In this way, the government's ecological aims have merged with the economic concerns of hospitals, in some cases helping assure a facility's survival. As Matthias Albrecht, then the CEO of the 210-bed Hubertus Hospital[71] in Berlin, stated, "We halved our energy use [reducing costs from about two million to one million euros annually]. If we had not taken timely measures to reduce our energy costs, we would possibly not be here today."[72]

Hospitals have used creative ways to meet their energy goals. The Hubertus Hospital used a financial model that had the firms who produced and installed new electrical and HVAC technology pay for the equipment and initial installation, after which the hospital paid off those costs with part of the money saved on energy use.[73] Further energy programs for hospitals have worked through an incentive system. In 2011, the Bavarian State Ministry for the Environment and Health developed an initiative called "Green Hospital," a certificate program that encouraged hospitals to consider energy savings and a reduced CO_2 footprint, reduced use of other resources, less waste production, and ecologically friendly building materials. The concept also included social factors, such as fair treatment of personnel and a "pleasant atmosphere" for patients, for example, through natural light. Hospitals were evaluated via a catalog of criteria, similar to the LEED certification process in the United States and elsewhere.[74]

The State of Bavaria has since expanded the Green Hospital concept to encompass a more extensive catalog of sustainability measures, calling it "Green Hospital Plus." The initiative specifically links energy savings (and thus energy cost savings) with environmental and social sustainability measures. Energy savings include measures such as energy efficient buildings and the use of renewable energy, in addition to careful energy use management in the hospital's operation. Other environmental measures include reducing the negative effect of the hospital on its environment through prudent use of land and resources. Social sustainability in the Green Hospital catalog is measured through the effect of the hospital on people, including employees and patients.

Supply chain effects have been a further part of economic and social sustainability initiatives in the "Green Hospital" movement. A new catalog of measures allows hospitals to apply for "Best Practice Hospital" (if they meet some of the criteria) or the more rigorous "Green Hospital Plus" status,[75] whereby a centralized database allows hospitals to see what solutions other institutions have used to achieve various criteria levels.[76]

The certification as "Green Hospital," "Best Practice Hospital," or "Green Hospital Plus" does not provide financial rewards per se, although the Bavarian State Ministry for the Environment and Health notes that the positive public relations of such a certification can help attract both employees and patients. Certainly, the ecological and procedural efficiencies required for certification provide savings for the hospital, and the use of the ministry's database and advisors is provided free of charge. Government involvement is thus ubiquitous, both in setting standards and in providing indirect financial support. Hospitals do not need to pay for certification, while the cost of advising hospitals, conducting audits, and engaging a multi-disciplinary jury to award certificates is borne by the state.

Energy policies are complicated, and the examples cited previously are not meant to be quantitatively compared to those of other countries. What is clear, however, is that the range of approaches is extensive, and if we are to seek more sustainable solutions, we must consider who our energy policies benefit, both in terms of health and wellbeing as well as financial outcomes. Arguing for a "filtering down" or "spillover effect" when designing policies contributes to social stratification, as benefits are not uniformly available to all. Energy policies that favor one social group over another cannot be considered socially sustainable, as the next section illustrates in more detail.

ECOLOGICAL SUSTAINABILITY: WHO BENEFITS?

In countries with a high degree of social or economic stratification, applying the benefits of ecological sustainability to all citizens becomes challenging. "Green" buildings, with their carefully chosen materials, better indoor air quality, and better daylighting, are healthier for those who live and work in them. As a secondary effect, reducing the ecological footprint of buildings benefits society as a whole. Yet in societies characterized by extensive class segregation, access to "green" buildings remains reserved for an economic elite, for example, residents of newer houses or apartment buildings or those who work in "green"-certified buildings.

All others, including many blue-collar and service workers and people who live in older housing stock, do not gain the same advantages. These problems are prevalent in many societies and are often intermixed with deep-seated racial or ethnic discrimination.[77] A snapshot taken from the United States shows how social segregation affects both ecological and social sustainability.

The United States is a country that remains segregated by both race and class. This segregation has had a profound effect on land stewardship. Communities of color, especially Black and Hispanic communities, have been disproportionately affected by toxic land-use decisions and disruptive highway placements, while white communities, especially those that are wealthier, have disproportionately benefitted from "green" building placement. The two interrelated processes have meant that as ecological sustainability has advanced, social sustainability has not kept pace. While urban communities are increasingly filled with modern, ecologically conceived buildings, people of color not only have less opportunity to profit from such buildings (financially or through living or working in them) but, through segregation, are excluded from such opportunities based on racialized criteria.

Figures 1.3.1–1.3.5 show the location of LEED-certified buildings in five of the largest U.S. cities: Los Angeles, Chicago, Houston, Phoenix, and Philadelphia.[78] All have large Black and Hispanic populations. At the time of the 2020 census, Los Angeles was 46% Hispanic and 8.3% Black, Chicago was 29.8% Hispanic and 28.7% Black, Houston was 44% Hispanic and 22.1% Black, Phoenix was 41.1% Hispanic and 7.4% Black, and Philadelphia was 14.9% Hispanic and 38.3% Black. Whites comprise less than half the population in all five cities: In Los Angeles, they comprise 28.9% of the population; in Chicago, 31.4%; in Houston, 23.7%; in Phoenix, 41.8%; and in Philadelphia, 34.3%.[79]

The absolute number of LEED-certified buildings varies by city: In 2024, Los Angeles had 723 LEED-certified buildings or 1.8 buildings per 10,000 residents. Chicago had 1349 (5 buildings per 10,000 residents), Houston had 792 (3.5 per 10,000 residents), Phoenix had 1129 (7.4 per 10,000 residents), and Philadelphia had 1,104 (7 per 10,000 residents).[80] LEED certification, which is still the most common "green" certification system in the United States, is more developed in some markets than in others, in part because some communities require certain building categories (such as all public buildings) to pursue LEED certification.[81] Common to almost all of these cities, however, is the pattern of where LEED-certified buildings are placed: largely in white neighborhoods.

In Los Angeles, for example, the largest proportion of LEED-certified buildings are located in the downtown area and predominantly white areas such as Brentwood, West Hollywood, and Beverly Hills. The map shows that areas that are Black or over 90% Hispanic have the least number of LEED-certified buildings. Chicago, too, has a higher proportion of LEED-certified buildings in the downtown and predominantly white northern areas of the city. LEED-certified buildings located in the predominantly Black south end of the city tend to be educational institutions (schools or higher-education buildings) or public libraries, largely due to a city-wide program requiring LEED certification for public buildings.[82]

In Houston and Philadelphia, the pattern of where LEED-certified buildings are located similarly correlates to the racial makeup of neighborhoods. Central

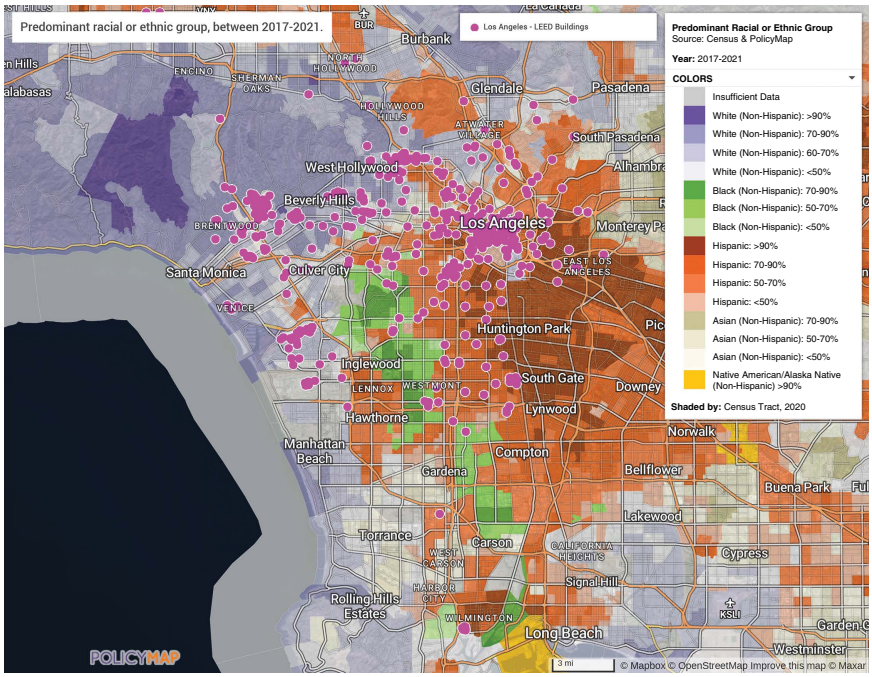

Figure 1.3.1
Location of LEED-rated buildings in Los Angeles compared to the racial/ethnic makeup of neighborhoods.

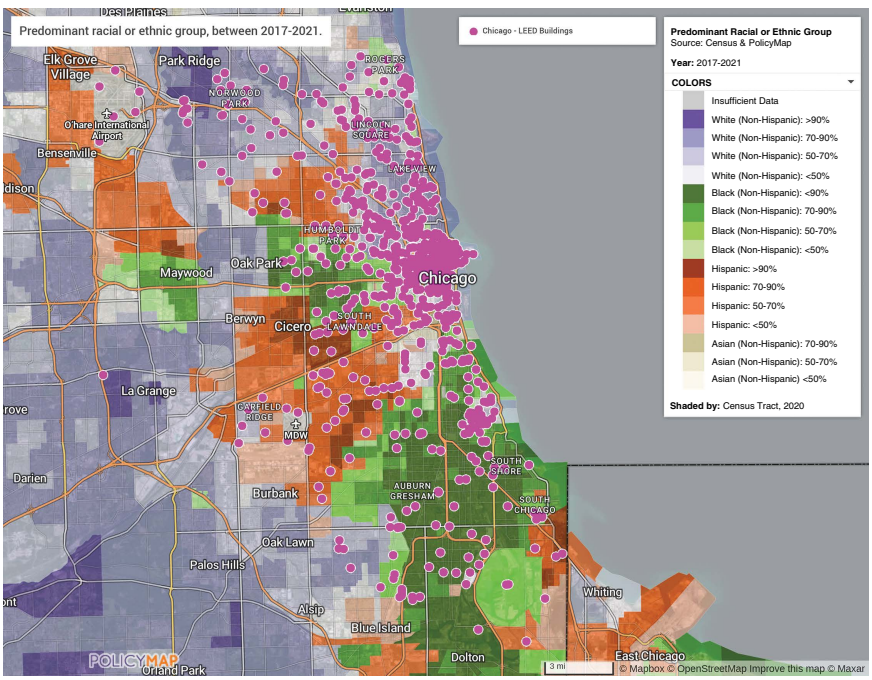

Figure 1.3.2
Location of LEED-rated buildings in Chicago compared to the racial/ethnic makeup of neighborhoods.

business districts and predominantly white areas of these majority-minority cities have the largest proportion of LEED-certified buildings, with neighborhoods that are predominantly Black or Hispanic having the least. In Phoenix, a city with large areas in which the Hispanic population is over 50%, the pattern is slightly different. Here, LEED-certified buildings are more evenly placed

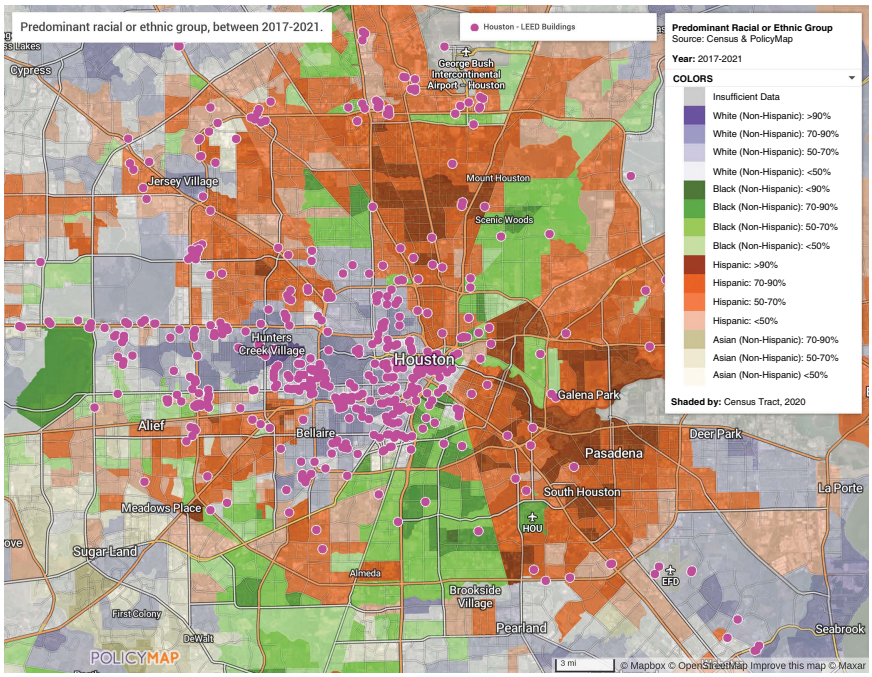

Figure 1.3.3
Location of LEED-rated buildings in Houston compared to the racial/ethnic makeup of neighborhoods.

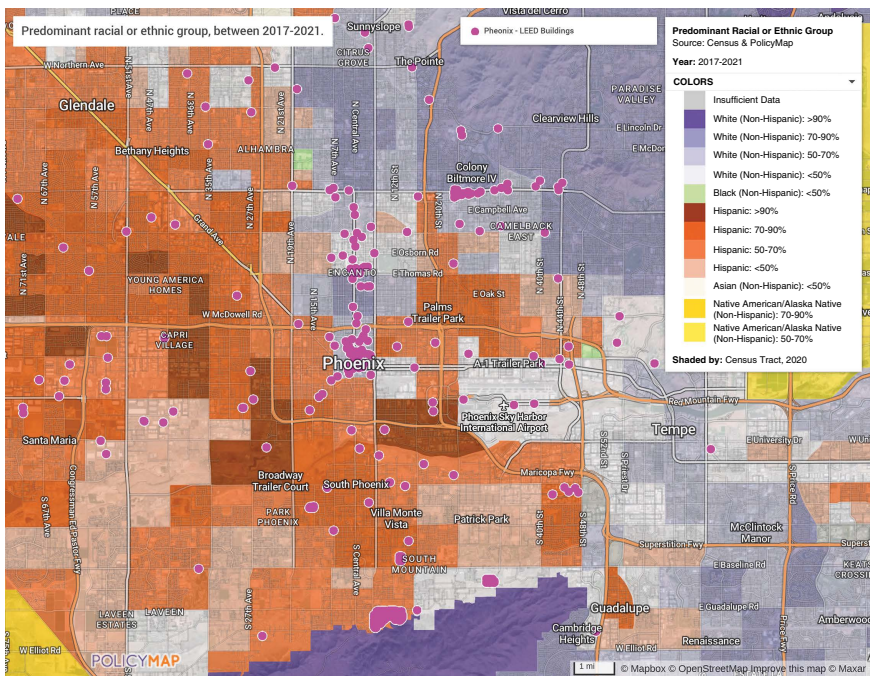

Figure 1.3.4
Location of LEED-rated buildings in Phoenix compared to the racial/ethnic makeup of neighborhoods.

throughout the city, largely because of requirements for municipal buildings to be LEED-certified.[83]

Mapping LEED-certified buildings points to how white communities disproportionately benefit from "green" infrastructure with its "healthy" buildings, which in the United States are largely positioned through voluntary certification

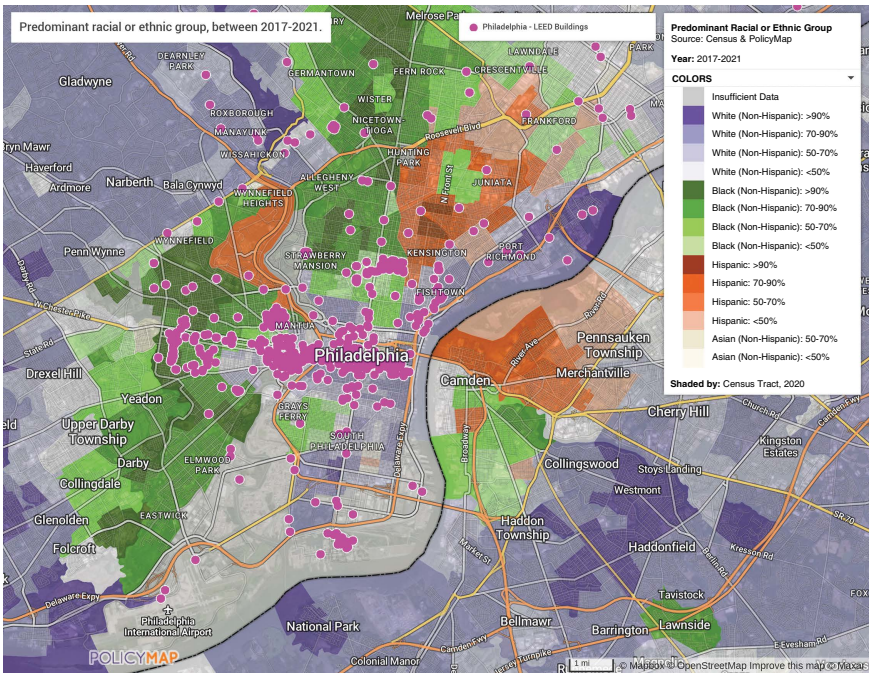

Figure 1.3.5
Location of LEED-rated buildings in Philadelphia compared to the racial/ethnic makeup of neighborhoods.

measures. In cities that require public buildings to be LEED certified or that otherwise provide financial or other incentives to builders that follow "green" standards, this also points to a higher level of investment in white neighborhoods relative to Black or Hispanic neighborhoods.

Not surprisingly, the inverse is also true. Mapping toxic land uses shows that communities of color are disproportionately targeted by infrastructure that is detrimental to human health, or as environmental sociologist Robert Bullard states, "People of color in all regions of the country bear a disproportionate share of the nation's environmental problems."[84]

In a groundbreaking study of the nation's southern states, Bullard found that African-American communities were routinely targeted for unwanted land uses such as landfills, hazardous waste facilities, lead smelters, chemical plants, and other industries that posed environmental hazards for adjoining residents. This situation persisted, even if the African-American neighborhood was middle-class or affluent. Not surprisingly, Bullard also found that people in those communities were more likely to suffer from health risks than people in communities without such hazards.[85] Cleaning up environmental problems was also racially lopsided. As Bullard found, "Nationally, funders spent a whopping $10 billion between 2000 and 2009 on environmental groups. However, just 15 percent of the environmental grant dollars benefited marginalized communities."[86]

ACTING AGAINST ENVIRONMENTAL INJUSTICE

Mapping both "healthy" (green-certified) and environmentally problematic buildings and infrastructure in the United States points to how ecological

certification systems struggle to define or implement social equity in an effort to "do good." Environmental and civil rights laws have existed for decades in the United States, yet are not always administered comprehensively. The result has been a continued series of land-use and building decisions that exacerbate social inequities.

In the United States, where environmental sustainability has largely been defined through voluntary and market-driven measures, grassroots activists have acted more decisively against environmental injustice and environmental racism in efforts to "prevent the bad." Environmental activism has arguably given activist groups deep expertise in social equity matters, expertise that could help better define formal equity goals. It is an irony that such expertise comes through reactively fighting for justice when harm has been done rather than proactively shaping codes and policies that assure vulnerable communities will experience healthy environments. Allowing community members to work within and expand existing networks to develop ecological and, by extension, socially sustainable environments for their members would use a community's expertise in more productive ways.[87]

Studies of how voluntary ecological certification programs compare to systems with mandatory ecological standards are rare. And while ecological sustainability clearly intersects with social sustainability, quantifiable data is often scarce. In the short term, ecological sustainability adds expense to the building process through research, the use of advanced technologies, and more expensive building components. In the longer term, however, ecological sustainability remains an ethical imperative. At the intersection of ecological and social sustainability, it is arguably money well invested in our common future.

NOTES

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3 *Stanford Encyclopedia of Philosophy*: "Jeremy Bentham" 2021.
4 United Nations Brundtland Report, Foreword.
5 United Nations Brundtland Report, paragraph I:28.
6 United Nations Brundtland Report, paragraph I:29.
7 United Nations Brundtland Report, paragraph II:43.
8 United Nations Department of Economic and Social Affairs. n.d.
9 United Nations Brundtland Report, paragraph II:43.
10 Atanda and Özturk 2020; Vallance et al. 2011.
11 Littig and Griessler 2005.
12 Vallance et al. 2011, 33.
13 These figures are for 2021; see UN Environment Programme 2022.
14 GBPN n.d.
15 Matisoff and Noonan 2022, 27.
16 World Meteorological Association (WMO) 2020.
17 Assessment reports by the IPCC (Intergovernmental Panel on Climate Change) (n.d.) have emphasized a need for action at scales from the global to the local.
18 Matisoff and Noonan 2022, 93 ff; Young 2014.
19 Young 2014.
20 https://bpie.eu/wp-content/uploads/2017/09/Factsheet_D-170918_Final-2.pdf.

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24 Sánchez Cordero et al. 2019.
25 The USGBC is part of the World Green Building Council.
26 Matisoff and Noonan 2022, 105–6.
27 Matisoff and Noonan 2022, 94.
28 Matisoff, Noonan, and Mazzolini 2014.
29 Matisoff and Noonan 2022, 97.
30 UKGBC n.d.
31 Lockwood 2009, 132–33; see also Matisoff and Noonan 2022, 32–32.
32 Lockwood 2009, 132–33.
33 Matisoff and Noonan 2022, 121.
34 Matisoff and Noonan 2022, 28.
35 See Matisoff and Noonan 2022, 115.
36 USGBC 2014.
37 USGBC n.d.
38 USGBC n.d.
39 USGBC n.d.
40 Enterprise n.d.
41 USGBC 2018.
42 Szibbo 2016.
43 See Talen 2010; Szibbo 2016.
44 Yeeles et al. 2023.
45 Living Future n.d.
46 Yeeles et al. 2023, 11.
47 See Stender and Walter 2018 for a Danish analysis.
48 Matisoff and Noonan 2022, 30.
49 Matisoff and Noonan 2022, 43.
50 Evans et al. 2017.
51 Evans et al. 2017.
52 Evans et al. 2017.
53 Statista 2024.
54 United States Census Bureau n.d. Numbers around rounded to the nearest 10.
55 For an analysis from California, a state with relatively stringent energy codes, see Levinson 2016.
56 Mallach 2017; Pivo 2014.
57 For an example from England, see Ambrose 2015.
58 Mallach 2017.
59 "Passive House" is a standard in energy-efficient construction based on space heating and cooling demand, primary energy demand, airtightness, and thermal comfort. Passive houses require very little energy to achieve a comfortable indoor temperature year-round, thus allowing residents to forego conventional heating and cooling systems. See International Passive House Association. n.d.
60 Verbraucherzentrale 2023.
61 Loan subsidies and tax relief put a financial burden on governments. For such programs to be effective, governments must commit to the policies and not rescind them when new budgets are made.
62 GBPN n.d.
63 März et al. 2022.
64 Franke and Nadler 2019.
65 Founded in 1948, the KfW (*Kreditanstalt für Wiederaufbau* or Credit Agency for Reconstruction) was created to help the German economy regain a foothold after

World War II. It is currently one of the largest state-run credit banks, investing in ecological and social projects worldwide.

66 Kuckshinrichs, Kronenberg, and Patrick Hansen 2010.

67 GBPN n.d.

68 Cited in Viamedica-Stiftung 2020, 5.

69 Hibbeler and Krüger-Brand 2013.

70 Viamedica Stiftung 2020, 7.

71 The German name is *Evangelisches Krankenhaus Hubertus*.

72 "Wir haben unseren Energiever-brauch bis heute halbiert .... Wenn wir im Bereich Energiesparen nicht frühzeitig aktiv geworden wären, dann hätten wir vielleicht schon geschlossen," Hibbeler and Krüger-Brand 2013.

73 Hibbeler and Krüger-Brand 2013.

74 Hibbeler and Krüger-Brand 2013.

75 Bavarian State Ministry for Health, Care, and Prevention 2024.

76 Bavarian State Ministry for Health, Care, and Prevention n.d.

77 See Atkinson 2006.

78 I have not included the nation's most populous city, New York, because so many commuters who work in the city live in two other states, New Jersey and Connecticut, making data analysis more difficult.

79 U.S. 2020 census, via Brookings Institution 2021.

80 Data were collected from the LEED building database and 2020 census information for each city. Numbers are rounded to the nearest tenth. Racial and ethnic group data were sourced through the mapping and analysis platform PolicyMap.

81 Lewyn and Jackson 2014.

82 Kamin 2009

83 Everblue Training 2015 (modified 2024).

84 Bullard 2018, xiv.

85 Bullard 2018.

86 Bullard 2014, 33.

87 For a discussion of how community bonds create community cohesion in two very different contexts, see Brand 2015; Stender and Walter 2019.

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1.4 Shifting Our Theoretical Thinking

In the past four decades, socially critical theories such as feminist theory, critical race theory, and interstitial approaches that examine how social categories intersect and overlap have helped uncover and define systemic discriminatory practices in many fields. Such theories have shaped not only our thinking but also some of the methods with which we conduct and apply humanities and social science research. Applying such theories – and the new methods they have enabled – to expand our understanding of the built environment is a first step towards finding solutions to the structural equity problems that continue to haunt us. As part of a broad-ranging analysis of sustainability issues, structural equity remains at the core of social sustainability.

Structural equity problems exist at several scales, from worldwide sustainability challenges ensuing through economic disparities, climate change, and globalization to more localized examples in which gender, race, or ethnicity intersect with access and equity at the urban or building scale. This chapter outlines several theoretical tools to understand and counter these processes that are applied more broadly in the second section of the book.

The chapter begins with a summary of why space, and especially the human-constructed built environment, is largely a social construct. "Social construct" is understood here as a process in which we subjectively experience and understand our reality, either individually or as a group, based on our lived experiences, a practice that has been extensively explored through phenomenology. When we subjectively process lived experiences, we find significance and meaning in the external world, a progression that creates within us frameworks of understanding. As this chapter discusses, framing such subjective experiences as universal truths while ignoring vast troves of non-aligned events and practices leads us to create theoretical constructions that are, at best, one-dimensional. I thus begin with several examples where one-sided theory has successfully been challenged.

This chapter also explores how theoretical discourse itself has expanded to embrace new epistemologies, how broadening historiographical approaches can create new insights, and how better understanding design consequences (especially social consequences) through understanding historical urban and building phenomena provides an opportunity for reconsidering how and what we design today.

The chapter closes with more inclusive perspectives that have helped inform creative work, both in design and in theory building. I present several examples

DOI: 10.4324/9781003480426-6

taken from design work that foreground spatial agency for those who use the spaces we design and produce. In the examples that follow in Part 2 of this volume, these approaches are discussed in greater detail through case studies that consider the social aspects of how we design and build the spaces we inhabit.

THE EXPERIENTIAL "PRODUCTION" OF SPACE

While our lived experience leads us to construct a subjective reality, the built environment provides tangible spaces that allow us to conduct ourselves in specific ways. Our built environment, in other words, helps determine how we live. Our experience of reality, moreover, helps to shape the spaces and buildings we use as we use them. Part of the social construct of space is thus the interplay between our understood realities, the shared cultures this creates, and the physical framework that is shaped by, and holds, both.[1]

Over the past decades, many authors have analyzed how our cultural mores and ideals are expressed spatially and how we perceive them, a discussion I will point to but not repeat here. Amos Rapoport has analyzed how cultural habits influence and are portrayed in our domestic architecture.[2] Henri Lefebvre has proposed space as a tripartite social "secretion" constructed by perceived, conceptualized, and representational space.[3] David Harvey has proposed categories of "absolute," "relative," and "relational" space.[4] More recently, Doreen Massey has explored spatial constructs from a poststructuralist and feminist position, in the process critiquing some of the topical limitations of earlier spatial models.[5] In earlier texts, I have also pointed to discrepancies in spatial production in specific cultures and the power struggles that result.[6]

Understanding the modes of spatial production and perception is a first step in conscientiously working with such modes as tools of production. The agency to transform and shape space has become a source of power in most societies,[7] especially where spaces have become commodified and thus closely tied to a society's economic system. The intersection between economic power, dominant cultures, and space has important political and economic consequences that are explored through the examples in Part 2 of this volume, many of which counter existing power hierarchies.

Rigorous conceptual tools can help us better understand the consequences of spatial design and planning. In the following sections, I introduce several critical bodies of theory based on feminism, race, and the history of colonialism, with special attention on how these conceptual frameworks intersect. These bodies of theory did not start within architecture, urban design, or planning but have been incorporated into those fields' theoretical canons in recent decades, often with intense and sometimes anguished debate. I examine these theoretical bodies within the built-environment context because they provide lenses for more complex and nuanced perspectives of architecture and urban design theory, as they open such theory to the views of a global majority rather than a powerful but inherently limited minority.

In the case of feminist and (post-) colonial theory (which often overlaps with questions of ethnicity and race), I also discuss how these theories have intersected

with the concepts and ideals of modernity. Feminist voices, especially, have often challenged normative (or traditional) spatial arrangements and ways of "doing architecture." Architectural modernity, which rose in the early twentieth century to encapsulate a more open and democratic spatial expression through ideals such as political emancipation, technical progress, and a certain cultural universalism, has played a significant role in affecting architectural production, the extent of which can only be touched upon here.[8]

In bringing together theories that have often originated outside the fields of architecture, urban design, and planning, it is not my aim to nullify existing experiences within the field. Rather, I seek to expand such experiences into new realms by suggesting ways to enhance and re-tool our means of analysis and understanding. Just as research methods evolve to capture new knowledge, so must theory building evolve to better understand that knowledge. In opening this discussion, I work on the premise that seeking ways to hear and understand diverse voices is a fundamental hallmark of stakeholder inclusion and, thus, critical to social sustainability.

SPACE IS SOCIAL

Space and socially constructed agency are inextricably linked. As the previous chapters have shown, this agency is linked to the power to define policy and to determine research and design methods, including the power to define what questions or problems are important and what constitutes a successful answer or solution. This power of definition has been carefully guarded by those with such power. While educational and professional criteria were initially developed to maintain health and safety standards, they have also concentrated decision-making power in the hands of an economic and social elite.

Traditional sources of expertise are now augmented by the seemingly more democratic forum of the internet, which has allowed a broad array of bloggers, users, and "influencers" to comment on just about anything. Architectural and urban design offices self-promote their work, blurring the lines of architectural criticism and marketing, with the internet now making such dissemination fast and easy. Readers, too, weigh in on all sorts of built-environment topics, sometimes bringing in critical viewpoints and sometimes mounting unfounded opinions. The internet's influence has become so pervasive that in the area of emerging research methods, e.g., data mining and macro-pattern extrapolation, researchers have used digital-native sources, including social media and video-sharing platforms, to extract spatially related data.[9]

Broader means of soliciting user input, while allowing for new voices to be heard, does not automatically mean those voices have contributed to greater social equity. For that to occur, there must be greater awareness of how power structures work, how they can be used to silence some voices while amplifying others, and how this has historically played out when making design and planning decisions. Race and gender are two categories where such power structures have been extensively analyzed, although other means of analyzing power certainly remain.

THE SOCIAL CONSTRUCT OF THEORY

Both race and gender have been described as socially constructed, while de facto, they are often regarded as biological categories.[10] In architectural theory, issues of gender and race have historically been sidelined through a misguided assumption that the classic canon of architectural theory is race-blind and genderless.[11] In examining the traditional theoretical canon more closely, it becomes evident that the user of urban space and architecture is hardly race- or gender-less and that most theory is written from a white and male point of view. This phenomenon becomes more visible when we consider that texts that consider alternative perspectives are typically labeled as such, for example, as "feminist" or "Black," thus contributing to a perception that they somehow lie outside the norm. This recognition does not nullify mainstream thought; it simply makes clear that such thought is hardly universally valid or representative.

Three growing bodies of theory can assist in examining and, where necessary, reframing traditionally dominant doctrines: feminist theory, (post-) colonial theory, and critical race theory. All three bodies of theory have in common their focus on analyzing situations against the grain, for example, by deconstructing hierarchies implicit in commonly construed categories such as "male/female" or "white/non-white," or by rendering the invisible visible by introducing perspectives from and data about groups that have not typically been a focus of analysis. The introduction of new *methods* of analysis is a key factor here, as theory and the methods used to generate it must continually be renewed to adapt to changing circumstances.

One method to generate such renewal is to place canonical theory within a broader framework by asking reverse-logic "what if" questions, in which *if-then* implications are challenged to counter biases so embedded in social conventions that they have become difficult to recognize. Judith Butler employs this technique when discussing the "performative" nature of gender (for example, wearing clothing associated with a specific gender), where she states that through repeatedly performing gender-specific acts, those gender categories *become representative* of one's biological existence (and not the other way around). Butler reverses the logic of an existing equation to show that biological existence does not predicate gender performativity, calling into question the validity of the equation.[12]

Alternatives to a "sole truth" Western-centric canon have existed for decades. Post-colonial theories, like Dependency Theory, emerged in the 1960s as scholars from previously colonized countries began examining colonial legacies. Critical race theory (in the United States emerging with the civil rights era) and the "second wave" of feminist theory saw an upsurge beginning in the 1960s and became part of alternative architectural and urban design critiques. Excursions into fields beyond architecture and urban design, such as geography, sociology, or multi-disciplinary fields, such as women's or cultural studies, provide a further set of resources that can often serve to illuminate how the built environment functions differently for different people. In all, shifting one's understanding of how the built environment is designed and created through shifting one's perspective away from ingrained viewpoints allows for new creative impulses, both in design and theory building.

There are several ways in which built-environment theory building can emerge. The first is by examining the process by which urban settings or buildings are commissioned, designed, and constructed. A second is to examine an urban setting or building's spatial or aesthetic coding, while a third considers the building or its urban context as an expression of power over users versus their empowerment. Each of these layered approaches considers a series of stakeholders and their interests to better understand buildings and urban ensembles, especially when their production is embedded in complex power relations.[13]

This chapter will examine power structures through a series of examples, highlighting non-traditional methods through which architecture and urban design can be assessed and evaluated. Because of a historical marginalization of women and (in Western societies) people of color as public decisionmakers, this chapter will focus on theorizations that have centered the perspectives and needs of these populations.

GENDER, RACE, AND CLASS: ARCHITECTURE AND THE "OTHER"

Architectural and urban theory is largely based on the male gaze. A classic example taken from Continental Europe is the late nineteenth and early twentieth-century *flâneur,* as described by both the French essayist Charles Baudelaire (1821–1867) and the German philosopher Walter Benjamin (1892–1940). Baudelaire portrayed

Figure 1.4.1
Charles Baudelaire's nineteenth-century image of a "flâneur" illustrates how wealthy men of leisure could occupy the city in ways the working class and women could not.

the *flâneur* as an upper-class gentleman who at once shaped and observed the city (in this case, Paris) through his presence. Embodying a bourgeois moral order in the "modern" city after a revolutionary period brought about by the politics of budding French industrialization, Baudelaire's *flâneur* represented an upper-class desire for social stability as the guidewire of a new political and economic order.

Baudelaire and Benjamin's *flâneurs* both saw the commercialized European city through the eyes of upper-class males who, having achieved wealth through liberalized markets and legal certainty, now used their privilege to consume the urban setting through leisure or by seeking the excitement of new urban typologies and services.[14] That such experiences stemming from economic advantage were limited to a small segment of the population was not highlighted in either writer's account. The *flâneur* had free time to spend taking in the pleasures of the city during an era when (for example) upper-class women in Europe and elsewhere were not allowed to walk the streets alone, as this was associated with prostitution. Only when another urban invention, the nineteenth-century department store, became commonplace did upper-class women find an urban space they could occupy without risking their reputation.[15] The *flâneur*'s experience also ran counter to that of working-class women and men of the era, who were in no economic position to partake in extended leisure pursuits at all.

Upper-class male privilege is not unique to Europe, of course. Seen through the eyes of a European writer, however, the European example was presented as normative rather than exceptional. By limiting description to their own contexts, both Baudelaire and Benjamin unwittingly submitted to the subjectivity of their upper-class male gaze while presenting such experiences as a new standard. It is the lack of acknowledgment of this subjectivity that has led "mainstream" writers to assume that they represent the norm and that other cultures make up "the other," even when they share physical space with "the mainstream." In this manner, the experiences of women, of the ethnically marginalized, and of the working-class become marginalized; themes that I will expand upon later.

Our experience of urban space depends on many things, including our socialization and how we are perceived by others. "Mainstream" accounts capture only a fraction of these experiences. The modern industrial city, which introduced an urban theory that resonates to this day, was based on strict sexual, class, and racial codes. Theories of urban space, written contemporaneously and carried forward ever since, have largely ignored the experiences of citizens marginalized by these codes. While a body of literature has since explored the lived experience of women, ethnic minorities, and the working class, this literature is often categorized as experiences of the "other." I would like to present several examples of writings as well as proposed or built designs that have challenged this assumption by centering the experiences of such marginalized "others."

WOMEN AND THE BUILT ENVIRONMENT

Women constructed vibrant alternatives to the urban scenario of the industrializing, late nineteenth-century city that catered largely to male pleasures. Dolores Hayden's book *The Grand Domestic Revolution: A History of Feminist Designs*

for American Homes, Neighborhoods and Cities charts progressive and woman-centered social movements of the late nineteenth and early twentieth centuries in the United States. Most projects were planned by women and sought ways to alleviate upper-middle-class white women's roles as (unpaid) housewives and their economic dependence on a male breadwinner.[16] The projects described were not theoretical treatises as much as project proposals and lived experiences; examples include socialist and domestic feminist proposals in the form of model villages, public kitchens, community kitchens, cooked food services, and extensive childcare facilities that allowed women time to pursue both employment and leisure. Some created shared housekeeping arrangements to economize time and effort, while others elevated housework to a macro-level and paid workers to perform domestic tasks such as cooking, cleaning, or childcare. (It should be noted that most of these workers were female, thus reinforcing rather than challenging existing gender roles.) The advantages of these projects remained largely available to an educated and economic elite.

An ambitious example, one of many, was Llano del Rio, California, designed in 1916 by Alice Constance Austin for farmers and urban workers who wished to create a socialist city of kitchenless houses as an alternative to the developer-driven tract housing going up in nearby Los Angeles. Llano del Rio incorporated state-of-the-art labor-saving devices as well as central laundry and kitchen services. Austin designed a concentric underground network of rail lines to link individual homes to these services. The project ultimately remained unbuilt due to a lack of funds, yet Austin had demonstrated clear alternatives to conventional housing at an urban scale.[17]

Llano del Rio's focus on mechanizing domestic chores to free up women's time showed an awareness of traditional gender roles and mirrored European projects built during the 1910s and 1920s. Examples include a series of "One Kitchen Houses" (*Einküchenhaus*), built in Berlin in the 1910s and catering mostly to an upper-class clientele, the *Heimhof* in Vienna, which catered to single women with careers (1911),[18] the Narkomfin House in Moscow, built in 1928–1932 for white-collar employees at the Commissariat of Finance,[19] and the Isokon Flats in London (1929–1934), designed for young, mobile professionals.[20] These projects, which represented social experiments of the time, were at the scale of individual buildings, in contrast to Llano del Rio, which presented a neighborhood system. Even at the building scale, however, projects focused on community, with many incorporating common spaces for residents. Designed for a middle- or upper-class clientele looking for alternatives to a traditional lifestyle, housework was typically performed by paid service workers, scaling up the economy of housework and making it more visible.

Several nineteenth-century projects were designed to allow freedom from Victorian-era sexual restrictions as well as domestic work, for example, the "free love" community at Oneida, New York, that cast aside ideas of the nuclear family, allowing both women and men to live outside conventional marital confines. The communal approach to love and sexuality was mirrored by an economic approach that featured communal housekeeping and childcare designed for efficiency.[21]

Projects that created new areas of personal and sexual fulfillment for women became built (or at least designed) examples of a new theory, one that questioned both traditional male/female roles and their implied hierarchies of space and social status. Such projects presented a stark contrast to "guidebooks," often written as manifestos, that tried to cement gender roles in the domestic sphere by "professionalizing" unpaid domestic labor. Catherine Beecher and Harriet Beecher Stowe's 1869 *The American Woman's Home*, for example, was a religiously infused guide to traditionally gendered domestic living.[22] Christine Fredrick's 1913 work *The New Housekeeping: Efficiency Studies in Home Management*, by contrast, introduced the business management concept of Taylorism into the household guidebook literature.[23]

Fredrick would follow this with a second book, *Selling Mrs. Consumer* (1929), where manufacturers and advertisers were advised on how to best convince a "typical" middle-class (white) married woman with children to repeatedly purchase consumer goods. The book, written like a novel following the life of a fictionalized "Mrs. Consumer," discussed topics such as "Mrs. Consumer and Inferiority-Superiority Feelings," "Mrs. Consumer's Great Receptivity to Food Suggestions," and "Mrs. Consumer Likes to Touch Goods," and presented statistical information about women in upper-income American households as an early form of marketing research.[24] The book thus merged early consumer marketing theory with gendered domestic ideals, presented as concepts for a model domestic environment.

Published ideals of women's social roles throughout the late nineteenth and early twentieth century, as cities modernized and new building types such as department stores and office buildings were introduced, thus followed one of two paths: that of the Beechers and Christine Frederick, whose theories built on a spatial binary that saw women relegated to the domestic sphere while men were free to explore public life, or that of Llana del Rio and other socialist and communitarian projects, which attempted to pull women (at least those with some economic resources) out of their traditional roles through technological or social means.

While proposed and built feminist communities offered tangible alternatives to a conventionally gendered spatial order, feminist manifestos, and treatises offered a further path forward, this time in texts rather than built works. Tellingly, some of these works used buildings as metaphors. As early as 1405, Christine de Pizan wrote *The Book of the City of Ladies*, metaphorically "housing" within the pages of her "city" (the book), a collection of historically famous women who had been overlooked in mainstream accounts.[25] Centuries later, in 1929, Virginia Woolf published her essay "A Room of One's Own," which argued that women needed agency over their own space and financial means to be able to write and be heard – qualities that many women pushed into the domestic sphere found elusive.[26]

Although it may be assumed that much of women's everyday experience has been lost to history, their general experiences regarding their social standing, work, and domesticity began to be more broadly theorized in the mid-twentieth century. Such works made clear that women's everyday lives were quite different from those of men, whose lives had served as a basis for experiential texts for

centuries. Volumes such as Simone de Beauvoir's *Second Sex*, published in 1949 (in French), and Betty Friedan's *The Feminine Mystique*, published in the United States in 1963, highlighted the need for new perspectives and helped usher in a new era of feminist literature. Beauvoir's book explored how women's lived experience had been erased from common theoretical positions, listing many examples of how women had been described as an aberration of the norm, the norm being males and their experience of the world. Women, de Beauvoir pointed out, were considered the "second" sex, the "other." Authors such as the Australian writer Dale Spender built upon this work to show how this happened linguistically, using the English language as a case study. Examples included the use of "man" to mean "human," a construction that suggested males represent all people, while women are considered outside this norm.[27]

Friedan, too, demonstrated how lived perspectives of women have been systematically passed over, in this case when planning U.S. post-World War II suburbs. Popularizing the phrase "the problem with no name," she made visible the deep dissatisfaction educated suburban women faced as they lived out lives of housework, material consumption, and childcare the (male) advertising industry and planners had sold them as fulfilling.

Both de Beauvoir's and Friedan's books made use of self-ethnographic methods, in which the authors described insights taken from their own lives and those of their peers. Both volumes had their own topical limitations, as they remained in the realm of those who were white, educated, and well-off and did not account for the experiences of working-class women, women of color, or women who were not heterosexual. Treatises accounting for such intersectionality became more visible starting in the late 1970s, and included books on race, feminism, sexuality, and class, such as bell hooks's *Ain't I a Woman: Black Women and Feminism* (1981), Angela Davis's *Women, Race & Class* (1983), and Audre Lorde's *Sister Outsider: Essays and Speeches* (1984), discussed in more detail later on.

FEMINISM AND THE MODERN MOVEMENT

The Modernist era in architecture has no set starting date, although many accounts focus on Europe in the early twentieth century as a social and technical inflection point that accelerated after World War I. The new era came with a progressive awareness that women's needs and desires were often not considered in traditional domestic environments. One result was that women became more directly involved in the design of buildings, even if they often remained in the shadows of male partners, while women's freedom and agency became determinants in buildings' designs. Architects of the 1920s Modern movement, including those at the Bauhaus as well as in the Russian Constructivist movement, based their designs in part on how they saw women's ideal lives as untied from domestic orthodoxy; tellingly, such theorization was often put forth by men. Despite this, the new housing concepts saw a radical departure from convention, with controversy soon following as social conservatives pushed back.

Housing the working class in growing cities was a major concern in many European countries of the late nineteenth and early twentieth century. Reformist

architects saw it as their calling to create healthier living environments, including access to daylight and natural ventilation in cost-efficient working-class housing. Reform went hand-in-hand with social engineering. In Germany, Modernist architects, including those of the Bauhaus, campaigned against large working-class kitchens with living-room functions in favor of small one-person kitchens that were considered more "hygienic" since they were seen as containing cooking odors. The most famous example, the Frankfurt Kitchen developed by Margarete Schütte-Lihotzky for a series of housing estates built in Frankfurt in the 1920s, was widely discussed for its ingenious functionality, yet nevertheless introduced a tight, closed-off, U-shaped kitchen with no functions beyond housework. The small kitchen isolated women as they did their gendered domestic chores and ran counter to working-class habits; Modernist doctrine nevertheless considered such kitchens superior.[28]

The Frankfurt Kitchen continued the pattern established by nineteenth-century guidebooks that "professionalized" women's domestic work while never questioning a traditional division of labor. Avant-garde architects of the 1920s did recognize the need to free women from domestic burdens, and one approach was to make "women's work" more efficient by introducing new household technologies or improving spatial arrangements for better efficiency. Another approach consisted of removing such work from the house entirely.

It was the Soviet Constructivists who, in the 1920s, completely re-thought housing as part of the Soviet economic and social revolution. Similar to their contemporaries in western Europe, the Constructivists attempted to create architecture that would free women from domestic labor, in this case, by dissolving the nuclear family to free women from its burdens. In a series of radically innovative projects, Constructivist architects designed workers' dormitories with associated communal spaces such as dining halls and libraries, kitchenless homes with associated dining halls for couples, as well as children's dormitories, where workers' offspring would grow up under the supervision of trained specialists while their parents pursued work, education, and leisure in dwellings of their own.

An example is Mikhail Barshch and Moisei Ginzburg's 1930 *Zelenyi Gorod* (Green City), a winning competition entry that proposed a string of single-person housing units that meandered through the bucolic countryside, joined by a public transit line as well as intermittently placed community centers and canteens (see Figure 1.4.2). Adults would have a small single room for sleep and study; social life would take place in the collective, while children were to be removed from adult spaces entirely.[29]

The forced dissolution of the nuclear family as a way of encouraging freedom from family responsibilities was a radical idea, and it should be noted that its proponents were largely well-educated urban men. In their scheme, women still did a large share of domestic work in the new economy since typical "female" chores, such as childcare and social welfare, were generally transposed to the macro-level, where such work became paid labor.[30] While the concepts initially seemed liberating, having women continue to perform domestic work while making children wards of the state makes one question whose freedom was being sought.

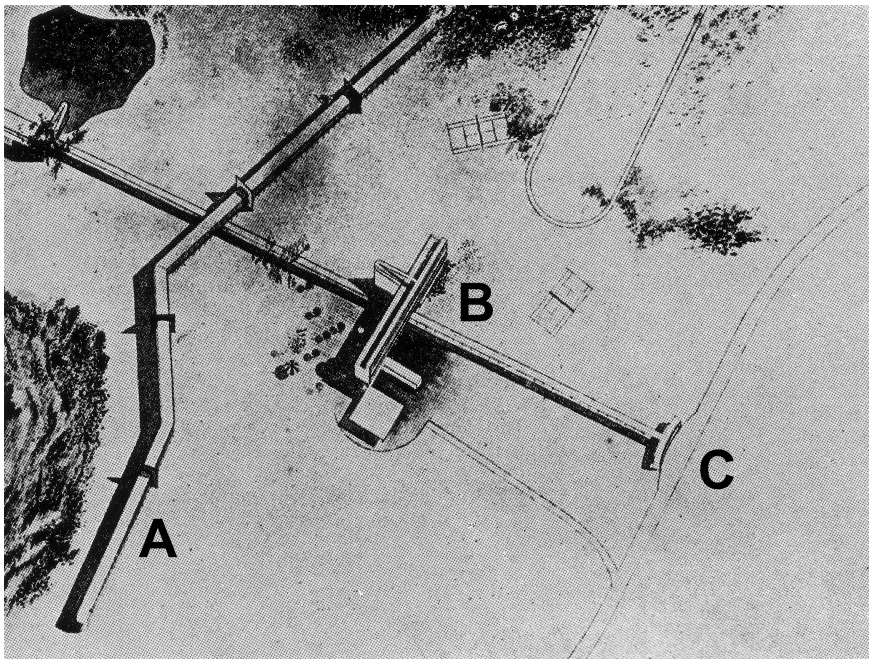

Figure 1.4.2
Mikhail Barshch and Moisei Ginzburg's 1930 Zelenyi Gorod project for a site near Moscow proposed the dissolution of both the nuclear family and conventional housing forms.

Ideals of the "new architecture" and housing for the "new Soviet family," expressed largely through architectural and urban designs, remained a fringe movement in the early Soviet Union, and most projects remained unbuilt. Traditional family life In the Soviet Union was based on rural ideals of the extended family, in which men, women, and children had clear economic and social roles, and new approaches to family life were difficult to implement. Overall, communal housing in urban centers, where families lived in a single room and shared a bathroom and kitchen with others, became a widespread consequence of severe housing shortages in cities rather than an aspirational expression of a new world order.[31] Soviet women in urban settings were required to work outside the home (productive labor, in Marxist terms), while social norms dictated that they continue housekeeping and family-related work as well (reproductive labor).

While architects of the Modern movement, including the Soviet Constructivists, often focused on better housing for the working class, many experimental approaches in Europe were realized as villas for wealthy clients. New approaches were theorized in manifestos as well as built examples, with concepts such as Le Corbusier's *promenade architectural* and "Five Points of Architecture" as well as Adolf Loos's *Raumplan* becoming major theoretical treatises taught in architecture programs worldwide.[32] While often regarded as gender-neutral works, a closer examination questions this premise.

Beatriz Colomina has critically assessed how, in the early twentieth century, Adolf Loos and Le Corbusier used women as props in their iconic villas by objectifying them within the house, in at least one case mixing in views of a racially based exoticism.[33] Colomina discusses Adolf Loos's famous *Raumplan* as a means of control in which women are placed in intimate spaces where they

can see into adjoining rooms but are also framed visually – like a sculptural object to be admired – from spaces designed for the male of the house. Nowhere is this voyeurism more striking than in the Josephine Baker house (1927). Here, Loos – who was not commissioned by Baker – designed a fantasy villa for a Black American dancer and singer, with the center occupied by a swimming pool; Colomina notes Loos's objectification of the dark-skinned Baker as viewers stood hidden on a balcony watching her wet body glide by.[34] While Baker herself used tropes of sexual exoticism in her stage performances, it was a narrative she controlled; Loos, on the other hand, denied her such control.

Le Corbusier's villas of the 1920s, too, frame both the landscape beyond the house and the viewers within. Colomina points out that contemporaneous images of the villas with their horizontal windows and their architectural *promenade*, including films produced by the architect, show women within the home gazing at interior spaces or watching men or children while the men use the windows to gaze at the world beyond: "The inward gaze ... of Loos' interiors becomes with Le Corbusier a gaze of domination over the exterior world."[35]

Loos's *Raumplan* and Le Corbusier's *promenade architectural* have advanced to theoretical mainstays. Although both theories are largely considered gender-neutral, the resulting villas exemplify a male gaze at the building scale that treats women as secondary within domestic settings. Colomina's analysis demonstrates how dissecting existing architectural and urban theories for their gender-specific implications becomes a first step towards understanding the one-sided nature of such theories and furthering architectural and urban design that is truly gender inclusive.

Inclusivity begins with stakeholder involvement in the design and planning process. Although men were more often listed as the authors of innovative 1920s housing, it should be noted that women did have a major influence on the ideas and execution of modern architecture during an era where theory was often expressed through experimental design. This is certainly true for female partners and employees in architecture firms (whose achievements often remain underacknowledged), yet clients, too, frequently played a considerable role in designing domestic spaces that became influential theoretical harbingers. Alice T. Friedman's 2006 book *Women and the Making of the Modern House*, which investigates how women clients influenced innovation in domestic architecture designed by renowned Modernist architects, recounts how women helped shape some of the most iconic houses that illustrate Modern architecture throughout the twentieth century. Houses include Frank Lloyd Wright's Hollyhock House (with Aline Barnsdall), Gerrit Rietveld's Schröder House (with Truus Schröder), Le Corbusier's Villa Stein (with Sarah and Michael Stein and Gabrielle Colaço-Osorio de Monzie), Ludwig Mies van der Rohe's Farnsworth House (with Edith Farnsworth), Richard Neutra's Perkins House (with Constance Perkins) and Robert Venturi's Vanna Venturi House (with his mother, Vanna Venturi).[36]

These notable projects make evident that with financial means and an outlet for creative thought, women have greatly contributed to the canon that is architectural thought. They also show how women's roles in design are downplayed when projects are portrayed as the brainchild of a sole architect. Women's roles

as architectural designers continue to be a fruitful topic of research, while projects such as *The International Archive of Women in Architecture* (IAWA) collect and document the history of women's contributions to the built environment to the present day.[37]

INTERSECTIONS OF RACE, SPACE, AND GENDER

Treatises accounting for intersectionality of race, space, and gender came to the forefront starting in the late 1970s and included books on race, feminism, sexuality, and class, such as bell hooks's *Ain't I a Woman: Black Women and Feminism* (1981), Angela Davis's *Women, Race & Class* (1983), and Audre Lorde's *Sister Outsider: Essays and Speeches* (1984). These works do not address the built environment directly, yet they provide a helpful perspective of how standard histories often provide a narrow perspective of stakeholder interests. The limited accounts – or even misrepresentations – standard histories present help keep alive dominant narratives and, with them, existing power structures. Works on race and gender point to the importance of understanding the nuanced intersections of hierarchies and power relationships, especially for constituencies whose voices are typically less heard.

Author bell hooks begins her analysis of race and gender by pointing to Black women's "double bind" of being considered secondary wherever they turn. Joining mainstream women's movements, such as the second-wave feminist movement of the 1970s, aligned Black women with a movement that often disparaged the experiences of Blacks. Aligning themselves with movements that sought Black power meant entering a patriarchal system where their experiences as women were scorned.[38] The erasure of Black women's experiences even took place linguistically, hooks points out: "When black people are talked about the focus tends to be on black men; and when women are talked about the focus tends to be on white women."[39]

In her writings, hooks examines Black women's specific experiences through a historical analysis of how patterns developed in the past continue to influence present-day culture. She begins her analysis with the era of slavery, noting that slavery was physically debilitating for all who were subjected to it, yet Black women were additionally exploited sexually by their white male "owners," a fate most Black men were largely able to avoid. Black women were regarded economically as "breeders," and in part, white-on-black rapes were initiated by "owners" in an attempt to produce offspring that would then be sold into slavery.[40] Economics, however, did not eclipse cruelty. As one contemporary noted, living conditions for Black women were so harsh that many children were miscarried, stillborn, or died in early infancy,[41] making it clear that sexual subjugation was, in the end, more about power than economics.

Both hooks and Angela Davis, in her analysis of *Women, Race and Class,* point to the divergent social roles of Black and white women in the nineteenth-century economic system and how this divergency continues to the present day. Davis points to a nineteenth-century split along racial lines in the ideals of womanhood: while the ideal for white women after industrialization and a rise in

capitalism was that of supporting wife and mother (with both roles seen as inferior to that of the male worker), Black women were still seen as ingrained in the productive work of labor.[42]

In part, Black women's role in labor was (and remains) due to low-wage service jobs being disproportionately filled by women of color, from fieldwork and domestic work in the post-Bellum period of the nineteenth century to poorly paid service work performed today.[43] Davis traces how middle-class and wealthy white suffragists of the late nineteenth century systematically worked to elevate their own standing while denigrating the nation's working class, largely made up of Blacks, Catholic or Jewish immigrants, and "uneducated native white workers." It was a class largely exploited by the gilded-age neo-capitalists, whose industrial and banking empires would reshape America.[44] As Davis notes, progressive white abolitionists ignored "the pain of economic deprivation and ... violence of racist mobs" that the newly freed Blacks experienced.[45] Among other things, this willful ignorance allowed affluent white feminists to turn a blind eye to "their own exploitative treatment of their maids."[46]

Both hooks and Davis found that up to the 1970s, most historical works, as well as political or sociological works on the Black family, focused on the sexual role of the Black woman, including her position as family "matriarch," rather than a more nuanced range of roles such as her economic role as a worker in society. This was especially true for Daniel Moynihan's influential 1965 government publication, "The Negro Family: The Case for National Action," which claimed that it was matriarchal family structures within Black culture that undermined Black families.[47] Sociological texts largely ignored discriminatory factors that led to social problems in Black society, such as a lack of decent housing opportunities, poor medical care, and a lack of educational opportunities.[48] Davis chastised the Moynihan Report in particular for suggesting the answer to the "problem" of the "Negro Family" should be to shore up male supremacy within the Black community.[49]

Davis discusses the uniquely contradictory position of Black women with regard to their sexuality at length. During slavery, they were seen as genderless when it came to harsh field work but were considered gendered when it came to the sexual abuse they endured at the hands of both Black and white men.[50] In other manners, Davis sees men and women under slavery as equals. Just as enslaved women were not seen as wives, so were enslaved men not seen as husbands or family providers, as men and women were "equally subjected to the slavemaster's absolute authority."[51] Despite this, a gendered view of sexual roles that began in the era of slavery continued throughout the late nineteenth and well into the twentieth century. These views led to the entrenched myths of black rapists of white women and, on the flip side of the coin, "bad" black women who were "available" for sexual abuse. These myths, Davis points out, continued to be used to justify violence against Blacks, both male and female.[52]

As both hooks and Davis make clear, Black women in U.S. society have very different experiences from white women, a difference feminist theory does not usually recognize. Black women also have different experiences from Black men, although critical race theory does not generally reflect that dichotomy. Black

women have thus found themselves in a double bind over centuries. Historical developments in gendered labor practices and the status of women have led to an impasse in which the experiences of Black women have been either trivialized or ignored.

Audre Lorde brings the interstitial nature of Black women's identities to the forefront in a holistic way, as she reflects on one's personal identity as being made up of various parts of one's life and the lived experience that provides authority to speak about that life. In a 1984 essay, "Age, Race, Class, and Sex: Women Redefining Difference," she points out the burden of those with less power (the "oppressed") in being forced to change their demeanor to adapt to the dominant system and to take on the considerable emotional labor of "sharing our knowledge" with those in power.[53] "[W]e have no patterns for relating across our human differences as equals. As a result, those differences have been misnamed and misused in the service of separation and confusion," Lorde states as a way of explanation.[54] Lorde's comments make clear how complex stakeholder experiences can be and how shared experiences can be perceived quite differently by different people. For designers embarking on work for and with a variety of users, this nuance provides an opportunity to creatively meet such challenges.

COLONIAL LEGACIES: TRADITIONALISM VS. "MODERNITY"

European and Anglo-American architectural and urban thought has, for centuries, constructed hierarchies of thinking; as the previous sections have shown, tenacious hierarchies based on race or gender were often used to downplay specific theoretical contributions or to "speak for" those without ready access to the canonical megaphone. European and Anglo-American colonialism is another area in which theoretical constructs have shaped the built environment in ways that often ignore existent epistemologies. Often expressed as colonial subjugation or westernization couched as "modernization," the ideals behind colonial building programs were based on a belief in racial and ethnic hierarchies and economic and political power discrepancies that denied cultural self-representation. The following section illustrates these concepts with several commonly discussed case studies, although many more examples of colonial subjugation exist in the literature.

In this section, I will largely avoid the use of the term "post-colonial" since the definition of the concept has been contentious at worst and broad at best.[55] I agree with authors who argue that colonialism frequently used ideals of "modernization" as a cover for political and economic exploitation; this topic has been covered elsewhere in great detail.[56] Scholars in many disciplines, from literature to political science to geography, have examined colonialism and have expressed the importance of breaking down perceived hierarchies. I will limit the following discussion to concepts associated with the built environment and how buildings, landscapes, and urban structures relate to and express cultural assumptions.

Colonial powers, especially European powers that maintained a presence in Africa and Asia until well into the twentieth century, often built settlements for their own citizens in the countries they engaged with; such settlements were built

largely according to European ideals. In Africa, for example, early colonial military settlements of the nineteenth century were soon augmented by the colonizers' urban settlements, often using experimental urban designs developed in Europe.[57] Colonizers built segregated quarters while introducing different ownership rights in European and native quarters. In some cases, they removed native populations from European populations for "sanitary" reasons, in the process constructing great disparities in infrastructure such as indoor plumbing or sewage systems.

Colonial legacies have left theoretical as well as physical residues. Much has been written about colonialism, with an important early work being Edward Said's 1978 book *Orientalism*, which suggested that the very idea of a separate and defined "Orient" was produced through European discourse in an effort to shape a political, ideological, and cultural artifact as seen through European eyes and thus under European control. Construction of the "other" meant the power to define who was at the "center" and who was at the "periphery" (as we have seen in other cases, outlined previously), or as Padmini Mongia writes in her introduction to *Contemporary Postcolonial Theory*, anti-colonial critiques often, "remained in many ways dependent on the very structures they were interested in dismantling. ... [These texts often] inverted the structure of binary distinctions [...] but without necessarily questioning the validity of the dualism itself."[58]

The problematic concept of dualism is further explained in an essay by Kwame Anthony Appiah, who critiques a 1987 show at the Center for African Art in New York that was co-curated by a wide range of individuals, from a Baule artist from the Ivory Coast largely unknown in the West to the wealthy American art collector and philanthropist David Rockefeller, whose influence in the west was considerable. Appiah notes that the Baule artist, Lela Kouakou, was asked by the museum's representative to select only Baule artworks because it was assumed he would otherwise select works according to his "own traditional criteria,"[59] while Rockefeller chose work from a variety of African cultures based on its perceived financial merit for a western collector. As Appiah notes,

> David Rockefeller is permitted to say anything at all about the arts of Africa because he is a buyer and because he is at the center, while Lela Kouakou, who merely makes art and who dwells at the margins, is a poor African whose words count only as parts of the commodification [...] of Baule art.[60]

While the issue of hierarchical binaries, centers, and perceived peripheries as parts of power structures is only one part of the colonial canon, it is a major factor. As Appiah makes clear, this is due in no small part to a globalized capitalism that has commodified the subaltern, the players who the capitalized power centers perceive as being on the periphery. In many cases, the subaltern players are even characterized as a uniform conglomeration, a "type," while those at the center characterize themselves as unique individuals.[61]

African countries largely gained independence in the late 1950s or early 1960s, yet problems with colonial legacies continue. In terms of building programs, colonial urban planning typically ran counter to how African cultures functioned spatially,[62] and this mismatch has influenced urban development to this

day, for example, by facilitating the expansion of slums on city edges.[63] "Modern" urban development of the nineteenth and early twentieth centuries was, in hindsight, a divisive approach based on ideals that only awkwardly fit African land use norms and cultural conventions. Decolonial theory has explored the effects of these actions, and it is interesting to speculate how African cities might have developed without European management of their spatial planning.

COLONIALISM AND THE "OTHER" IN INDIA

Much has been written about British colonialism in India; indeed, two of the three major post-colonial theorists (Edward Said, Homi Bhabha, and Gayatri Chakravorty Spivak) are from the subcontinent. Their work addresses the mechanisms of colonialism in various ways, yet largely without going into detail about how this manifested itself spatially. Bhabha, for example, rejects the binary of "colonizer" and "colonized" and instead proposes ideas of "hybridity," in which (using psychoanalytic and deconstructivist theory) he sees the colonial subject as at once desiring to occupy the colonizer's place and avenging the injustices of colonization.[64] Bhabha also speaks of a "Third Space" (which he sees metaphorically rather than literally) as allowing cultural traditions to be "appropriated, rehistoricized, translated, and reread."[65] It is the hybridity of this third space that allows knowledge of the subordinated population to be restituted.

Spivak, rather than speaking about colonialism, critiques imperialism as a factor of neo-colonialism, racism, and labor relations, linking and interrogating feminist, Marxist, deconstructivist, and psychoanalytical debates through these theoretical lenses. Bringing forth the voices of the "subaltern," Spivak seeks alternative histories to the exclusionary ones of a Western as well as an indigenous elite. She thus examines resistances and histories of the Indian peasantry, the "subaltern" whose stories are largely hidden. Spivak has reshaped historiographic priorities, reading historical data to understand understatements and omissions rather than taking the data's literal assertions at face value. She also warns against "reverse ethnocentrism," where indigenous practices are uncritically celebrated as part of a colonialist fantasy.[66]

Spatially, British colonialism in India proceeded much like colonialism did in Africa, with colonizers building separate communities for themselves and importing European planning ideals. Colonizers used planning ideals developed at home, including those based on military-political dominance, those based on formally stated "Town Planning" theories such as Garden City concepts, and those (after the independence of colonies) based on a continuing "cultural colonialism" derived from values, ideologies, and planning models.[67] In the new part of Delhi, India's capital city, the wide boulevards, green spaces, and low-density residential areas the British administrators built for themselves and government employees from the Indian elite were part of this colonial process and remained in stark contrast to the compact layout of Delhi's old city, where much of the population continued to live.[68] Indian society has always been extremely heterogeneous, with diverse cultural, social, and religiously based identities, and the built environment that expressed British class-based mores remained a poor fit for Indian society.[69] As in

Africa, European efforts in India were based on visions of "modernity," including European models of technology, sanitation, and propriety, ideas that often went hand in hand with economic exploitation.[70]

Urban planning in India after independence in 1947 has continued to be influenced by western ideals in ways that Bhabha would frame as a hybrid condition in which Indian elites have absorbed some of the colonizer's value systems. Major projects have been designed by western architects, the clearest example being the city of Chandigarh, which was planned by the French-Swiss architect Le Corbusier.[71]

After independence, foreign-trained Indian urban planners continued to take their spatial cues from the west. In the 1950s, for example, American planner and architect Albert Mayer assisted the Indian government in preparing comprehensive plans for Chandigarh, while the Ford Foundation helped plan Delhi and Kolkata. Bringing in outside experts was an attempt to use technical planning to control what was perceived as India's unruly sprawl, a process that was rarely successful.[72] Over the years, for example, Delhi has continued to use zoning and land development ideas developed in Europe or North America to produce a series of urban master plans that included slum removal and other large-scale demolitions as part of "beautification" schemes.[73] As one commentator has noted, attempts to make Delhi a "world class" city have not mitigated urban poverty so much as to serve the city's elite as they attempt to attract capital investments to the city.[74]

COLONIALISM AND MODERNITY IN LATIN AMERICA

In Latin America, the role of hierarchies based on colonialism has been extremely nuanced, in part because Latin American countries gained national sovereignty in the early nineteenth century as opposed to 1947 for India and the 1960s for many African countries. Latin American countries, thus, have a longer history of independence and a different relationship to their former colonizers compared to many other nations. Additionally, many Latin American countries have experienced extractive conditions under U.S. political influence as well as U.S. corporations that operate in the region to the present day, conditions that are arguably similar to colonial impacts yet are often not considered in the post-colonial literature.

Many Latin American countries have rich traditions of indigenous and vernacular cultures, as well as Modernist concepts initially imported from Europe. While many Latin American countries saw a surge in Modern architecture from the 1930s on, the uniquely Latin American expression of architectural modernity was often diverse, sometimes even within a single country. Latin American architects often adopted the technical, aesthetic, and social tenets of European style Modernism yet also transformed such ideas. This has raised new questions about the cultural role of Modernist buildings in Latin America and what significance they play in the relationship to economically powerful nations, such as those of western Europe or the United States.

Historian Felipe Hernández comments on this diversity of cultural approaches in his analysis of three architectural examples: The library of the Universidad Nacional Autónoma de México in Mexico City (1956), the campus of the Universidad

Central de Venezuela in Caracas (1940–1960), and Brasilia, the capital city of Brazil (1956–1960).[75] While the library of the Universidad Nacional Autónoma included European modernist elements such as form (plinth and tower) and materiality (concrete and glass), the exterior decoration is based on vernacular imaginations, including images of workers and soldiers, as well as indigenous Mesoamerican symbols. The University complex in oil-rich Caracas, Venezuela, by contrast, was based on ideals of Modernist urban design as a sign of a new-found prosperity, with little reference to an indigenous past. Finally, Hernández highlights Brazil's capital, Brasilia, initially maligned by the European and U.S. architectural establishment as a "failed" attempt at constructing a physical city on par with those of Europe or North America. Once appropriated and transformed by its citizens, Hernández argues, Brasilia offered a vernacularized social framework that very well suits residents' diverse needs.[76]

Hernández's analysis of Brasilia is an example of what happens when existing assumptions are questioned. In a liberating twist, he reverses criteria for a project's success as he points out that appropriations carried out by citizens are not a sign of designers' and planners' failures; rather, they are a recognition of a project's adaptability.[77] More so, he notes that such appropriations have led to transformations within the architectural community in many Latin American countries, opening up new interpretations of what it means to be "modern" that are not based on ideals of linear progress and universalization.[78]

As in other cultures where the subaltern has little voice, writings on the interplay between modernity and tradition in Latin America have often failed to consider the perspective of indigenous workers. As the elites of "modernizing" nations used architecture to express a new cultural era, one often based on Modernism's perceived power of social transformation towards a new social equality, indigenous workers remained unrecognized for their role in this process. Historian María González Pendás points to the scores of indigenous workers who made Félix Candela's thin-shell concrete structural experiments possible and whose roles have largely been overlooked in historical narratives. While workers are rarely credited in the building process, even in Europe and North America, in this case, the power imbalance was between a descendant of the former colonial power (Spain) and poorer, mostly indigenous workers,[79] an imbalance that mixes ethnicity with social class in a production process that, despite Modernism's social focus, hardly contributes to social equity.

As the Latin American examples make clear, coming to grips with a colonial past did not always mean embracing an indigenous origin story so much as crafting a culturally reflective modern counterpoint in the quest for a new global identity. In this manner, architectural Modernity became a national signifier. In terms of architecture and urbanism, this brought up its own questions based on the Modern movement's wide-ranging promise of social renewal, especially for the working class. Historian Fernando Lara has argued that in Brazil, where in the 1930s, the Portuguese architectural style of the colonial era made way for a new epoch of modern architecture as a "native modernity," the new architecture distracted from and even heightened the social inequalities that had existed under colonialism. "Exuberant forms to express the country's modernization,"

he writes, "downplayed the social struggles that were happening at that time throughout the nation."[80] As Gonzáles Pendás and Lara make clear, the relationship between cultural legacies and new modernities in Latin America is complex and has yet to be fully explored.

COLONIALISM, MODERNITY, AND TRADITIONALISM IN IRAN

As a final example (of many that could be chosen), Iran has seen battles between modernizers and traditionalists for most of the twentieth and twenty-first centuries, although here, the colonial influence is more nuanced since foreign colonizers did not establish their own settlements in the country. Over the course of the twentieth century, Iran was politically dominated by Britain, the Soviet Union, and the United States, with the latter supporting a coup d'état in 1953 to depose Iran's prime minister in favor of monarchial power. Despite such overt political struggles, it was the cultural signs of modernization, such as women's western dress and architectural transparency, that stood as a proxy for colonial power.

Modernizers, politically represented from the 1920s until Iran's Islamic Revolution in 1979, aimed to transform Iran from a conservative society with religiously based social ideals into a secular and capitalist society based on European norms. The monarch Reza Shah Pahlavi (who ruled 1921–1941) had the capital Tehran rebuilt from a series of closed-off, narrow streets that afforded family privacy and tight patriarchal social control to a European-influenced city of wide commercial streets offering vistas onto monumental squares. At the same time, the government mandated that the population adopt western dress, which meant that women were required to forgo the traditional *chador* that veiled their body and head.[81] Buoyed by western powers after a coup d'état, Reza Shah's son Mohammad Reza Shah (who ruled 1941–1979) continued the push for spatial and visual transparency, commissioning large middle-class housing estates that visually opened private spaces to the public realm through street-facing windows and balconies.[82]

In Iran, the struggle between modernists and traditionalists played out as an economic struggle as much as a cultural one. As part of this cultural clash, sweeping vistas and transparency were set in opposition to local control exerted through shrouded and hidden bodies and spaces. The struggle broke open through the 1979 Islamic Revolution. With Mohammad Reza Shah in exile and a theocratic government in place, the country continued its confrontational relationship with the west and the economic, social, and visual modernity it represented; a struggle that continues to the present day.

The previous examples are several of many where western ideals of modernity provided a pretense for major urban and architectural changes that often ran counter to existing social patterns which had evolved over centuries. In some cases, such as in several Latin American countries, modernity became fused with indigenous cultural patterns; in others, such as in India or many African countries, modernity initially dominated or depreciated indigenous culture. Arguably, colonial expansions were as much about economic exploitation as about cultural mores and included resource extractions in African nations, India, and Latin America, as

well as control over the notable oil industry in Iran. As a means to reinforce political and economic power through spatial means, architectural and urban theory provided a blueprint with which to express and reinforce the economic and social control colonial powers hoped to achieve.

EXPANDING THEORETICAL PRODUCTION

Theorizing the Theory

The discourses around feminist, critical race, and colonial theory (writ large) have themselves been theorized. In constructing theoretical approaches, it becomes evident that there are similarities between different sub-fields; for example, critiques of hierarchical structures occur in feminist as well as colonial theory. Colonial theory, for example, has been critiqued for adopting the colonizer's understanding of hierarchy and simply reversing it rather than considering other conceptual paradigms. (Post-)colonial theorists have instead proposed perceived centers and peripheries, or, as Bhabha offers, notions of hybridity. As the Latin American examples demonstrate, hierarchies themselves can be regarded as fluid and shifting, perhaps becoming layers and gradients rather than absolutes.

(Post-)colonial theory has been linked to discourses in other areas, such as language, gender, and nationalism. Taking a cue from "contact languages" (a linguistic term) that develop when speakers of bordering languages meet and must communicate, Mary Louise Pratt has spatialized the concept into "contact zones," where people of varying cultures encounter each other, usually at their cultural edges, in a spirit of exchanges and adaptations. Other scholars have adapted the idea of such "zones" to theory to explain the bringing together of conversations previously separated by disciplines. Such contact, or intersections, between different fields, can create rich new discussions and enhance understanding of the phenomena being studied.[83]

The idea of such "contact zones" creates further nuance about spatial phenomena as it intersects with theories located within feminism, critical race theory, or post-structuralism. Similar to the interstitially of race and gender outlined previously, for example, women under colonialism suffer from two interlinked systems: that of colonial repression and that of a dominating patriarchal power structure.[84] Anti-colonial movements that consider themselves emancipatory have thus allowed feminist thought to flourish within those movements.[85] On a semantic level, such connections exist as well. For example, nations are frequently portrayed as "female," where homelands under threat must be protected from "violation" from external forces. This is another instance where anti-colonial thought intersects with feminist theory.[86]

The concept of "race" has become an intersection of separate value systems within theory as well. "Race," a concept with no scientific validity, has become a key factor of post-colonial theory. As Sociologist Paul Gilroy argues: " 'Race' must be retained as an analytic category, not because it corresponds to any biological or epistemological absolutes, but because it refers investigation to the power that collective identities acquire by means of their roots in tradition."[87] Gilroy has rejected ideas of Afrocentricity, turning instead to Black traditions of hybridized

consciousness in a form that sees western theory as part of colonial history rather than the other way around.[88]

Anti-colonial nationalist movements are another area of intersections. Often led by a European-trained national elite, such movements speak for the masses yet do not always represent their interests. While it becomes easy to define struggle against a colonizer, "elite nationalism espouses the culture of imperialism while eschewing its rule and so, for example, even in anti-colonial circles there has often been a veneration of the history, language, and literature of the colonizer." The intersection of colonialism, national identity, and class structures is unmistakable.[89]

One consequence of these conceptual intersections has been a far greater awareness of the similarities amongst discourses in various critical epistemologies. Where Black feminist writers of the 1970s first brought out complex linkages between questions of race and gender, (post-)colonialist writers have highlighted the increasingly complex mixture of class, gender, religion, nation, race, and sexuality in defining and analyzing both local and global power structures.[90] It is these theorizations that have allowed for a new fluidity and movement in critical considerations, a movement that has encouraged the expansion of theoretical thought.

HISTORIOGRAPHICAL APPROACHES TO CREATING NEW THEORY

Theory is intricately linked to the history that accompanies it, and an expansion of theoretical perspectives has gone hand in hand with a remaking of historiographies to incorporate viewpoints not represented adequately (or suppressed) in existing texts. Such reframing opens up opportunities to shape nuanced stakeholder experiences into a more holistic narrative. Inversely, repressing knowledge of historical events and diverse viewpoints limits knowledge production and, with it, creative potential. In the following section, some of the ways in which our questions have served to shape our understanding of historical events are examined.

As one example, Africans brought to the Americas for enslavement were culturally deprived in numerous ways, and it is illuminating to consider how this attempted cultural control has gone hand in hand with attempts to define both landscapes and the ensuing historical narrative. Both builders and historians have "erased" cultural artifacts, social attributes, and, in some cases, whole groups of people through visual or historiographical sleights of hand.

Spatially, enslaved people were hidden from the view of a white population where possible, making their work and culture invisible. Slave quarters on plantations were kept out of sight of the "Big House,"[91] and plantation homes were constructed so that the slave quarters would not be visible, as in Thomas Jefferson's self-designed residency, Monticello, constructed between 1768 and 1809.[92] Enslaved craftspeople often fought against the erasure of their culture, introducing African-inspired layouts, materials, or decorations in housing; often, these were hidden away to avoid their destruction.[93] More recently, broader cultural attributes have been analyzed, such as crop-growing practices and culinary habits imported or adapted from Africa or developed by Black cooks who melded culinary traditions to create new, specifically African-American cuisines. In many

cases, such habits not only endured over generations but also deeply influenced mainstream American culture, often without attribution.[94]

Scholars have begun to consider the legacy of the control Blacks endured during slavery by examining the effects of laws, policies, and practices both physically and spatially. This scholarship has brought to light connections between historical events and current-day conditions. Such examinations provide a powerful example of how historiography – the manner in which historical events and impressions are chosen and reflected on – can shape our understanding of events and, with it, the construction of theory.

Simone Browne, for example, examines current-day surveillance techniques using biometric technology, such as fingerprinting or facial recognition technology, and notes that Black citizens in the United States are disproportionately singled out for surveillance, often with increasingly sophisticated technology as well as algorithms that intensify surveillance in a spiral of bias.[95] She traces the origins of such control to practices of branding in the slave trade, where the enslaved were marked with hot irons according to what was perceived as their "labor preparedness, race, ethnicity, and resistance."[96] Browne argues that branding, common in the eighteenth and early nineteenth centuries to control and de-individualize people according to mercenary criteria, has today become digital.

Ruha Benjamin has also criticized algorithms biased against Blackness, calling such markers " 'the New Jim Code': *the employment of new technologies that reflect and reproduce existing inequalities but that are promoted and perceived as more objective or progressive than the discriminatory systems of a previous era*."[97] New technologies are often touted as gender- or race-neutral, and as they are introduced, it is important to examine possible consequences of their use rather than to rely on unfounded theorizations of their benevolent neutrality.

Analogies between historical and current-day techniques and phenomena are one way that biases have come to light. Another is the formation of new questions that have allowed a reinterpretation of spatial continuities. In her essay "Plantation Futures," Katherine McKittrick examines spatial connections "between the living and the dead, between science and storytelling" to develop new ways of understanding unearthed histories.[98] McKittrick examines the plantation, the site of Black enslavement, as an ongoing point of anti-black violence that tacks towards today's prison, another point of such violence. She compares both as part of an economic system that disproportionately keeps Blacks in material poverty. This racialized economy has expanded over time to include further locations, including the city and the resort (with its cadre of service workers) as further examples of racialized economies.

The linkages that McKittrick calls for and her use of historical socio-geographic structures as an analytical framework for today's racial geographies allow her to create parallels between past and present, her point being that such parallels must be considered to be able to adequately theorize historical processes and the meaning of the spaces themselves. These parallels and the socio-spatial theorizations they allow can only be considered once historical processes are recognized. Understanding spaces as sites of cultural knowledge allows an accurate theorization of how various populations absorb and use the spaces they inhabit. To be

effective, this must happen both in educational settings, where knowledge is formally discussed and carried forth and in sites of everyday life, where knowledge is created more informally.

UNDERSTANDING DESIGN CONSEQUENCES

In charting historical phenomena and analyzing possible analogies to current-day situations, we are better able to not only grasp history but also to better understand design consequences, both past and present.

For example, much of the United States remains racially segregated, yet policymakers regularly ignore both historical reasons and the full aspect of consequences this creates, despite work that has traced both. As early as 1985, Kenneth Jackson, in his book *Crabgrass Frontier*, analyzed how post-World War II suburbs contributed to racial segregation in the United States. In 1993, urban sociologists Douglas S. Massey and Nancy A. Denton published *American Apartheid*, which examined how racial segregation through land use controls and banking practices helped perpetuate persistent poverty in affected areas. Massey and Denton found that policymakers saw the people enmeshed in poverty as a "problem" to be solved rather than understanding poverty's root causes, such as a lack of infrastructure and opportunity.

Massey and Denton's theses still resonate today, with more recent scholarship having added necessary nuance. George Lipstiz has written extensively about the effects of racial segregation and how the interplay of race and space are linked to politics and culture, analyzing how those displaced by racial policies have staged a unique culture of resistance in the process.[99] In further work, Lipsitz shows how racialized public policy has secured economic benefits for whites, from methods such as insider benefits in jobs or housing to the passing on of inherited wealth, in manners that encourage white Americans to continue to embrace discriminatory practices.[100]

Ibram X. Kendi has followed a somewhat different path, arguing that segregation per se is not at fault when considering societal ills but rather a lack of recognition of and respect for the diversity of (segregated) cultures. While some of Kendi's ideas on racism have been criticized as reductionist,[101] his analysis of spatialized racial norms overlaps with those from other fields. Writing that spaces that are predominantly white are seen as normative by a white majority, while "Black" spaces are seen by the mainstream as outside the norm, Kendi's arguments are similar to both feminist and post-colonial writings that emphasize cultural and spatial multi-centricity. With the voice of an activist, he argues for Afrocentricity, urging Blacks to stop regarding the world from a Eurocentric point of view and instead embrace their own cultures. Taking this premise one step further, he argues for equality by not pathologizing the cultures of any given space.[102]

In a further demonstration of how bringing forth "forgotten," or repressed, data can lead to new historical knowledge, Richard Rothstein has examined how public housing, zoning, marketing efforts, legal measures, government policies, and state-sanctioned violence have worked together to reinforce the racial segregation of the American landscape and stifle economic opportunity. Rothstein

examines historical data to point out injustices that have been created through systematic and purposeful exclusion.

In one example, Rothstein illustrates how local governments constructed segregated wartime housing for defense workers during World War II and how these housing patterns have affected the communities in question to the present day. Using the example of Richmond, California, Rothstein notes how the government built worker housing during the early 1940s, both low-standard apartments for Black residents and more solidly constructed homes with neighborhood amenities for whites. Rothstein traces how this pattern, once established, has continued to affect the neighborhoods in question to the present day. While housing discrepancies remain legible, Rothstein points out that the origins of such differences are often forgotten, with biased narratives of degeneracy replacing the narrative of historical policy decisions.[103]

Rothstein points out that the policies that shaped residential segregation and its negative consequences are a violation of federal laws outlined in the Constitution and the Bill of Rights.[104] Despite these clear foundational decrees, unequal treatment of Blacks and whites continued, often under the guise of "data" that was methodically flawed. As Rothstein documents in case after case, exclusionary decisions were either made openly, with no manner of recourse for those affected, or made based on discriminatory cultural assumptions, such as Blacks "prefer" to live in all-Black neighborhoods. Tracing historical developments after such decisions were made, Rothstein points out that much of the initial history of exclusion was purposely forgotten and its systematic nature thus overlooked.

BREAKING DOWN HIERARCHIES: INCLUSIVE THEORY THAT INFORMS PRACTICE

Reinterpreting hierarchies, acknowledging power systems, and creating more inclusive architectural and urban theory have allowed for creative impulses in practice as well as history and theory. Theoretical writings about hierarchies and binaries have helped new avenues of inquiry enter the mainstream. In practice, designers such as Burkina Faso Architect Francis Kéré, with his "Afro-Futurist Vision," have highlighted formerly peripheral building traditions and interpreted them for the twenty-first century. This has allowed deep-rooted cultural traditions to gain new recognition as they come to the surface and advance theoretical discourses. Although one can argue that Kéré's privilege as a European-trained architect has somewhat clipped his African roots, numerous buildings in his homeland, Burkina Faso, and other west African countries provide examples of his Afro-Futurist imaginations.

An early work, the Gando Primary School in Burkina Faso, uses traditional adobe brick as a building material, mixing it with modern cement to make it more resilient. Natural shading and ventilation techniques keep the interior comfortable without the use of air conditioning. Village residents were involved in the construction of the mud bricks and the school itself, making the project a construction training ground for local workers. The project was highlighted in a major exhibition

Figure 1.4.3
The Gando Primary School in Burkina Faso (Francis Kéré Architects) was completed in 2001. Village residents helped build the structure. Image courtesy of Kéré Architecture.

Figure 1.4.4
Francis Kéré's Serpentine Pavilion in Kensington Gardens, London (2017), takes its inspiration from a shade-giving tree canopy in western Africa. Image courtesy of Kéré Architecture.

at the Museum of Modern Art in New York in 2010 as an example of using modest-means architecture as a catalyst for social advancement.[105]

Sometimes, in an inverse example of Modernism's global reach, ideas behind indigenous cultural experiences have been recognized as universal, expanded upon, and exported as an instance of inspiration taken from one cultural context and *adapted* to another. The localized experience that becomes a universal phenomenon is very different from a general theory, such as Modernism, that is applied globally with little climate or cultural adaptation. An example of such

indigenous "scaling up" is Kéré's Serpentine Pavilion in Kensington Gardens, London, which took its inspiration from a shade-giving tree canopy in western Africa, "under which members of the community meet to reflect on the day." The act of meeting regularly in a given spot is a tradition that exists in many cultures. In this case, Kéré has taken a common human experience and given it a new physical framework based on his own cultural experiences.[106]

In a creative reversal of the idea that broad Eurocentric standards are valid globally, architects such as Kéré highlight the rich trove of non-Western thought and building practice that has long struggled to gain recognition in the West. At the same time, western theory has turned to its own buried history to challenge conventional readings of the built environment.

CREATING SPATIAL AGENCY

I conclude this chapter with several approaches to creating spatial agency for those who have historically had none. In a book that explores "other ways of doing architecture" through *Spatial Agency*, a collective of authors points to a need to break apart binaries, defined as either/or thinking. In a critical analysis similar to that discussed in other contexts as outlined previously, the authors point out that binaries defined as "mainstream" and "other" or "center" and "margin" frame the concept of agency from the point of view of those who have created the binary system.[107] In other words, binaries allow the more powerful in the system to create and shape the paradigm framework rather than flattening hierarchies to shift agency to the less powerful. For anyone who continually experiences discrimination or sidelining, those experiences *are* their "center" and become the space they act from. Labeling such perspectives as "marginal" (and not "marginalized, which implies a willful act by those in power) becomes a method to keep power with those who dominate the power structure.

Breaking through this complex system helps break through a social and spatial hierarchy.

Spatial Agency also addresses the problem of defining "architecture" as another example of cultural marginalization, a topic that is addressed in more depth in Chapter 1.1 of this volume. As the authors of *Spatial Agency* note: "Architectural culture – expressed through reviews, awards and publications – tends to prioritise [...] aesthetics, style, form and technique."[108] To this, one can add that architectural culture is often self-referential: reviews, awards, and publications are written and awarded by other architects or people who are in some manner trained in the field. The result is a bubble that defines what counts as "architecture" and what that architecture is worth. The power to define, in essence, becomes both cultural and economic power in a self-perpetuating system.

Spatial Agency explores the title concept through a series of projects that "tend toward multi-use spaces, structures that are adaptable, and projects that privilege the passage of time."[109] Such concepts provide a contrast to most building projects designed as profit-making ventures, which retain their value either as cultural icons (if designed by well-known architects) or until the money invested is amortized. As such, the longer-serving adaptable projects that support ideals

of spatial agency re-center control of the building with its users, thus offering an alternative to a hierarchically structured capitalist system with its own spatial ideals. More adequately serving users and other stakeholders requires re-thinking architectural production. As Chapter 1.2 in this volume shows, we already have tools for doing so, some of which are further illustrated in Part 2 of this book.

The manner in which the architectural community responds to the demands of profit and amortization continues to determine where we see our center and our margins. In architecture designed for spatial agency, these categories are shifted, linked, and intertwined so that each margin consequently becomes another center, and each center is recognized for its inherent value, even if that value cannot be quantified.

In an article, "Heart Rate, Interest Rate: Architecture's Representation of Social Life," David Gersten points out that,

> A critical understanding of the mechanisms of capital, of how money works, is essential for architects. The exchanges between time and value have direct consequences for the links between time and space, between time and memory, and ultimately, between time, space, memory, and architecture.[110]

It is the "heart rate" of our lived spaces that Gersten tags as important, not the "interest rate" of capital, that sees such spaces as containers towards an abstract financial and power gain. In other words, the uncalculatable and immense value of human experiences in the spaces and places we live in should govern our assessment of how "successful" our designs ultimately are.

In the introduction to Dana Cuff's *Architectures of Spatial Justice,* we find the same theme of how the built environment straddles realms of both social life and capital:

> Interrogating two fundamental conditions of architecture reveals the field's capacity to work toward spatial justice. The first is architecture's relation to the public, and the second is architecture's dependence on capital. By examining practices that reimagine these two conditions [...] architecture's limitations and potentials become apparent.[111]

Cuff considers urban and architectural design together and sees several necessary changes in the architectural process to increase spatial justice. One of these is that architects and planners resist the urge towards project authorship, focusing on the collectivity of the design process instead.[112] Another is that architects realize that socially oriented architecture takes time to develop: lending requirements, nonprofit timelines, proforma expectations, and public processes must all be learned. Social justice architecture does not function like market-based architecture, and good intentions are not enough to make it work.[113] Cuff lists a number of centers and practices that have managed to create innovative funding mechanisms for design and planning projects in the public realm.[114]

Although Cuff points out that ideally, "equity must be everywhere," she points to schools, memorials, and housing as spaces where public interest design

is especially effective.[115] These typologies will be taken up in the second part of this book, along with healthcare facilities – which in some countries are seen as sites of the common good and in others, like the United States, sites of intense capital flows – and urban spaces more generally. Urban spaces, not just those that are memorials, are often shaped more by the people who occupy them than by those who formally plan them.

Spatial agency, as this literature suggests, begins with the people we design for and with listening to and incorporating stakeholders in the design process. It involves adopting long-term social equity goals over short-term financial ones. In seeking this type of design approach, we begin to move towards a process of social sustainability.

NOTES

1 The discussion of how knowledge is understood based on its representation was initiated by Émile Durkheim (1858–1917), a philosopher by training whose scientific study of human societies helped establish the modern field of sociology. Durkheim first suggested that knowledge only exists based on how it is represented in a "symbolic sphere" and that collective (internalized) knowledge is what society uses to represent its collective existence. See Thompson 2002, 60ff. Like many of his contemporaries, however, Durkheim did not consider the extensive heterogeneity within any given society.
2 Rapoport 1969.
3 Lefebvre 1991, 38.
4 Harvey 1973.
5 Massey 1994, 2005.
6 Staub 2015.
7 See Dovey 2014.
8 Modern architecture has been defined in various ways; here, I define it loosely as a movement that originated in Europe after World War I as a social agenda that rapidly encapsulated new expressions of building. Cf. Berman 1983; Colquhoun 2002; Felski 2009; Heynen and Baydar 2005.
9 Digital native methods are methods that do not have an analog version, such as research with online social media accounts or other material located online. For a summary of methods, see Lupton 2021.
10 Gannon and Livescience 2016; Byrnes and Featherstone 2018.
11 For a broad discussion of space and gender, see Borden, Penner, and Rendell 2000; Massey 1994; Staub 2018.
12 Butler 2006.
13 See also Staub 2022.
14 Baudelaire 2010; Benjamin 2006.
15 England 2018.
16 Hayden 1982.
17 Hayden 1982, 242ff.
18 Kuhlmann 2014, 184ff.
19 Brumfield 2013, 211ff.
20 Allan 2018.
21 Hayden 1976.
22 Beecher and Beecher Stowe 1869.
23 Frederick 1913.
24 Frederick 1929.
25 Pizan and Brown-Grant 2000.

26 Woolf 1989, originally published 1929.
27 Spender 1990, originally published 1980.
28 Saldern 2002, 149.
29 Barshch and Ginzburg 1930; Bliznakov 1993.
30 Voronina 1989.
31 See Hudson 1993.
32 Le Corbusier 1985; Risselada and Colomina 1993.
33 Colomina 1992, 73ff.
34 Colomina 1992.
35 Colomina 1992, 112.
36 Friedman 2006.
37 International Archive of Women in Architecture (IAWA) n.d. https://spec.lib.vt.edu/iawa/.
38 hooks 2015, 3.
39 hooks 2015, 7.
40 hooks 2015, 40.
41 hooks 2015, 41.
42 Davis 1983, 12.
43 Urban Institute 2024, https://www.urban.org/data-tools/black-women-precarious-gig-work; Leslie and Catungal 2012, 119.
44 Davis 1983, 116.
45 Davis 1983, 77.
46 Davis 1983, 50.
47 hooks 2015, 179; see also Davis 1983, 4ff.
48 Davis 1983, 4ff.
49 Davis 1983, 13.
50 Davis 1983, 5.
51 Davis 1983, 8.
52 Davis 1983, 174.
53 Lorde 1984, 107.
54 Lorde 1984, 108.
55 See Childs and Williams 1997, Introduction.
56 For an introductory discussion on "Colonialism" and a bibliography, see *Stanford Encyclopedia of Philosophy* 2023.
57 King 1977; Silva 2015.
58 Mongia 1996, 5.
59 Cited in Appiah 1996, 56.
60 Appiah 1996, 57.
61 Childs and Williams 1997, 188; see also Appiah 1996, 70, footnote 3.
62 See also Chapter 2.4 of this volume, which discusses market structures in Nigeria today.
63 Silva 2015.
64 For a summary, see Childs and Williams 1997, Chapter 4.
65 Childs and Williams 1997, 142.
66 For a summary, see Childs and Williams, Chapter 5.
67 King 1977, 13.
68 Guerrieri 2020.
69 Hosagrahar 2005.
70 Hosagrahar 2005, 2007.
71 See Vale 2008, Chapter 4.
72 Banerjee 2009.
73 Menon 1997.
74 Ghertner 2015.

75 Hernández 2009, 10ff. UNAM's library was designed by Juan O'Gorman, Juan Martínez de Velasco, and Gustavo Saavedra; the Universidad Central de Venezuela in Caracas was designed by Carlos Raúl Villanueva, and Brasilia was designed by Oscar Niemeyer.
76 Hernández 2009, 10ff.
77 Hernández 2009, 13.
78 Hernández 2009, 14.
79 González Pendás 2022.
80 Lara 2011, 131.
81 Hambly 1991.
82 Habibi 2018.
83 Childs and Williams 1997, 185.
84 Childs and Williams 1997, 198.
85 Childs and Williams 1997, 205.
86 Childs and Williams 1997, 187.
87 Gilroy 2002, 339.
88 Gilroy 1993, 2002.
89 Childs and Williams 1997, 208.
90 Childs and Williams 1997, 199.
91 Wright 1981, 43.
92 Wilson 2020, 42.
93 Wright 1981, 46–48.
94 Harris and Angelou 2012.
95 Browne 2015, 89ff; see also Green 2019.
96 Browne 2015, 95.
97 Benjamin 2019, 5–6; italics in the original.
98 McKittrick 2013, 2.
99 Lipsitz 2011.
100 Lipsitz 2018.
101 Poser 2024.
102 Kendi 2019, 166–80.
103 Rothstein 2017, 4 ff.
104 Rothstein 2017, viii.
105 Bergdoll and Lepik 2010, 33–42.
106 Kerearchitecture n.d.
107 Awan, Schneider, and Till 2011.
108 Awan, Schneider, and Till 2011, 27.
109 Awan, Schneider, and Till 2011, 58.
110 Gersten 2012, 24–25.
111 Cuff 2023, 1.
112 Cuff 2023, 4.
113 Cuff 2023, 39.
114 Cuff 2023, 54ff.
115 Cuff 2023, 46.

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PART 2

2.1 Design on the Side of Transformational Change

The Destination Design School and Georgia's Black Belt

Interview with Euneika Rogers-Sipp[1]

INTRODUCTION

The Destination Design School of Agricultural Estates (DDSAE) was founded by activist artist-designer and researcher Euneika Rogers-Sipp in Atlanta, Georgia, in 2017. Alongside family farm practitioners, research design experts from across the African Diaspora have started working with the DDSAE to develop and provide a new design pedagogy centering Afro-descendants of the Southern United States' Black Belt region[2] and "youth elders" in family networks that foster experiential learning, healing, and reparative practice. The initial goal was to develop long-term sustainable planning that would reflect the resiliency of the region's ancestors and move towards still-unmanifested dreams of equity in the face of historic social, economic, and environmental injustices.

DDSAE was also interested in providing collective solutions to threats of climate change. With initial work in the Black Belt region of Alabama (Gees Bend), followed by South Carolina and Georgia, DDSAE students worked with frontline leaders to rethink their approach and strategies to design, embracing rather than running away from current challenges, particularly as they relate to social responsibility. Students were guided by the network's larger commitment to generating actual projects through strategic investments and reparative infrastructure.

The plan's focus on social responsibility and sustainability responded to W.E.B. Du Bois's research on African-American landowners in the late nineteenth and early twentieth centuries. Du Bois had traversed the Southern United States' Black Belt, writing about the deplorable conditions African Americans inherited once white landowners abandoned their plantations after the Civil War ended in 1864. As a sociologist and independent scholar, Du Bois chronicled the quality of the home structures and living conditions as well as the racism and exclusionary politics he found throughout the state, all while focusing on the descendants and inheritors of Black Belt land. He described how the formerly enslaved continued to bear the brunt of environmental and financial resource constraints related to preservation, conservation, and production. The conditions Du Bois found have continued to impact families and their descendants, owing largely to structural mechanisms of wealth creation. These structural issues have increased disparities for African American descendants, even as they have put pressure on the federal government to react to historic injustices, for example, through reparations.

DOI: 10.4324/9781003480426-8

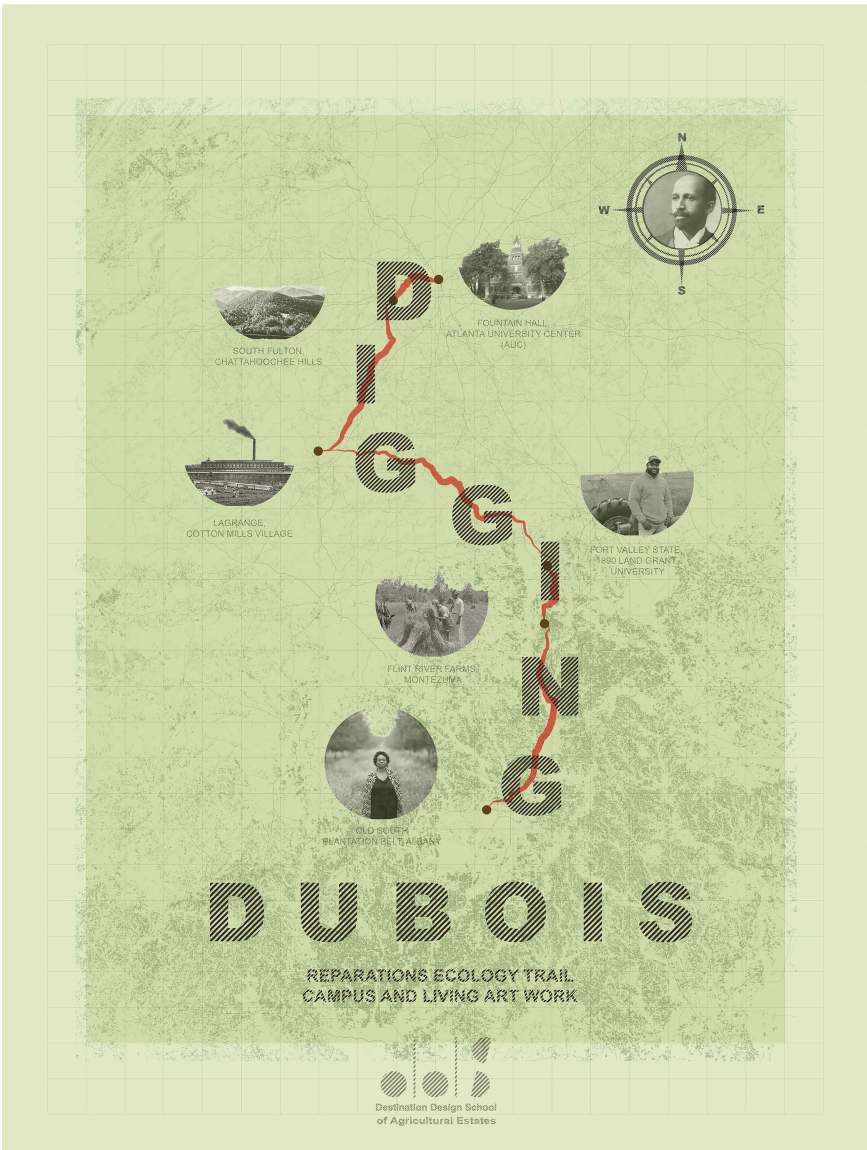

Figure 2.1.1
A Destination Design School poster showing an early instance of the "Digging Du Bois Trail" with intervention sites tracing the footsteps of social scholar and Pan-Africanist W.E.B. Du Bois. Poster by Michael Cafiero.

With climate change emerging as a pressing concern, DDSAE began to explore ways to consider climate questions linked to historical injustices through integrating sustainability goals in art, design, and planning education programs. Since 2018, DDSAE has focused on these issues through the *Digging Du Bois* trail design.[3] The trail has become both a resistance tool and a cultural planning mechanism, linking Green New Deal[4] initiatives and innovative energy solutions with regions in Black Belt counties that Du Bois traversed. One of the original goals was to redirect federal funding toward agricultural communities, which had long been neglected in terms of new environmental and infrastructure measures. Such projects provide an inspirational community educational model for social architecture, catering to families lacking financial resources since emancipation.

Q: What is the "Black Belt" in the Southern United States?

Technically, the "Black Belt" refers to a region in the Southern United States that has historically been characterized by a high concentration of African-American residents, particularly in rural areas that were connected to the slave plantation economy. Maps show a broad band stretching from Virginia down through Mississippi, Georgia, Alabama, and Louisiana. The Black Belt also relates to this region's fertility, the rich black soil that attracted planters to the area. The region's social and economic conditions are one reason my focus has been there. It is considered the homeland of the descendants of enslaved Africans, and the region has been persistently economically distressed due to the legacy of slavery and the ensuing struggles African Americans have faced.

I would like to expand this definition to include aspects of a "Black Ecology." This term converges environmental and racial justice movements into a geographical area and considers the ecological consequences of slavery and its afterlives in

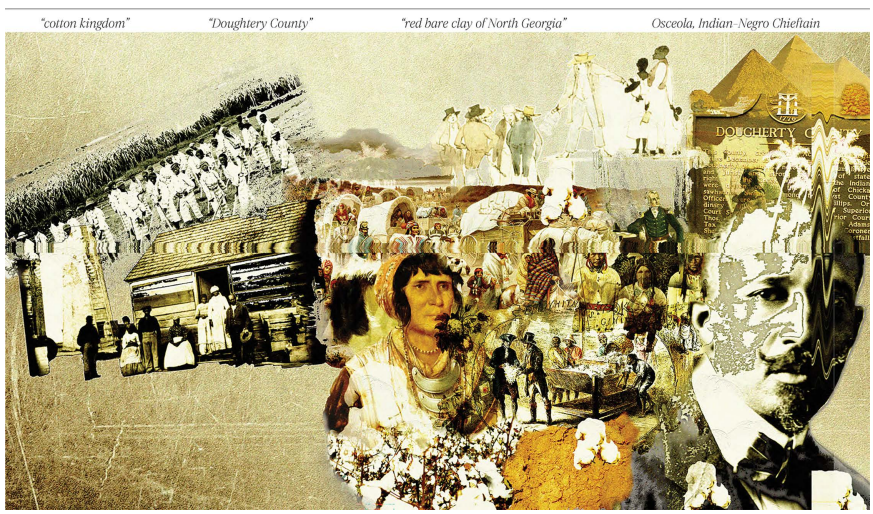

Figure 2.1.2 *Honoring Heritage Through Art*: A historical collage of Black and Indigenous residents of the Georgia Black Belt, reflecting on resilience, culture, and community to illuminate the legacy of the past while inspiring the journey ahead. Image by Michael Adams, Akrem Ahmed, and Rahul Subramanian.

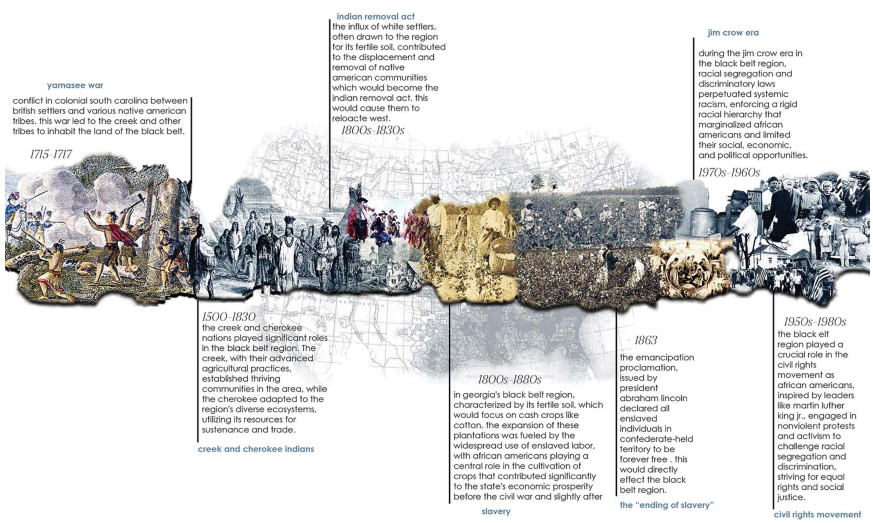

Figure 2.1.3 *Tracing the Threads of History*. The collage timeline offers a glimpse into the rich and complex history of the Black Belt in the southern United States, showcasing key moments of resilience, culture, and transformation. Image by Michael Adams, Akrem Ahmed, and Rahul Subramanian.

the enduring regime of extractivism and disposability shaping Black communities in the Diaspora.

Q: What role did W.E.B. Du Bois have in defining this area?

Du Bois, who lived from 1868–1963, played a crucial role in defining the Black Belt. As a pioneering sociologist, he was one of the first to conceptualize the region. His 1903 book, *The Souls of Black Folk,*[5] significantly influenced the understanding of the area. Du Bois is credited with charting much of what is now considered the Georgia Black Belt. The founding of Destination Design School culminated from my Loeb Fellowship, regional fieldwork, and research on Du Bois's work.

Du Bois created new survey tools at Atlanta University (later Clark Atlanta University), where he was a faculty member in the late nineteenth and early twentieth centuries. These tools allowed for a new understanding of the region. He was also an advocate for social conditions in the area and spoke with great vehemence about the systemic exploitation he observed in African Americans. He was one of the first to connect this exploitation with concepts of systemic racism. He not only defined the concept but also spatialized it and was ahead of his time in both respects. His work was seminal, and his scholarship helped form some of the civil rights agenda that would begin to address these issues.

When I started the W.E.B. Du Bois Trail design project, I found that social scholars knew about his work in some depth, but the average citizen in the area did not and was not able to place Du Bois's work into its historical context. I was struck by this, considering the extensive implications of Du Bois's work for the Black Belt. I had studied Du Bois during my graduate education and felt that the Destination Design School had a responsibility to build on Du Bois's foundation. I realized there is a need to take the social aspects of Du Bois's thinking and apply them in ways in which they could be better understood.

Q: As a founding member of the Destination Design School, could you summarize the school's philosophy?

Our projects examine the intersections of race, gender, power, class, ecology, and the environment. We are particularly interested in Black women's leadership. Black women have historically navigated, adapted to, and even resisted the environmental conditions imposed upon them, such as marginalization, colonialism, capitalism, patriarchy – any form of exploitation. Two questions we are grappling with are how to gain a better understanding of these concepts and how they work systemically. Our understanding will allow us to apply that knowledge to planning and design.

Our approach, always, is to reckon with power as a question of intersectionality, not just as a concept, but as a living, breathing praxis. Our design interventions and pedagogy are shaped by that reckoning. We don't just look at things; we inhabit them and feel them through the historical contexts that have shaped them and, in turn, are shaped by them. The Sankofa bird (as shown on our Pedagogy wheel) is a symbolic Ghanaian expression. The bird looks back with her feet facing forward, moving into the future. It's a way of being, a way of seeing. The backward-looking head calls us to remember, to reclaim, to let the past guide us

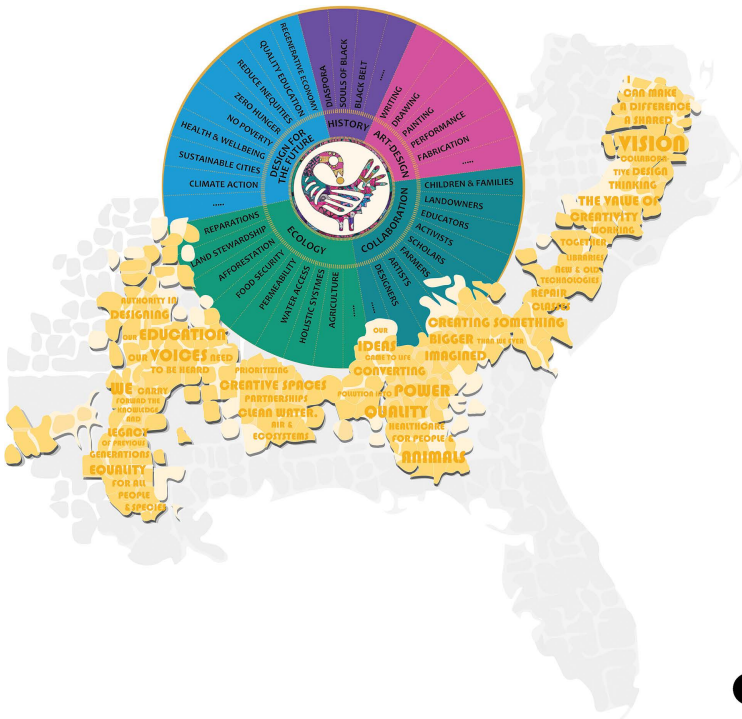

Figure 2.1.4 *Empowering Learning Through Reflection*: The Destination Design School's pedagogical approach, as shown in the Pedagogy Wheel with a Sankofa Bird at the center. The Sankofa bird symbolizes the importance of looking back to retrieve valuable knowledge while moving forward with purpose to shape an innovative future. Image by Destination Design School of Agricultural Estates.

into futures yet unformed, futures still caught in the afterlives of what's come before.

Reparation ecology, then, becomes an embodied example of this – an act of care and restoration that insists on the necessity of looking back, of repairing the ruptures created by histories of violence, in order to build a future where healing is not just possible but necessary. The term describes a new model for making amends for historical injustices by rethinking the relationships between society and ecology as mutually beneficial. As we see it, reparation ecology also involves hearing, learning about, and understanding history as a means to inform the changes we make for the future. This process has been liberating for us, allowing us to take risks and do the kinds of interventions that align with our values.

In our work, we've been deeply concerned with the ways we relate – not just to each other but to the land itself. In reparation ecology, for example, we center reciprocity, or at the very least, the ethics of "doing no harm." Without reciprocity, there is no relationship, and when there is no relationship, everyone suffers. So we've made it a point to move outside of capitalist structures when we can, to carve out spaces where harm can be undone, where we might begin to know each other differently in ways that don't require extraction.

Q: Could you describe the methods that you use when you conduct research?

In co-design collaborations with community residents, we facilitate deep community engagement where we examine intersectionality, process information,

Figure 2.1.5 *Rooted in Reparation*: Afro-futurist images from "Digging Du Bois Trail" student designs. Images by Shaina Lofton, Ella Petry, and Aaliyah Alvarez.

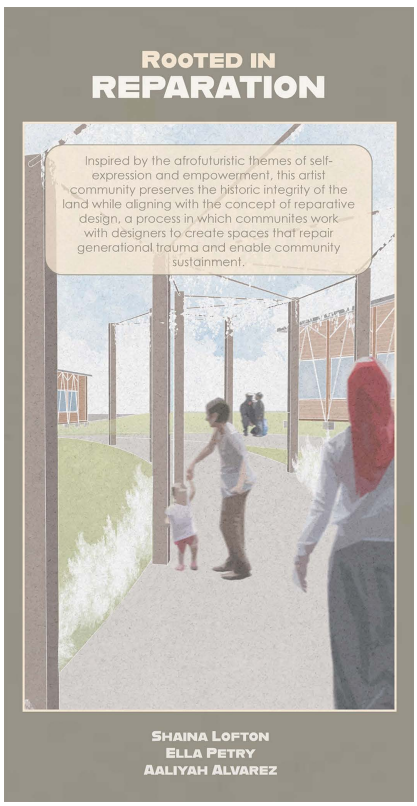

Figure 2.1.6 *Rooted in Reparation*: Afro-futurist images from "Digging Du Bois Trail" student designs. Images by Shaina Lofton, Ella Petry, and Aaliyah Alvarez.

collaborate with partners, and engage in problem-solving. An example of our action research is the "Co-Design Field Lab" that we organized in 2021. We collaborated with the residents on participatory planning, starting with a power analysis as part of our community engagement. We analyzed the power structures within the community as part of our action research. This analysis helps us understand how things are interrelated, for example, how food sovereignty is connected to economic development, transportation, housing, or construction.

When we began the Co-Design Field Lab programming, we witnessed a lot of time-intensive community meetings in which residents described what they needed. Although they had many ideas, none of them ever seemed to come to fruition. If ideas did move forward, community members had no ownership over the design process or solution. We tried to counter these tendencies. There is a great need for collective ownership, a topic Du Bois addressed as well. We focused on collective ownership and non-extraction, fair and responsible management of resources, and ensuring that the wealth we generate is of benefit to the community and the environment.

Q: "Wealth" and "value" are often seen as quantifiable. I think what you're saying is that we need to understand them as immeasurable qualities instead.

Yes, that's true. I agree that wealth possesses immeasurable qualities.

Q: What is the "Black Belt Story Map," and how did you create it?

To document the W.E.B. Du Bois trail, I invited people to walk along the trail with me and record their impressions. I probably have more than 500 hours of documentation from interviews, photographs, and drawings. We continue to develop the story map in this way and are currently seeking funding to expand the narrative as a way of empowering advocacy toward need-based priorities.

To expand the project, we developed the Black Belt Story Map in 2020 with students at the Harvard School of Design, in a course I co-taught with Lily Song, who is now a faculty member at Northeastern University. We wanted to create a visual representation of the Black Belt, using a form of "thick mapping" as a place for the gathered narratives to exist. The story map provided information for our students as well as people who came to the region and wanted to learn about it.

Because the Black Belt is often described as a place of deficit or loss, we wanted to focus on a different narrative. The story map was developed over six months and shows the significance of the Black Belt by highlighting the values and achievements of its people. The story map was a collaborative effort that included students at Harvard's Graduate School of Design and local community members in Georgia, including children and their families. Further partners were at sister sites on the W.E.B. Du Bois trail.

The trail and our documentation of it continue to serve as an educational resource, raising awareness about climate change, environmental justice, and sustainable practices. Our hope is that this will equip us with up-to-date information to help us better prepare for and respond to climate change disasters and other issues. The Green Infrastructure and the work we have developed through a project called the "Green New Deal Superstudio"[6] directly address some of the environmental challenges our communities are facing.

Figure 2.1.7 *Rooted in Reparation*: Afro-futurist images from "Digging Du Bois Trail" student designs. Images by Shaina Lofton, Ella Petry, and Aaliyah Alvarez.

Q: Your documentation uses a "thick mapping" process used in the field of digital humanities, where data such as interview transcripts or photos are joined with and layered onto physical maps. Could you describe what you did?

We gathered information about the historical sites and cultural landmarks and digitalized it for inclusion on the Du Bois trail maps. These are important narratives to document in context.

Q: You discuss how spatial organization systems are rooted in colonial interests. Can you give an example of this phenomenon?

There are many examples. We documented exclusionary practices in Charleston, South Carolina, another primary area of the Black Belt region that shows how exclusionary practices function in the built environment. Tourism and, more recently, historical preservation have excluded and downplayed African-American contributions in Charleston's public-facing narrative. Much of the existing narrative is about the city *before* the Civil War, at the height of the plantation economy. The roles of African Americans during this time are mostly ignored. It's a narrative of white hegemony that is largely designed for touristic consumption.

Tourism is something many people experience, but we rarely think to what extent it has become a mechanism for perpetuating specific narratives. For example, local citizens' ability to publicly speak and have their history heard is controlled through the mechanisms of tourism and historic preservation. We've found that when we map the history of African Americans in Charleston, a completely different narrative emerges from the one put forth by the mainstream tourism industry.

The W.E.B. Du Bois trail design offers a new way of looking at public spaces. It honors Du Bois's legacy by emphasizing cultural heritage and the importance of history. In developing the Story Map and voicing and centering the contributions and experiences of African-American communities, we strengthen identity and pride while countering existing narratives that have excluded African Americans and their culture.

We have also focused on creating economic opportunities within the site destinations along the trail. For example, we developed a wealth-creation and community-based tourism model in Gees Bend, Alabama, another town in the Black Belt that the Du Bois trail concept strengthens and builds upon. In diversifying the area's economic base, we have been able to alleviate some of the economic imbalances that have made us more vulnerable to the effects of climate change and climate disasters.

Q: The Black Belt land you describe has changed greatly since Du Bois published his book. Can you describe these changes? You mentioned climate change. Are there others?

It's good to discuss what's changed, but we also need to keep in mind what hasn't changed. For example, the problematic social and economic conditions Du Bois described haven't improved much over time. Historical exclusionary practices are still evident and prevent progress.

Problems associated with climate change will have a harsher effect on those without access to resources. We've had climate events here that have caused incredible damage from flooding. Without access to proper resources, historical inequities will continue to affect people inhabiting and stewarding this land. Hurricane Katrina laid bare the deep inequities that have long been festering, and the scars of that devastation still mark us. But let's be clear: the struggle goes beyond the floodwaters. Our farmers, especially the ones on the frontlines of this climate catastrophe, are wrestling with more than just increasing heat – it's the scorching extremes that threaten their crops and livelihoods. And with the rise in temperature comes an ever-greater demand for water, a resource that has been scarce for many of our people for decades. The land is crying out, but for Black farmers, the burden is heavier. The weight of history – the unrelenting legacy of dispossession, disenfranchisement, and racial violence – means the fight for survival today is tangled in the continued repercussions of past wrongs. These issues are not isolated; they are a direct consequence of systemic forces that have long sought to extract from us, and to degrade and destabilize us. We are still dealing with the aftermath.

Q: We have seen in other chapters (Anna Livia Brand's Chapter on New Orleans) how climate change and natural disasters affect communities of color with greater force because of existing economic imbalances. How does the W.E.B. Du Bois trail design work as a resistance tool when considering this problem?

We approach resistance through the lens of "homemaking," understanding it as one of the most radical political acts we can engage in. As we worked to reshape the built environment, crafting spaces for economic development and

sustainability, it became clear that any real change would require us to reckon with the profound economic disparities faced by families in the Black Belt. Traditional agriculture, as it stands, simply doesn't yield enough to sustain a community – it's a system designed to fail. What's needed is a diversity of income streams and a reimagining of economic possibilities that moves beyond exploitation and toward a future where people, especially those marginalized, can thrive on their own terms.

I think my understanding of design, especially reparative design, comes from watching the women in my family and community, learning from them as they navigated the complexities of society. They worked both outside and inside the home, balancing the demands of the world with the sacred act of sustaining their home life. It became clear to me that addressing economic diversity wasn't just an abstract concept – it was rooted in the way the home itself functions. "Homemaking" and homesteading weren't just about domesticity; they were acts of radical care, of creation and preservation. At Destination Design School, the solutions we seek – whether economic, social, or ecological – are all tied to the way we build, nurture, and sustain our homes. If we examine the home as central to our pedagogy, we can trace the blueprint for rebuilding everything else.

Q: Women performed what Marx would call "reproductive labor," in addition to the "productive labor" outside the home.

Yes. And reproductive labor is often ignored, as is the crucial role of "homemaking" in reparative design. In the professional design world, the contributions of women to reparative work were routinely erased or undervalued. Their efforts were acknowledged in passing, but the credit rarely went to the women who did the work. I witnessed firsthand how the devaluation of this labor impacted not only me and my family but entire communities. I saw women bending themselves to "fit into" professional frameworks that were foreign to their true selves, contorting their lives and work to meet expectations that didn't honor their essence. At a certain point, I refused to accept this and then began integrating our labor, our stories, and our contributions into our approach.

Instead of waiting for someone else to change the system, I began to design differently – designing for care. We're told, for example, that we can't be emotional, but of course we can be emotional! We're all emotional beings. I'm describing a society grounded in eco-feminism, where the values of equity, sustainability, and care take center stage, and the impact of design is measured not just by utility, but by its ability to foster a deeper connection to the earth and to one another.

Q: Feminist theory has pointed out that whatever women do is seen as having less value than whatever men do. When activities change, so does the value scale. We see it clearly when we regard pay scales for gendered work, where men are paid more than women for the same tasks performed.

Currently, women make up the leadership of 60% of our design ownership, and I think that is affecting the results positively.

Figure 2.1.8
Euneika Rogers-Sipp (left) with quilt artist Mary Margaret Pettway (right), Folk Advisor to the Destination Design School and resident of the Alabama Black Belt. Photo by Drew Shonka.

Figure 2.1.9
A Destination Design School grandmother (Elder) and grandchild (Youth Elder) in the Black Belt today. Photo by Drew Shonka.

Q: Women seem to have a different type of access to some of the equity issues you describe and to the reparative work process.
That's absolutely right. You have to establish your own foundation, your own values, before you can build solidarity with others. We had to define the reparative

design process ourselves, ensuring it reflected our needs, priorities, and vision, before opening it up to broader collaboration.

Q: You mention that the Destination Design School has developed several sites. Can you provide more information about how this was done?

There are six sites on the Digging Du Bois Trail. We call them "sister sites." All are at different stages of development. For example, one of the sites we are developing is in Chattahoochee Hills, Georgia. It's a 27-acre site and a forestry reserve. This site was our first co-design field lab, a Reparation Design Residency, and a pilot project for the wealth-creating model that we began to develop in collaboration with the community.

We did a concept study with Georgia Tech and are now planning a Reparation Design Residency, with the Destination Design School using the land as a teaching ground.

We interviewed our landowner network in the same manner that Du Bois interviewed African American landowners when he was gathering material for his book, *The Souls of Black Folk*. We asked some of the same questions Du Bois asked about land and the owners' access to capital, but we were also interested in their visions for their land and its development. We compared landowners' experiences to that of other, mainly white, owners in the area, particularly in a neighboring community called Serenbe, which is a high net-worth development community.

Our work was inspired by the legacy of Du Bois, the design residency reparation project, and a deep commitment to the care of the land, all intertwined with the question of healing – where culture and creativity come together. Most of what we've worked on with the community has already taken root. The community now has ownership, and what we've created is a culturally rich space built through a holistic development process. Resources are being funneled into beautifying the area, all within an ecological framework that the community itself has shaped and put in place. This is about creating a sustainable future rooted in the community's values and vision.

There are five other sites on the trail. We want to consider them as a place for artists, designers, architects, and cultural bearers to come together and examine their own history and design practices. The aim is to put in place a model of reparative ecology and reparation design.

These examples illustrate the approach we take when collaborating with students. At Destination Design School, we teach students to design with a deep connection to the spaces they inhabit. We guide them to understand and practice reparative design. This foundational knowledge empowers them to carry that vision into their professional work, enabling them to create designs that are rooted in community, healing, and transformation.

Q: Moving forward, what approaches do you think we should take in developing sites such as the ones you're working with? What are the most important considerations for you, and how do we achieve them in practice?

First and foremost, I encourage people not to shy away from conflict, especially when confronting the historical trauma tied to land as a possession. Our students

can sometimes feel hesitant when facing areas of difference, but I remind them that conflict signals that their presence is necessary, and that it's a sign something needs to change.

A second lesson is to confront exclusionary practices directly – digging deep to understand how they function and where they stem from. This is central to dismantling the power structures that perpetuate them.

As a designer, I believe that places like the Black Belt South, where the Civil Rights movement took root, carry the weight of this struggle. It's through understanding and challenging these legacies that we can truly begin to create designs that reflect justice and healing.

Design should be viewed as a force for positive, meaningful change, not just a quick fix for the area's challenges. We have to ask ourselves: what side of this change are we on? Are we just slapping a band-aid over the deep scars left by historical injustices, or are we committing to the hard, uncomfortable work of real transformation? Our design approach at Destination Design School is part of the movement toward transformation. It's about confronting the past, understanding it, and making something new that brings about lasting healing.

NOTES

1 The interview was conducted by Alexandra Staub. Research assistance for this chapter was provided by Nekelle Thomas.
2 The Black Belt is a physical geography term referring to a roughly crescent-shaped geological formation of dark, fertile soil in the Southern United States. It is about 300 miles (480 km) long and up to 25 miles (40 km) wide in a c. east–west orientation, mostly in central Alabama and northeast Mississippi.
3 https://www.kickstarter.com/projects/2052346617/digging-du-bois-project?_pxhc=1611934694958.
4 The Green New Deal is a series of policy proposals to address climate change and other social issues. The name is a play on the New Deal proposed by Franklin D. Roosevelt in the 1930s in response to the economic problems of the Great Depression.
5 Du Bois [1903] 2022.
6 https://www.gndsuperstudio.com.

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2.2 Framing the Commons

Starting Small

Yang Yang, Gus Wendel, and Claire Nelischer

Designers increasingly recognize the need to develop processes that take seriously local perspectives and experiences when pursuing equitable and inclusive public spaces. Working at the small scale – in practice, research, and pedagogy – can facilitate civic connections and enhance the public realm while remaining attuned to the influence of broader structural conditions that shape the built environment. This chapter explores how small actions in the city, however informal, temporary, or minor in scale, can catalyze community engagement, uncover shared interests, and serve as prototypes for future urban transformations. We describe three projects undertaken in Los Angeles that demonstrate how "starting small" in practice, research, and teaching can aid designers, community members, and advocates in co-creating tools and strategies that are accessible, engaging, cumulative, and, thus, socially sustainable.

In Los Angeles, where the built environment reflects and reinforces deep spatial inequities, architects and urban designers must contend with the expansive scale and scope of social and environmental challenges. This chapter explores how we, as researchers, educators, and practitioners invested in advancing spatial justice, can meaningfully study, teach, and intervene to counter architecture and urban planning's legacy of meeting great challenges with clean-sweep changes that ignore context and erase local character while avoiding the pitfalls of highly localized interventions that fail to scale up or prove transferrable to other communities. Here, we address the question of scale in both action and impact.

The concept of "small" appears in a rich lineage of reflections on the structural issues of capitalist urbanization. British economist E.F. Schumacher's work *Small is Beautiful*, produced during the 1973 energy crisis, emphasized the importance of scale for political, social, and economic sustainability, highlighting the virtues of smallness as a counterbalance to environmental degradation and social injustices produced by the ever-growing economics of gigantism.[1] If large, in the form of modernist blueprints, grand development plans, and bureaucratic procedures, symptomizes the systematic problems of neoliberal urbanism, urban activists have increasingly embraced small as a focus of restorative practices, particularly amid economic and social crises.

Two MoMA exhibitions in the 2010s, "Small Scale Big Change: New Architectures of Social Engagement" and "Uneven Growth: Tactical Urbanisms for Expanding Megacities," have drawn public attention to modest-scale, nonstandard design interventions as alternative means to respond to the needs of

DOI: 10.4324/9781003480426-9

underserved communities often overlooked by large, institutionalized efforts. Scholars such as Antonio Negri and Peter Weibel, examining scattered citizens' movements in the twenty-first century, further underscore the power of small, decentralized actions in fostering democratic resistance and creating new institutions.[2] Small, as a scale for defining spatial practices, an extent for implementing spatial rights, and a scope for assessing spatial justice movements, opens up new design actions.

At cityLAB, a research center at the University of California, Los Angeles, we recognize the potential of "starting small" to catalyze broader, longer-term change. Our interdisciplinary approach spans architecture, urban planning, and the humanities, integrating design, policy research, and pedagogy. By taking seriously the small scale, our research has become more attuned to the specific needs, interests, and ideas of often underrepresented and racialized communities with which we work. By targeting our activities towards spatially and temporally "small" events, our actions have fostered community engagement and brought shared interests to light. By focusing on context-responsive micro-urban design in our pedagogy, our students and instructors engage directly with local perspectives and experiences to craft more equitable, inclusive public spaces. Starting small creates connections to larger structural issues and broader urban transformations, allowing us to "think big."

This chapter presents case studies of three action, research, and teaching projects that illustrate how small, temporary, and everyday design approaches can sustain community engagement and expand and enhance the public realm in ways that support social sustainability. All projects share a geographical focus in the Westlake-MacArthur Park neighborhood of Los Angeles, a methodological focus inspired by the interdisciplinary field of the urban humanities,[3] and an ethical focus on architecture's role in advancing spatial justice. All unfold in Westlake, an underserved neighborhood in Los Angeles where cityLAB has longstanding collaborative research relationships. Together, the cases demonstrate promising directions for architects, allied practitioners, researchers, and students to focus their efforts on the small scale while contributing to a safer, more inclusive, and more socially vital public realm.

SMALL IN PRACTICE: TESTING INTERGENERATIONAL PROGRAMMING THROUGH THE SMALL-SCALE EVENT

One way in which we operationalize small-scale approaches to intervening in and creating just and equitable public spaces is through small-scale events in public spaces. Organized alongside community-based partners and in collaboration with UCLA's *(Un)Common Public Space Group* research collective, cityLAB plans small-scale events in various kinds of public spaces, such as parks, squares, sidewalks, and streets located in the neighborhood where our community partners are based. These small-scale events involve anywhere between 20 to 100 attendees and are fundamentally celebratory. As a form of collective nourishment and sensory enjoyment, the events typically involve food catered by local vendors or restaurants, reflecting how everyday resources help to create different forms

Figure 2.2.1 Westlake-MacArthur Park is a dense neighborhood west of Downtown Los Angeles with a large immigrant population, most of whom are renters living in multi-unit buildings. The area is served by two large historic parks, Lafeyette and MacArthur, and a new pocket park, Golden Age.

Figure 2.2.2 Entrance to Golden Age Park on the day of *Creating Common Ground: A Festival for Intergenerational Public Space*. Photo by Les Dunseith.

of solidarity and community.[4] In this section, we present our recent *Creating Common Ground* research project and subsequent festival as a case study to demonstrate how small-scale events can test programming ideas that make public spaces more accessible and desirable for multiple user groups, as well as catalyze new relationships between and among researchers and community stakeholders.

Creating Common Ground: A Festival for Intergenerational Public Space was a musical festival event that we organized in the Spring of 2022. The idea for the festival originated from the research project *Creating Common Ground,* which sought to investigate the potential for intergenerational use in three different parks located in the Westlake-MacArthur Park neighborhood of Los Angeles. Westlake-MacArthur Park is a dense, multiethnic, and low-income

neighborhood with a high concentration of children and older adults.[5] The neighborhood has relatively little open space compared to the average for the city: 0.84 acres of park per 1000 residents versus the city average of 3.3 acres per 1,000 residents.[6] The research sought to identify opportunities for creating public spaces in a disinvested neighborhood that serves intergenerational uses and needs. Hosting small-scale events in public spaces emerged from the research as one promising strategy for creating settings that can set the stage for intergenerational exchanges.[7]

Over the course of a year, the *Creating Common Ground* research team conducted a series of site observations, focus groups, thick mapping workshops, and participatory design workshops to better understand the public space experiences, perceptions, and desires of both youth and older adults in the neighborhood. Working with two community-based organizations, St. Barnabas Senior Services (SBSS) and Heart of Los Angeles (HOLA), we recruited 43 youth and 38 older adult residents of Westlake to participate in the research activities.[8] During workshops, which were mostly held via online video conferencing due to COVID-19 constraints, we asked research participants to share their experiences and ideas about the neighborhood's public spaces.

One of the surprising findings was that Golden Age Park, one of the three parks that were part of the study, was severely underutilized. Built in 2019, just before the onset of COVID-19, Golden Age Park is a small, 0.17-acre pocket park that was designed with older adults in mind.[9] We found that many youth and older adults were unaware of the park's existence due to the park's relatively small size, hidden location, and its recent construction. However, upon learning of the park's existence and its many amenities, nearly all research participants expressed a desire to visit the park. The park held potential as a truly intergenerational public space that encouraged use by and engagement between users of all ages, but that park was not living up to that potential.[10]

Reflecting on Golden Age Park, we considered: What kind of programming could raise awareness and foster intergenerational use of Golden Age Park? One approach would be to test a range of programming activities identified as desirable through the earlier focus groups and workshops, including gardening, yoga, music and dance classes, concerts, board games, art activities, and intergenerational language learning programs.[11] The research team discussed possible options with our partners at SBSS and HOLA and, based on our respective time and resource capacities, decided that one small but potentially powerful gesture would be to host an event at the park. The primary goal of the event would be to test whether or not a small-scale event could encourage interaction between youth and older adults in the community. Working collaboratively with both SBSS, HOLA, and the Los Angeles Neighborhood Land Trust (LANLT), the nonprofit owner of Golden Age Park, we developed a plan for a "Festival for Intergenerational Public Space." If the research team observed that the event drew attendees from all age groups and fostered interaction between them, it would be considered a success and confirm our research finding that music and performance-centered programming could promote intergenerational use of public space.

The event was held on a warm, sunny Saturday afternoon in March 2022. Over the course of an afternoon, the free event attracted over 100 attendees composed of multiple age groups, both young and old, for food, games, and music. HOLA's 45-member Intergenerational Orchestra, as well as a Shakespeare troupe composed of both youth and adults, performed an excerpt from "A Midsummer Night's Dream" in English and Spanish. As we hoped, the programming provided something for everyone, whether it be music, theater, games, face painting, or food. The research team observed both youth and older adult attendees enjoying the music and theatrical performance and interacting with one another throughout the event.

Linking our research findings to practice, the event's success suggests that planners ought to consider small-scale events in public space programming to support intergenerational use. This is especially true when considering the time and resource constraints of researchers and community partners, as hosting small-scale events is a relatively cost- and resource-effective programming intervention that is feasible in other parklets and public spaces in neighborhoods similar to Westlake-MacArthur Park.

In addition to considering the event's practical results, the research team reflected on the broader implications of integrating small-scale events into the research process. By positioning the event as part of the research process, rather than merely its outcome or object, and by "keeping it small," the *festival* represents a shift in the way events have historically been considered in research processes. Events are typically examined in terms of static units of analysis with measurable characteristics,[12] and researchers have tended to focus on analyzing large-scale or mega-events.[13] Such approaches may miss opportunities to understand the kinds of relationships that unfold during the event itself, as well as the implications for social and power relations between researcher and community members.[14]

In terms of its relational implications, the event created an opportunity to more critically consider the positionality of the researcher, research participant, and event organizers and to level the power imbalances inherent to traditional research practices. Rather than positioning ourselves as neutral observers, all members of the event-planning committee were embedded in the planning, staging, and executing of the event. This included one of the authors performing with HOLA's Intergenerational Orchestra, requiring weekly rehearsals in the six months leading up to the event, ongoing engagement with the community partners in the planning process, and close participation in event logistics. In doing so, the event created a network of researchers and community organizations with the unifying goal of creating a public space that would serve the needs of multiple age groups within the neighborhood.

The convivial and ephemeral aspects of the small-scale event were also important. We called the event a "festival" to emphasize its celebratory nature. The playfulness of the *festival*, in addition to its situatedness and intentional planning, was a key ingredient that supported intergenerational engagement. Theoretically, the celebratory aspects of events hold the potential to strengthen everyday social bonds that are suppressed under capitalism in the city.[15] Taking inspiration from Guy Debord and the Situationist International, we recognize the

Figure 2.2.3
An aerial view of *Creating Common Ground: A Festival for Intergenerational Public Space*. Photo courtesy of Los Angeles Neighborhood Land Trust.

Figure 2.2.4
Various activities at the *Creating Common Ground A Festival for Intergenerational Public Space*, including an orchestra performance, playground use, and catering provided by Tamales Alberto and HiFi Kitchen. Photos by Les Dunseith.

potential of small-scale events, which can range in form from artistic to playful and from subtle to overtly political, to disrupt the ordinary rhythms of the everyday urban social order.[16]

While events conceived in this way are ephemeral in nature, they can lead to ongoing engagements between researchers and community members in the future. In the aftermath of the festival, members of the research team and HOLA

continued to explore the potential for youth-centered public space in the subsequent *Pathways to Autonomy* research project and in an Urban Humanities graduate capstone course titled *Micro-Urbanism*. The relationships that endure after the event suggest the potential to make a wider, longer-term impact. Thus, the *Creating Common Ground* festival demonstrates how small-scale events can test research findings in practice, as well as reshape the research process by rebalancing power relations between researchers and community-based partners.

SMALL IN RESEARCH: CENTERING YOUTH VOICES AND VISIONS FOR URBAN MOBILITY

"Starting small" in research on equitable public spaces offers avenues to engage directly with community members and reveal overlooked knowledge and perspectives. Our recent participatory research project, *Pathways to Autonomy*, explored the experiences of adolescents as they travel independently in Westlake, Los Angeles. Our goal was to inform actionable design and programmatic interventions to support urban sidewalks as safe social spaces for youth mobility.[17] Empirically, we sought to gain a richer understanding of how youth, an underrepresented population group, navigate independent travel. We examined not just why they choose to walk or take transit but also the complex experiential factors that shape their route choice and the smaller, adaptive behaviors they assume in response to the socio-spatial environment. Methodologically, we sought to develop, test, and refine a youth-centered, qualitative, interdisciplinary research approach that was explicitly centered on the "small." We thus worked with young pedestrians in a precise geographic context, with a focus on their embodied, affective experience of mobility.[18]

Our research design responded to both the substantive and methodological gaps in scholarship on youth mobility, namely, a lack of interdisciplinary, design-based analyses and an absence of youth voices. Studies of youth mobility often employ quantitative tools like surveys or GIS mapping that fail to capture the affective, experiential nature of walking in the city.[19] Seldom does this blend interdisciplinary analytical and representational approaches.[20] Furthermore, given the practical and ethical challenges of involving children as research participants, few studies engage directly with youth, instead using "parents as proxies."[21] These gaps point to the possibility of starting small as a means to shift our epistemological and methodological approaches to understanding youth mobility in ways that may ultimately support the effectiveness of design-based interventions.

From our earlier research collaborations with Heart of Los Angeles (HOLA), we had initial insight into how youth in the area experience and imagine their public spaces and the social and spatial barriers they encounter to their full participation in public life.[22] From GIS analysis of existing data, we also knew Westlake faced many challenges to sidewalk safety, including high instances of pedestrian-vehicle collisions, poor street maintenance, and violent crime. From existing literature, we knew that, when supported by safe and enjoyable sidewalk infrastructure, mobility can be an important pathway to autonomy, wellbeing, and urban citizenship for youth.[23] We didn't know how Westlake's youth negotiate

their everyday journeys, experience the city, and perceive the social and built environment along their routes. This micro-scale information is, however, critical to our ability as planners, designers, and policymakers to develop effective public-realm improvements that support youth.[24]

We developed a youth-centered research approach to identify how site-specific social and spatial factors shape youth travel experiences. This research ultimately informed supportive design, policy, and programmatic interventions. Our youth-centered approach engaged directly with young people who hold extensive knowledge about their neighborhood environments and important insights about its future. Our methods needed to respond to the context of Westlake while generating understanding relevant to other urban areas and population groups. Inspired by the emerging field of urban humanities, which integrates the analytical and representational strategies of architecture, urban studies, and the humanities to deepen understanding of urban environments and shape intervention,[25] as well as a growing body of scholarship and "mobile methods"[26] reflective of the "new mobilities paradigm,"[27] we integrated interdisciplinary methods including mapping, walk-along surveys, and participatory design workshops into our study design.

We began by engaging 28 students in HOLA's after-school classes to map and record details of their journey from school to after-school activities for four weeks, using workbooks designed by our team. We then selected ten of these students to participate in walk-along interviews, during which we joined them on their typical journey from school to after-school activities. We asked questions about their experience along the way and concluded with a post-walk interview and cognitive mapping exercise.

Our methods accommodated the verbal and cognitive abilities of the 11- to 15-year-olds and encouraged detailed, in-situ engagement with Westlake's urban environment.[28] We then synthesized our findings using thick mapping, a cartographic strategy emerging from the urban humanities, in which many layers of place-based information data are mapped to reveal new relationships.[29] As both an analytical and representational tool, thick mapping enabled us to integrate significant volumes of qualitative and quantitative data while prioritizing the "small stuff." In this manner, we caught the voices and perspectives of youth as reflected in their direct quotations, place-based observations, hand-drawn maps, and photographs.

Our research and analytical methods elevated the individual, the local, and the specific experiences of youth travel in the context of larger structural and policy conditions that shape the built and social environments of Westlake. Together, they yielded a rich portrait of the experience of youth travel. We found that youth hold low expectations of the sidewalk and frequently encounter poorly maintained paths, unsafe or absent crosswalks, narrow sidewalk widths, a lack of lighting, seating, and shade, and unfamiliar people who may give unwanted attention or even harass them.

Generally, social environment concerns outweighed built environment concerns for most participants. Instead of avoiding particular spaces in response, youth consistently chose the most convenient, familiar, and efficient route,

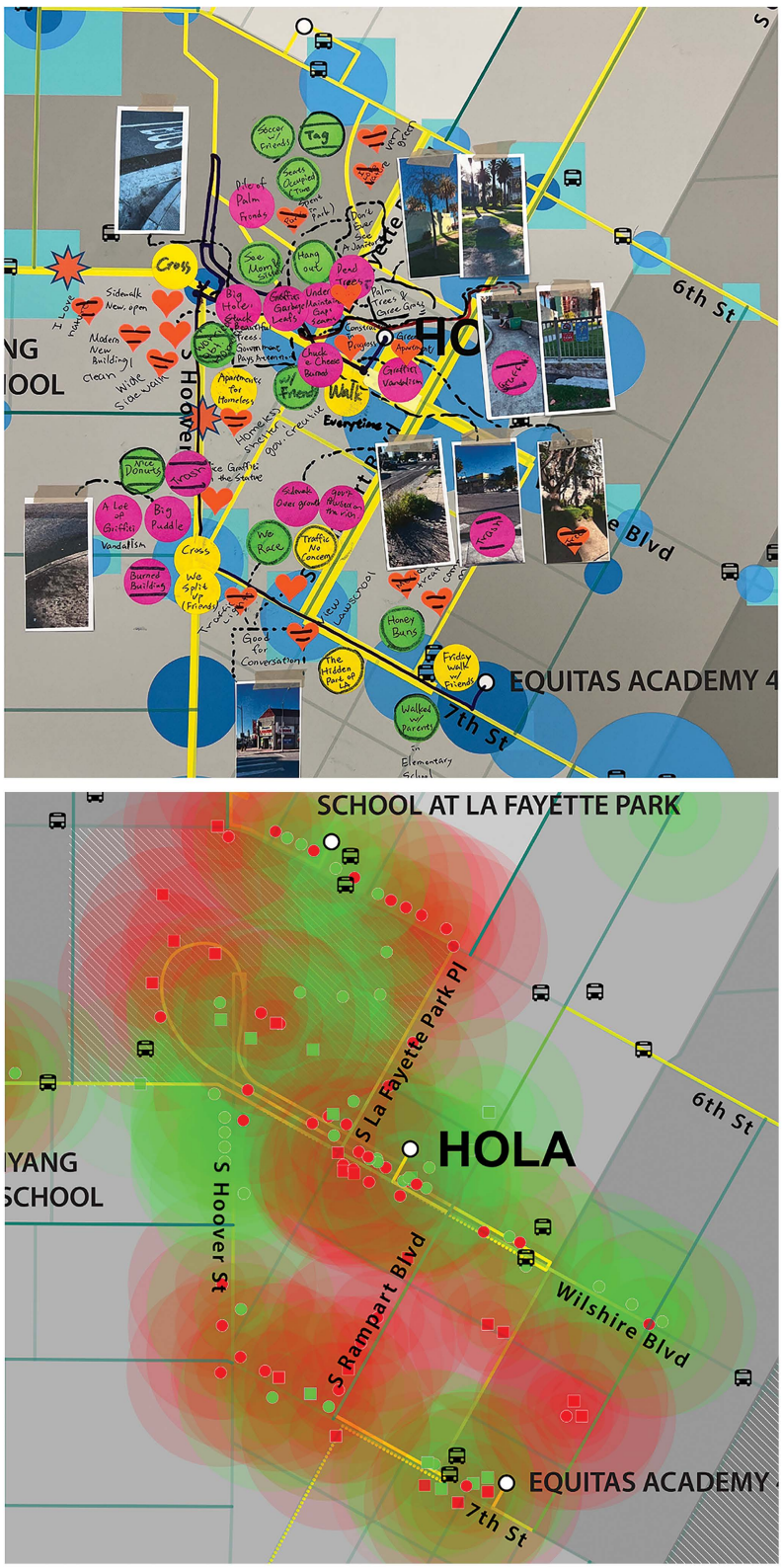

Figure 2.2.5 The thick mapping process involved manually layering and coding observations and images captured by youth during walk-along interviews and then synthesizing this information into a digital thick map that showed clusters of positive and negative built and social environment characteristics.

traversing spaces associated with crime, risk, and discomfort to arrive at islands of safety, familiarity, and comfort, often clustered around schools and community facilities. Along the way, youth engaged in smaller adaptive behaviors to manage and minimize risk. This complex decision-making was supported by young pedestrians' extensive neighborhood travel experience and in-depth knowledge. Knowledge was accrued over time, as youth often traveled first with a caregiver (often a parent or older sibling) before developing the confidence, capacity, and parental license to travel independently.

For many youth, independent travel remains an important source of freedom, confidence, and even joy despite the pervasive risk of unpleasant or unsafe conditions. Our findings informed propositions for planners, designers, and advocates invested in enhancing youth independent mobility through context-sensitive design and policy interventions. These included emphasizing the social determinants of sidewalk safety, reinforcing preferred, familiar, and more public paths, addressing links between islands of safe, enjoyable spaces, supporting the social life of the sidewalk, and demonstrating care for people and for place. Our fine-grained, youth-centered research approach allowed us to capture, analyze, and represent the small details of youth mobility in Westlake and to understand sidewalks as complex, socio-spatial environments. Taking seriously the youths' small-scale, everyday experiences, we became more attuned to their broader needs, experiences, and desires and were better equipped to respond.

At the conclusion of the project, we identified a highly traveled segment of the sidewalk with a high concentration of both positive and negative observations. With our newfound understanding of youth travel experiences and perceptions, we launched a phase of research focused on elevating youth voices and visions for their mobility futures. Through co-designing temporary infrastructural interventions with the youth, we helped improve this sidewalk segment.

The *Pathways to Autonomy* project demonstrates that small is big when it comes to linking research on the built environment to interventions that advance spatial justice. In this project, "small" can be read in several ways. First, we engaged directly with young people – sidewalk users who are literally smaller than adults but no less attuned to their urban environments. We developed collaborative, youth-centered research activities that prioritized the individual, affective, and bodily experiences of these young people. We centered youth voices as a community frequently marginalized in urban planning and design research.

Second, our research focused on the everyday and individual experience of travel in the city, including the micro-scale details that shape experiences and perceptions of mobility. While researching, thinking, and acting at this small scale, we did not lose sight of the broader structural conditions that inform these experiences. These include policy and planning decisions, the lack of infrastructural investment, and vestiges of racism that have shaped the built environment in Westlake, one of the densest neighborhoods in Los Angeles with limited access to green space and high instances of traffic-related injuries.[30]

Finally, our study was centered on an area within a half-mile radius of HOLA's facility, a small zone that captures the specific community and context of Westlake. Throughout our research, this narrow geographic focus allowed us to

center the needs, ideas, experiences, and lived realities of the underserved and underrepresented residents of Westlake. These citizens have the most to benefit from the concerted, careful efforts of architects, planners, and designers working in pursuit of spatial justice.

SMALL IN PEDAGOGY: RECLAIMING THE COMMONS THROUGH PLAY AND BUILDING TRUST

"Starting small" is one of the pedagogical experiments that cityLAB has been exploring for nearly a decade through the Urban Humanities Initiative (UHI), a graduate certificate program at UCLA. The UHI's cross-disciplinary curriculum involves project-based, studio-format learning that reimagines educational spaces outside traditional academic settings and rethinks the university and its programs' relationships to broader socio-political processes.[31] Temporary engagements with local communities resulting from these design studios enable radical spaces for students to practice in alignment with community agendas. As a case study, we explore the Micro-Urbanism course, a 2023 UHI capstone studio that asks: How might the city bend toward spatial justice when urban humanists engage in small-scale urban transformations?

Built upon the initial findings of *Pathways to Autonomy* research, the course aimed to address the sense of neglect expressed by adolescents in Westlake in response to the poorly maintained pedestrian environment in their neighborhood. The goal was to explore how small, engaging urban interventions could support young citizens in developing autonomy and their own agency to uplift their city, their sidewalks, and their commutes.

The course began by examining various tactical urbanism precedents, including DIY urbanism, guerilla urbanism, pop-up urbanism, and urban hacking. These practices, some more symbolic (such as sticker campaigns), some less legal (such as guerrilla appropriation), and some less scalable (such as DIY activities), share common characteristics, such as resistance against social inequalities, use of low-barrier, cost-effective solutions, and involvement of local activists and community members. For a course focusing on engaging urban youth and negotiating spatial rights, our focus was not on distinguishing the nuances of terminologies but instead on highlighting the common traits of these interventions, which we saw as smallness, informality, and immediacy.

Small actions not only challenge the institutional and bureaucratic desire for durable and holistic transformation in the built environment but also embody "the quality of virality," a quality that sociologist Ruha Benjamin emphasizes can spread justice in a time of global crisis. In her book *Viral Justice: How We Grow the World We Want,* Benjamin examines individuals' connection to large, structural changes and proposes a "microvision of social change" that gives individuals agency to act politically, project positively, and create collective change.[32]

Trusting in the power of small actions, we developed the idea of "micro-urbanism," with its rationale based on several factors: 1) small-scale interventions allow for testing new ideas before larger-scale implementation and without the risk of permanent failure; 2) temporary activities are flexible and more accessible; 3) interim

projects can build tolerance for innovative design; 4) informality fosters dynamic and adaptive urban life; and 5) incremental changes can have lasting effects.

The prefix "micro-" refers not just to physical and geographic scale but also to actions that may at first seem trivial in meaning, slight in extent, and ephemeral in lifecycle. Working within a paradigm of small but viral, the capstone students developed strategies for civic participation that asserted a right to the city for the HOLA youth. Students gravitated toward leveraging play as a design tool for intervening in the HOLA youths' daily environments where they feel secure and included. Students examined how play in everyday public encounters can be engaging, poetic, thought-provoking, and political for negotiating rights and vulnerabilities.[33] To engage youth of different ages and encourage them to claim fun-filled public spaces, the students decided to hold a "city crafting fair" in connection with HOLA's after-school programming.

Before planning the crafting activities, the class collectively established expectations for respectful and compassionate interactions within the team and with others they might encounter during their fieldwork. Everyone should "care with the structure of [their and] others' positionality, privilege, expertise, expectations," "recognize that joy, curiosity, and enthusiasm can be present for all participants," "acknowledge other's truths," and "understand any skepticism."[34] Drafting these agreements is a practice for students to build common ground outside the traditional classroom context and reflect on forms of responsibility, shared spaces, and alternative ways of knowledge production.

Mindful of not passing judgment as outsiders, the capstone students documented the material conditions and everyday activities in Lafayette Park, where HOLA is situated, at different times throughout the week. They also spoke with park users to understand their feelings of security and belonging. One of the main observations students made during their fieldwork was the stark contrast in the built environment shaped by the boundaries of responsibility. Contrasts were observed between the lively and diverse park activities and the frequent littering and temporary structures erected by unhoused people on the sidewalks and between the well-maintained infrastructure within the immediate vicinity of HOLA's facility and the rest of the park where cross-border behaviors like playing football in the no-soccer zone were common. These observations directed the intervention site to the fenced perimeter of Lafayette Park, which was segregated from the sidewalk.

Aiming to transform the fence from a symbol of division into a connection point, the team created a crafting game called "Fence Kaleidoscope."[35] Youth from HOLA's after-school programs decorated paper tubes with colorful tape and stickers and attached them to the fence bars, adding a colorful and personal touch to an important place on their daily commutes. This quasi-art installation was placed next to an LA Metro bus stop and encouraged interactions from people on both sides of the fence. Crafting the fence together was a joyful and performative activity, which did not prevent it from being political. By making their daily environment more vibrant with their own hands, young residents of this underserved neighborhood found a way to combat their feelings of abandonment using everyday materials and their existing artistic abilities. The installation had a short

lifespan, yet the awareness of seeking spatial justice through design was seeded and carried on by young citizens.

The short duration of a ten-week course cannot bridge the gap between small design endeavors and larger, long-term transformations. Indeed, the capstone students experienced moments of hesitation as they grappled with questions of what it means to "intervene," what rights they have, how to navigate the tensions of institutional authority in public space, how to appropriately seek permission to work in the community, how the academic calendar constricts their capacity to advance social justice, how they would know if they had "advanced" social justice and if there was a need for an evaluation measure. These questions, which mirror unsolved problems of many tactical urbanists, cannot be answered solely by designers or activists but require ongoing practices and public dialogue.[36]

In the end, cityLAB's long-term partnership with HOLA, as well as HOLA youths" active participation, helped ease some of the students' anxiety. One student shared an illuminating moment when a youth participant wanted to take her decorated paper tube home but decided to leave it on the fence after seeing the positive reactions from passersby. The fence altering experience increased the students' awareness of their ethical and socio-political roles and how their actions can contribute to advancing spatial justice.

The structure of this pedagogical engagement legitimized the temporary nature of micro-urban interventions while enabling new modes of solidarity. Architectural theorist Beatriz Colomina has highlighted how pedagogy has been, and still should be, understood as a "political agent" to destabilize established disciplinary norms and engage society at large for radical change.[37] Many short-lived experimental teaching practices and limited strategic interventions in architectural education during the 1960s and 1970s, as documented in her *Radical Pedagogies* project, found their afterlives in extended processes that affirm the social role of architects and contest the unjust distribution of spaces. The *Micro-Urbanism* capstone shares the same vision that recognizes the establishment of common grounds as an ongoing collective process in which students contribute not only through design proposals but also by reimagining how transformative forms of design engagement can empower underrepresented young citizens.

STARTING SMALL AND SCALING UP

In design practice, urbanist and architecture theorist Dana Cuff argues that, "Ethical projects in architecture are never complete. Linked together, they form initiatives that can be transformative [...]. Leveraging design on behalf of social justice inherently means starting small, in ways that are likely to seem insignificant."[38] This principle applies in both temporal and scalar ways to the three projects described here, each employing experimental approaches to leverage design, research, and pedagogy to support more just urban futures with real impacts for communities in Los Angeles and beyond. While the individual projects may be "small" in both geographic and temporal ranges, the projects expand beyond a single event, report, or course. Indeed, all three of the projects featured here have built iteratively on previous work, expanding in scope and impact. The *Pathways to*

Figure 2.2.6
UCLA students presented a city-crafting fair that engaged children of different ages. Children crafted the urban environment around HOLA (Heart of Los Angeles) in LA's Lafayette Park as the outcome of the UHI Capstone course "On-Your-Own: Micro-Urbanisms for Kid-Friendly Cities." Photo courtesy of Tamika L. Butler.

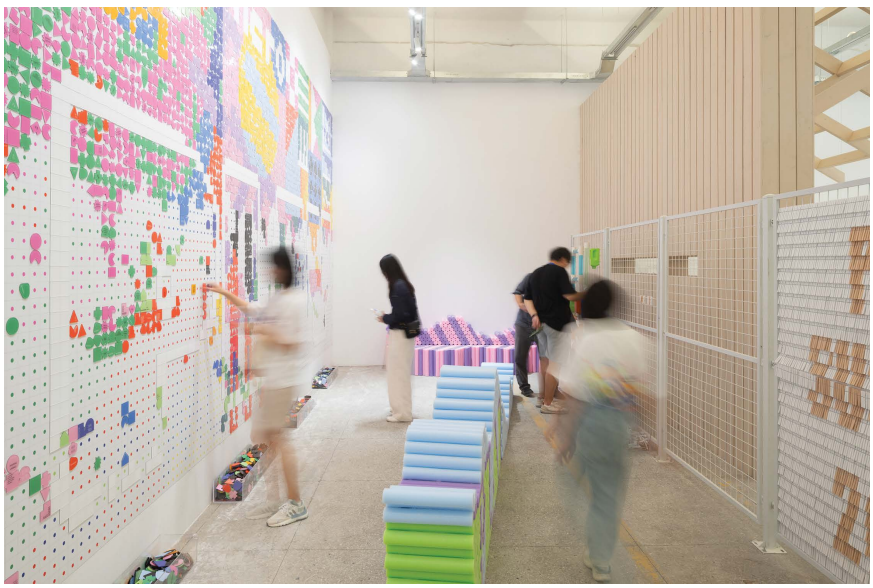

Figure 2.2.7
"Micro-Urbanism Toolkit: Reclaiming the Commons through Play," an art installation exhibited at 2023 Shanghai Urban Space Art Season (SUSAS), as the afterlife of the UHI capstone course. Photo courtesy of Fangfang Tian.

Autonomy youth mobility research project and *Micro-Urbanism capstone course* extended from community partnerships established during the *Creating Common Ground* project and have continued to engage new activists, artists, and residents in visions for a more just public realm.

What remains at the end of each of these projects are the *relationships* built between students, instructors, and community members. These relationships are founded on trust, accountability, a shared understanding of mutual benefits accrued, and an ongoing commitment to reflexivity. This is where the

transformative potential of "starting small" is found. The projects discussed in this chapter are each situated in their respective contexts and require attention to places that planning scholarship often overlooks. Inspired by Anna Livia Brand and Charles Miller's call to center visions for alternative futures that would "amplify sociospatial practices of justice from the scale of the front porch to the scale of the region," we envision a situated and reflexive practice of "starting small" as one of many steps that, considered collectively, can scale up to more largely impact social and spatial transformation.[39]

NOTES

1 Schumacher 1973, 67–80.
2 See Peter Weibel 2015 and Antonio Negri "Living in a Time of Crisis" in Weibel 2015, 29–61, 100–10.
3 Cuff et al. 2020.
4 Holt-Giménez, Patel, and Shattuck 2009.
5 US Bureau of the Census 2019.
6 AARP, 8 80 Cities, and the Trust for Public Land 2018.
7 Wendel et al. 2022.
8 SBSS is one of the oldest senior-serving centers in Los Angeles. HOLA provides after-school arts programming to underserved youth.
9 Loukaitou-Sideris, Brozen, and Levy-Storms 2014.
10 Wendel et al. 2022.
11 Wendel et al. 2022.
12 Richards and Palmer 2010; Smith 2017; Smith et al. 2021.
13 Lamond and Platt 2016.
14 Fuller and Renn 2019.
15 De Bord 1958; Lefebvre 1991.
16 De Bord 1958.
17 Nelischer, Cuff, and Loukaitou-Sideris 2023.
18 Cresswell 2010.
19 Lin, Witten, and Oliver 2017; Marzi and Reimers 2018.
20 Porter and Turner 2019.
21 Fusco et al. 2013; Darbyshire, MacDougall, and Schiller 2005.
22 Wendel et al. 2022.
23 Skelton 2013; Crawford et al. 2017.
24 Rothman et al. 2018.
25 Cuff et al. 2020.
26 Merriman and Pearce 2017.
27 Sheller and Urry 2006.
28 Kullman and Palludan 2011.
29 Presner, Shepard, and Kawano 2014.
30 UCLA Lewis Center for Regional Policy Studies and cityLAB UCLA 2021.
31 For more on urban humanities pedagogy, see Cuff, "Thinking Through Cities: Prospects for an Urban Humanities," in Cuff et al. 2020, 3–13.
32 Benjamin 2022, 27, 4.
33 These precedents include artist Jason Eppink's "Pixelator," which temporarily eliminates LED billboards at the entrance of New York's subway citations by placing a homemade foam core and paper screen over the monitors; Greyworld's "Railings," which simply reappropriate metal railings and rediscover the joy of running a stick along them to create a pleasant sound; street art projects that playfully mock the futility of pressing placebo crossway buttons; Sierra Seip and Alison Uljee's "Skipping Only Zones" and

"Stairway Stories," which break up monotonous commutes by introducing a little fun; and Emma-France Raff's "Pirate Printer," which uses street infrastructure graphics to make clothing patterns. All these projects interact directly with found objects.

34 Class discussion note from May 4, 2023.

35 The capstone students proposed multiple ways to activate the fence, including turning it into a musical fence and using it as a canvas to map youth's experiences in Lafayette Park. After consulting with HOLA teachers, the students decided on the "kaleidoscope" option because it required only common crafting materials and minimal instructions for youth to take part.

36 The small urban intervention experiment engaging HOLA youth continued in another UHI capstone the following year, extending the "claiming space" activities to the sidewalk outside Lafayette Park.

37 Colomina et al. 2022, 11–20.

38 Cuff 2023, 67–68.

39 Brand and Miller 2020, 469.

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2.3 Topographies of Sustainability in New Orleans's Lower Ninth Ward

Anna Livia Brand

THE SUSTAINABILITY OF RACIAL CAPITALISM

On the eastern edge of New Orleans, along the Mississippi River and stretching back to Bayou Bienvenue, lies the Lower Ninth Ward.[1] Devastated by one of the levee failures during Hurricane Katrina in 2005, the Lower Ninth Ward was amongst the hardest hit neighborhoods in the city in terms of loss of life and property; it is also one of the slowest neighborhoods to return. In the wake of Katrina, local and national planners, designers, and policy-makers depicted the Lower Ninth Ward as being "unsustainable". Sustainable development, despite its formal definition by the United Nations 1987 Brundtland Commission as development "that meets the needs of the present without compromising the ability of future generations to meet their own needs"[2] and that prioritizes those who are the least well off, was a loosely defined and applied concept in the days after the storm. For the Lower Nine in particular, the argument that this specific neighborhood was unsustainable rested largely on the topographical condition of the neighborhood and its low-lying landscape, much of which lies below sea level. This topigraphical argument, supported by the depth of flooding and the expanse of devastation, was codified by the lower property values that defined this primarily Black neighborhood. Together, topography and valuation were used as the justifiable metric and spatial logic for imagining the future neighborhood as primarily green space with a substantively smaller residential footprint concentrated on the higher ground toward the Mississippi River.

Though the series of urban planning and design efforts after Katrina envisioned a sustainable and resilient future for this deltaic city, the prioritization of those who were the least well off, who were most impacted by the levee breaks, and who were least able to recover on their own was all but absent as an organizing framework for recovery and rebuilding.[3] Indeed, numerous public and private planning efforts envisioned the future of a "sustainable" and "resilient" city without the majority of the Lower Ninth Ward, rationalizing its limited return and redevelopment within a larger narrative about urban sustainability and even environmental justice. As the city was drained of the flood waters and residents began to return and make sense of the scale of destruction, projections of a higher ground, sustainable city that *lived with water* flooded in. The circulation of such sustainability and resiliency urban discourses permeated the city's post-Katrina

DOI: 10.4324/9781003480426-10

planning and design, reinvestment, and branding efforts, eventually making their way to city-level planning and policy-making efforts.

Yet, below the surface, the depths and expanse of anti-Blackness exhibited by a smaller footprint, including a possible Lower Nine-less future, were clear to residents, many of whom struggled to return to the city and rebuild against overt and de facto prohibitions on their return.[4] Though obscured through the seemingly innocuous language of sustainability and resilience, proposals to reduce the urban footprint in predominantly Black neighborhoods like the Lower Ninth Ward were met with strong resistance from Black residents who, in the midst of their work to come home and rebuild, articulated the racism and inherent anti-Blackness clearly and loudly at city and neighborhood planning meetings held across the city in the months and years following the storm. Indeed, and also in the midst of rebuilding, Lower Nine residents used the disciplines of urban planning and landscape design and the public forums of participation to articulate an understanding of sustainability and futurity that was deeply Black.

This chapter argues against the depths of anti-Blackness that permeate urban planning and landscape design futures. Drawing on Ruth Wilson Gilmore's definition of racism as the "state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death" and scholars who insist upon the spatiality of racism, I situate city-led sustainability planning and design in the Lower Ninth Ward within the logics and ongoing arc of racial capitalism in order to centralize the primacy of anti-Blackness.[5] I cast the post-Katrina moment and its ensuing planning and design imaginaries as both an elongation of anti-Black planning and policy-making and urban development and a recalibration of the spatiality of whiteness in the wake of the storm. Further, I argue that together, these elongations and recalibrations of anti-Blackness point toward a new iteration of white supremacy and its ensuing spatial logics.[6] This new logic, both continuous and distinctive, operates through a seemingly apolitical and neutral logic of sustainability and resilience, thus doing the work of anti-Blackness by predicating a future where the "chocolate city" is no longer Black.[7] This argument is the foundation and premise upon which I center and build upon Black residents' social, spatial, and political forms of resistance as a way of predicating and imagining future urban landscapes that are socially, politically, and environmentally sustainable, where this sustainability is deeply Black.

Tracing Lower Nine residents' engagement with urban planning and landscape design as a forum for articulating and imagining beyond the confines and logics of racial capitalism, I argue for a more coherent understanding of anti-Blackness within planning and design disciplines and through a critique of the ways that sustainability and resiliency narratives align with the spatial workings and logics of racial capitalism, I argue that planning and design disciplines have a specific role to play in challenging these spatial logics. Further, I articulate the ways that urban planners and designers can learn from and with Black communities and their visions for their own sustainable futures. Finally, I argue that the archive of anti-Blackness, the racist dreams of futurity that fill the shelves of urban planning and landscape offices, continue to do harm and, therefore, require radical re-imaginings beyond the confines and the limits of anti-Blackness. Drawing

on residents' own language and material imaginary for conjuring a Black future, I challenge our disciplinary capacities and anti-Black logics so that we might imagine landscapes that are always and everywhere Black.

I begin by outlining the geological, social, and developmental history of the Lower Ninth Ward before turning to a brief analysis of post-Katrina planning efforts and the emergence of sustainability and resiliency discourses, analytically grappling with their anti-Blackness that appears, on the surface, as politically and socially neutral. From this discussion of the confluences between racial capitalism and post-Katrina planning and design efforts, I argue that sustaining Black geographies must analytically and creatively encounter Black voices, imaginaries, and spatial praxes in order to create landscapes based not only on sustainable land praxes but liberation from structures of racial oppression. To do this work, I draw on Lower Ninth Ward residents' own planning and organizing efforts and their deep history of organizing and land sustainability practices to argue that they offer planners and designers ways that we can co-imagine liberatory landscapes.

A DELTAIC NEIGHBORHOOD

In geology, a delta is a low-lying, flat landform formed by the buildup of a river's sediment. A deltaic city, New Orleans lies on land formed over thousands of years by the alluvial deposits of a once-meandering Mississippi River. The city's naturally higher ground and thus the areas first settled in the early 1700s lie parallel to the river, sloping back toward Lake Pontchartrain to the north. While drainage has always been (and continues to be) a critical issue across the city, more sustained efforts to drain and develop the lower-lying areas of the city into its current-day urban footprint reached their apex in the late nineteenth and early twentieth centuries.[8] About 80% of the city, as we know it today, rests on former cypress swamp and marshland. Indeed, the flooding footprint from Katrina mirrored the natural distinction between higher and lower ground, which is evident in maps of the city through the late nineteenth century. As has become increasingly apparent since Katrina, the drainage of the city's marshland and the continued practices of stormwater management, which pump water out of the city rather than let the water permeate its soils, have led to varying levels of subsidence across the city, an issue which further impacts neighborhood and property flooding from regular storm events.[9]

The Lower Ninth Ward's natural topography is, like much of New Orleans, a relatively gentle slope away from the Mississippi that has been impacted by drainage and land subsidence since drainage efforts in the early-mid twentieth century. While in the 1800s, the neighborhood's topography sloped back from elevations of 31 feet along the river's natural levee to 21 feet at what is now just north of North Claiborne Avenue, areas north of North Claiborne are now predominantly below sea level and, therefore, saw some of the worst flooding, upwards of ten feet, from the Katrina levee breaks on the Industrial Canal, the neighborhood's eastern edge.[10] Thus, though still relatively gentle, the slope away from the Mississippi and toward the neighborhood's northern edge, Bayou Bienvenue,

has great repercussions in terms of how this neighborhood was settled and how it was impacted by Hurricane Katrina.

Bayou Bienvenue, originally a cypress swamp, provided shelter and home to maroon communities[11] who lived sustainably on and with the land and in refuge from the brutalities of slavery prior to emancipation.[12] Sustenance through the land and water and local gardening practices sustained residents both on and off the plantation and beyond emancipation. As the neighborhood developed in the early twentieth century, larger lots and gardening praxes and hunting and fishing in Bayou Bienvenue continued to define the neighborhood. As it was plotted and developed in the early twentieth century, the land also provided refuge from the larger geography of post-Reconstruction. Here, Black residents could purchase properties and buy homes in areas not disciplined by the city's emergent racial segregation laws dating from the 1890s through the 1930s.[13]

Like the majority of the city's current urban footprint, the lower-lying areas of the Lower Ninth Ward were drained and developed into private property in the early twentieth century.[14] The coupled construction of the Industrial Canal in the 1920s, which effectively cut the Lower Ninth Ward off from the city, and the new job opportunities that emerged with the rise of a ship-building industry for WWII along the Industrial Canal resulted in the expansion of the neighborhood, primarily in its Black population, between the 1940s and 1960s (nearly 20,000 residents). The construction of the Mississippi River Gulf Outlet (MRGO) to the east of Bayou Bienvenue in the 1960s inundated the bayou with salt water, effectively killing the cypress habitat and, with the construction of a nearly six-meter sheet piling levee along the bayou's southern edge, effectively closed the neighborhood off from this site of economic and environmental connection.

Hurricane Katrina was not the first time that the Lower Ninth Ward sustained massive flooding. In 1965, levee breaks in the Industrial Canal during Hurricane Betsy led to catastrophic flooding in the Lower Nine. Like Katrina, it was the water that devasted the neighborhood.[15] The majority of the estimated 164,000 homes flooded during Betsy were in the Lower Ninth Ward and, in what was eerily like the sudden flooding and subsequent evacuations of stranded residents after Katrina, over 1,200 Lower Ninth Ward residents were rescued and evacuated to higher ground by the Army Corps of Engineers.[16] Though not the first time the neighborhood was impacted by a hurricane, damage from the levee failure on the Industrial Canal during Katrina and the inundation and force of floodwaters impacted the majority of the neighborhood with some degree of flooding and devastation. North of St. Claude Avenue, 100% of homes were declared uninhabitable after Katrina. At worst, houses were torn from their foundations and deposited blocks away. At best, houses that didn't suffer damage from flood waters suffered wind damage from the storm's sustained and near Category 5 force winds of 150 miles per hour. The failure of the city's levee system is attributable to many variables, including poor maintenance, the strength of the storm, and design flaws. The failure of the Industrial Canal levee can also be linked back to the erosion of unstable and compacted soils upon which the levee walls rested.[17]

POST-KATRINA RECOVERY AND PLANNING

In 2006, the "Bring New Orleans Back Commission" was optimistic about the city's recovery, predicting that:

> New Orleans will be a sustainable, environmentally safe, socially equitable community with a vibrant economy. Its neighborhoods will be planned with its citizens and connect to jobs and the region. Each will preserve and celebrate its heritage of culture, landscape, and architecture.[18]

There are numerous reasons why the recovery of the Lower Ninth Ward has been slower than nearly all other areas of the city, including direct and extended prohibitions on residents' return; the relatively extended time it took to turn on electricity and for the neighborhood to receive potable water; racialized rebuilding policies, such as the Road Home program; difficulties in determining property ownership in properties handed down informally over generations, and the protracted realities of lower-income residents struggling to continue to live their lives while also rebuilding.[19] Each of these presented its own complications for return. For instance, the lack of clear title to inherited property hindered residents' efforts to exercise their property rights, such as government aid, refinancing, obtaining loans for rebuilding, and receiving insurance payouts.

Even now, at the time of this writing, the Lower Nine's basic recovery statistics indicate the slow return and the shifting nature of the neighborhood – both of which compound the challenges of recovery.[20] For instance, while the larger Lower Ninth Ward neighborhood has lost over 12,000 residents, the majority of this loss is felt in the areas north of North Claiborne Avenue, where the worst of the flood damage was and where the white population was lowest. For instance, the census tract just adjacent to the location of the levee break accounts for nearly 20% of the total population loss in the neighborhood and 22% of the loss in total housing units. The neighborhood's recovery has also been marked by a total growth in its white population, up from pre-Katrina numbers.

These numbers are perhaps not surprising in a post-disaster city marked by a radical racial shift that is marked in terms of its absolute numbers, its population percentages, and its geographical footprint. Yet, while the Lower Nine's unequal return is attributable to the complexity of the previously noted factors, this baseline of recovery importantly plays a continued role in the city and neighborhood's ongoing planning and redevelopment efforts, including those focused on an equitable and sustainable recovery. Indeed, urban planning and landscape design played direct, if not also tacit, roles in this slow and unequal recovery through multiple streams of post-disaster planning and design, including early proposals to reduce the city's footprint in low-lying, predominantly Black neighborhoods and proposals that reimagined private property in Black neighborhoods as new sites for urban greening and expansive stormwater infrastructures.

Though seemingly pairing easily with a general and benign, if not laudable, commitment to build back a "sustainable, environmentally safe, socially equitable community with a vibrant economy," the reality of unevenness evident in

the Lower Nine's recovery speaks to the failures of these larger planning efforts to challenge deltaic formations of *de facto* and *de jure* segregation that predate but were exacerbated by Katrina.[21] Indeed, in the wake of Katrina, a primary focus on sustainable redevelopment and "living with water" permeated planning and design circles, resulting in drastic proposals to shift the settlement patterns of the city to better accommodate water infrastructures and higher ground development at the expense of the city's majority and long-term Black neighborhoods and residents. In the Lower Nine, both direct and tacit forms of racialized recovery have been shaped through planning efforts and design imaginaries that have failed to confront what geographers R. Dean Hardy, Richard Milligan, and Nik Heynen have described as the "socio-ecological relations of racialized spaces."[22]

In early 2006, just five months after the storm, the city's Bring New Orleans Back Commission's (BNOBC) urban design committee published its proposal to reduce the city's urban footprint. Led by a local developer, the urban design committee worked in partnership with the Urban Land Institute (ULI) and the Philadelphia-based planning and landscape design firm Wallace, Roberts, and Todd (WRT). After months of planning and public statements about limiting return in areas like the Lower Ninth Ward, the final proposal included a future redevelopment map published in the local newspaper, *The Times Picayune*, where now infamous green dots outlined future green spaces in areas that were once residential areas.[23]

Like its mixed-race or primarily Black counterparts in lower-lying areas (and unlike its equally flooded counterpart in the primarily white and more affluent Lakeview neighborhood), the Lower Ninth Ward's northern portion received a green dot. The green dot suggested that the planning team proposed not to redevelop the vast majority of the Lower Ninth Ward, essentially the majority of land north of North Claiborne Avenue, and to "return" this area of the neighborhood's fabric of private homes to green space.[24] Residents' vehement response and protests of a future city envisioned without them stymied these planning efforts. Yet while the city largely backed away from direct proposals to reduce the city's footprint or prohibit return in certain areas, the slow pace of recovery and lack of significant public funding support for redevelopment continued to impact the Lower Ninth Ward in the years after Katrina, despite resident participation in subsequent city-led planning efforts.

These subsequent planning efforts, including the City-Council-led Lambert planning process in 2006; the Unified New Orleans Plan (UNOP) planning process (2006–2007); the master plan planning process, which culminated in 2010; and the comprehensive zoning ordinance process, which culminated in 2015, also largely backed away from any recommendations to limit the full rebuilding of the city. To varying extents, these subsequent processes made efforts to involve residents more comprehensively in the planning process. Despite this, there was little, if any, concerted effort to confront the exacerbated racial vulnerability and inequality evident in the Lower Nine, much less confront the ways that racial formations, as part of a larger work of racial capitalism, would take place through disaster recovery.[25]

Many of the post-Katrina planning efforts took a phased, targeted return, either proposing to phase in redevelopment efforts by first focusing on the least impacted areas first or by targeting redevelopment in specific zones to catalyze further development and investment.[26] Finally, a set of parallel private planning processes led by the New Orleans-based architecture firm Waggonner and Ball focused on Dutch water management models and detailed redevelopment plans based on the premise of "living with water."[27] These planning approaches, which started with the Dutch Dialogues planning process that then became the publicly funded New Orleans Water Plan, were synchronous with city-led planning efforts and were later adopted in part in the city's resiliency planning efforts and eventual Resilient New Orleans Plan (2015) and the establishment of the Office of Resilience and Sustainability.

Lower Ninth Ward residents also held and were the focus of neighborhood-specific planning efforts, including the Ward's own Sustainable Restoration Plan (2006) and the more recent American Institute of Architects' (AIA) Lower Ninth Ward R/UDAT Report (2018). While the AIA's plan took to task the inherent problems of the BNOBC's green dot plan and offered a more substantive, community-focused approach to rebuilding, it also took a phased and targeted approach in its recommendations for rebuilding and built on the Water Plan's proposed water infrastructure plan. That the AIA's planning effort, which included engagement with some of the Lower Nine's strongest neighborhood organizations, was held in 2018 indicates the continued need for attention to redevelopment and rebuilding efforts to specifically attend to the protracted and racialized inequalities that Lower Nine residents have continued to experience in their return. That the AIA planning effort continues to obfuscate the racialized undertones of this unequal recovery indicates that our current post-disaster recovery and sustainability approaches fail to confront the ways that race can work through such seemingly benign, if not commendable, rebuilding goals. Thus, as the city has proceeded through two decades of concerted city- and private-led planning and design efforts, the Lower Nine's future remains relatively unclear.

SUSTAINING ANTI-BLACKNESS

Understanding the specific roles that urban and environmental planning and landscape design have played in the Lower Nine's unequal recovery and continued vulnerability is critical to uncovering how, when generalized and abstracted from the specificity and formational nature of racialized contexts, processes, and landscapes, planning and design goals of sustainability and resilience can exacerbate if not create racialized geographies.[28] Because of their presumed benefit, policy and development directives invoking sustainability, equity, and resilience obscure how they might actually sidestep or malign the political and equity implications of redevelopment. Perhaps more importantly, they ignore the ways that anti-Blackness can work in parallel with these goals.

As noted in the introduction, concepts such as sustainability, as well as equity and resilience, are nearly ubiquitous in climate adaptation and environmental planning, locating planning and design squarely within the goal of improving, if not

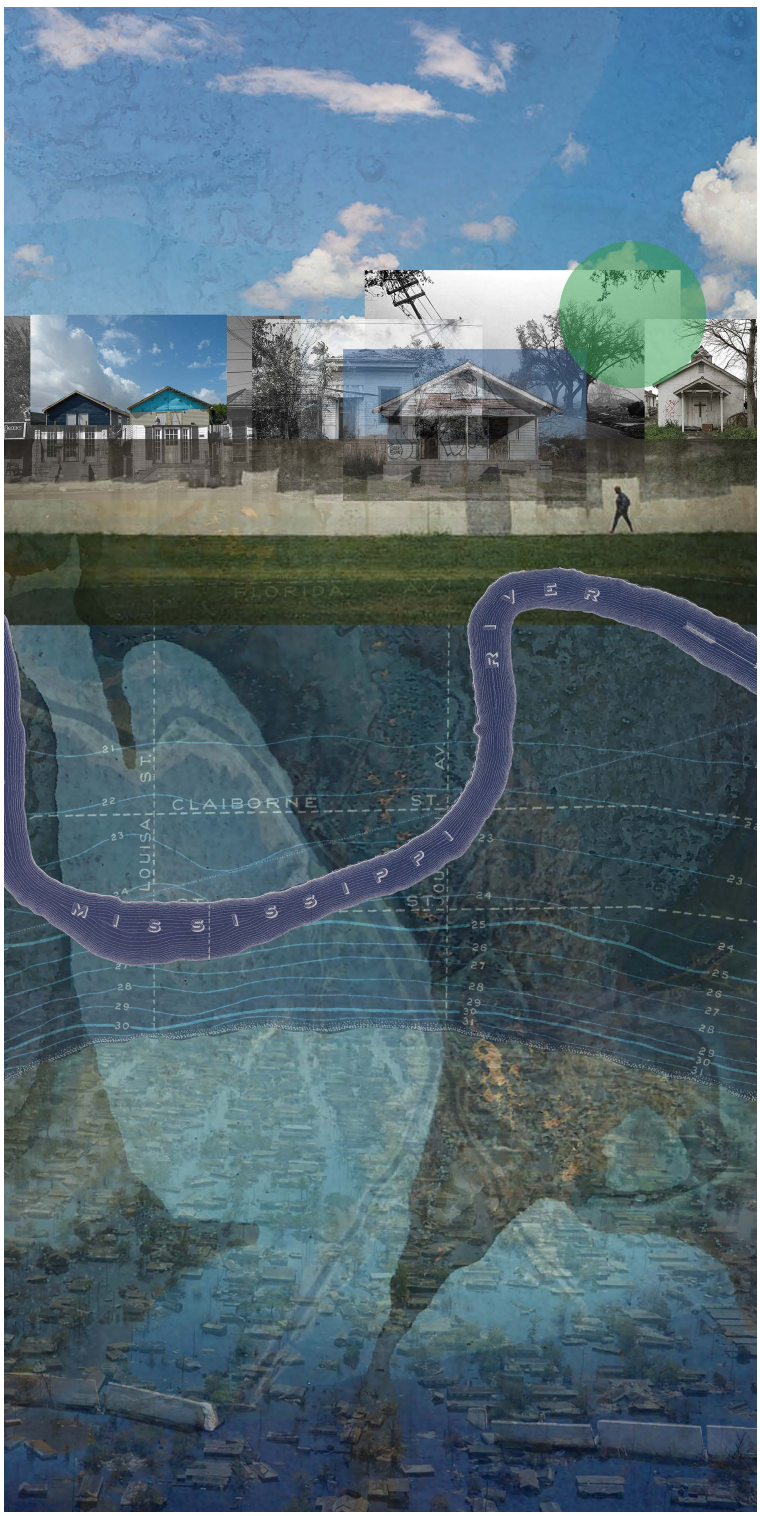

Figure 2.3.1
Sustaining Anti-Blackness. Mixed-media collage by the author.

transforming, land use patterns and the built environment in the face of climate change. Yet, sustainable development can be a loose concept in planning and design. Defined in the most general terms as development that meets the needs of the present without sacrificing the ability of future generations to meet their own needs, the ways it is understood and operationalized through planning, policy, and development decisions vary tremendously.[29] Indeed, recent scholarship problematizes urban greening and sustainability efforts for reproducing racialized inequalities at different scales, leading to enhanced vulnerability and displacement for those who are the most vulnerable to climate change.[30] While this literature points to the unequal outcomes of urban greening and climate adaptation, there is less work questioning how sustainability can be implicated in ongoing spatial logics of anti-Blackness in the U.S. context.[31]

Geographer Adam Bledsoe defines anti-Blackness as "a societal logic which assumes the inhumanity and thus spatial illegitimacy of Black populations."[32] His work parallels and builds on Black geographies scholarship, particularly its core premise that racial processes are inherently spatial.[33] Environmental justice scholars similarly locate their work squarely within the ongoing geographies of whiteness and white supremacy, noting how white supremacy and white privilege are bound up in the exacting geographies of environmental injustice, which scales from the siting of hazardous waste facilities to water and transportation infrastructures to the coterminous geographies of privilege protected from these same sites.[34] Anti-Blackness, as defined by Bledsoe, is a useful framework for articulating how sustainable development directives can exacerbate, if not extend, racial inequality, not only because of the ways through which Black geographies are rendered illegitimate and thus dispossessable but also by the ways the deeper contexts of race and vulnerability are erased in sustainable planning efforts.

In New Orleans, the lack of coherence between the goal of sustainably redeveloping the city after Katrina and the protracted and exacerbated issues of racialized inequality was particularly stark. For instance, the BNOBC's 2006 proposal to reduce the city's footprint and return much of the city's Black geographies to green space reveals major fault lines in planning and design thinking regarding how to deal substantively with racial justice within rhetorical commitments to sustainably redeveloping the city. As planning scholar Zachary Lamb has argued, the "green dot" plan failed to detail not only a spatial specificity to the proposed green spaces (the green dots were ambiguously placed in neighborhoods but did not conform to the existing urban fabric or land use patterns) but it also failed to justify why some neighborhoods and not others received a green dot.[35] The abstraction of a green dot placed over what, in the Lower Ninth Ward, was a dense array of intergenerational, familial connections to a landscape with one of the highest rates of home ownership in the city further distances the goal of sustainable development from its real-life impacts on individuals and communities. The sheer scale and amorphousness of the proposed dispossession of over 14,000 residents was a key mechanism through which anti-Blackness was carried out in the BNOBC plan.

The BNOBC plan proposed no housing, redevelopment or property policy, or funding mechanism for moving such a large number of residents away from

lower-lying areas in order to concentrate redevelopment on higher ground. The absence of such policy proposals, as well as the failure to engage with what is essentially an unequal and racialized private housing market, is, as proposed, incompatible with a more general goal of ensuring residents are not susceptible to future flooding.[36] The state's Road Home policy, which provided gap funding to homeowners to rebuild, was also based on the deeply racialized property values that existed before the storm, thus perpetuating an unequal return and an unequal housing market.[37]

Residents' protests and resistance to the BNOBC proposal aside, what is also important about the BNOBC's 2006 map is that, in its insistence that higher-ground areas were more sustainable, it failed to not only definitively define sustainability or how high-ground areas could accommodate the full population, but it also failed to confront how the deeply segregated city could be reconfigured through the lens of racial justice. In other words, given that the BNOBC's plan is absent a substantive discussion or analysis of the city's pre-Katrina racial segregation and how these realities of racialized inequality would compound the experiences of the storm and rebuilding, the indices of elevation and level of flooding as justifiable metrics for *not* rebuilding were abstracted from their deeper and racialized context of historical development in which many, though not all, of the city's majority Black neighborhoods lay in lower-lying areas. This context was wiped away through a seemingly neutral metric that justified how the plan's recommendations to reduce the city's footprint coincided only with historically Black neighborhoods.

While topographical conditions such as "elevation below sea level" and "extent of flooding" are indices of vulnerability that justify further analyses of socio-economic vulnerability, the measurements themselves were incomplete and partial, lacking more substantive contextual analyses of soil structure, building structures, and foundations, as well as larger levee protection systems. Indeed, such topographical distinctions are somewhat irrelevant *if* the levees were rebuilt to standards that protect the city from future storm-induced flooding.[38] Given the federal jurisdiction over levees, this is, therefore, at least as much a political question as it is a topographical one. Topography, in other words, was a metric for flood extent, but it is not necessarily a metric for vulnerability to flooding in the future.[39] Solely topographic analyses of the city's footprint would have yielded a *much* wider array of green dots than the BNOBC proposed and would have included low-lying affluent and white areas of the city that are on poorer soils and lower-lying than most of the Lower Nine.[40] Indeed, while it should be noted that the BNOBC proposal was made almost entirely in the absence of citizen participation, the commitment to high-ground redevelopment and density itself lacked an analytical framework beyond topographic conditions.

Though the city largely rejected a framework of limited return, the themes prevalent in the BNOBC's treatment of the Lower Ninth Ward continued in subsequent planning processes, particularly the Dutch Dialogues and New Orleans Water Plan planning efforts. For instance, despite their own soil analysis, which reveals the poorer soil conditions in areas toward Lake Pontchartrain, both Dutch

Dialogues and the New Orleans Water Plan proposed more investment in these areas rather than retreat.[41] In the Lower Ninth Ward, the Water Plan proposed a future wetland in a large portion of the neighborhood where, when the plan was created and released, hundreds of residents had already rebuilt their homes.[42] While the Water Plan details other proposed water infrastructures, the authors fail to engage substantively with their own vision for the Lower Ninth Ward. In other words, they make a sweeping proposal for sustainable development that erases hundreds of privately owned homes with no analysis of how the proposal would benefit or protect residents. Though rendered in far more detail than the BNOBC's green dots, this form of blank-slate sustainability, largely absent of Black residents in both process and design, further illuminates the anti-Blackness of many of the urban visions that percolated after the storm.

While this is not out of line with other larger-scaled proposals throughout the Water Plan in terms of taking private property to support new water infrastructures, the absence of any analytical, participatory, or design approach detailing the Lower Ninth Ward's racialized history and recovery, reveals the limits of sustainability planning to confront the entrenched workings of race and vulnerability. Like the BNOBC plan, the Water Plan's presumed connections between sustainability and a reduced building footprint (here taken over by blue space rather than green space) fail to grapple with the multiple dimensions of and tradeoffs inherent in sustainability planning and design. Indeed, though the Water Plan offers strong narratives of sustainable redevelopment through its premise of "living with water," it does little to attend to the multiplicity of ways that vulnerability is experienced by the city's Black residents.

In the end, such blank-slate approaches to sustainable development sustain anti-Blackness through a series of interconnected presumptions, analyses, and logics that not only fail to confront racialized vulnerability as the base landscape but also presume the inherent colorblindness of sustainability.

SUSTAINING BLACK FUTURES

When Katrina hit, the Lower Ninth Ward's population was predominantly Black, with just under 20,000 residents. The neighborhood's racial topographies roughly manifest as lower-lying areas being predominantly Black and higher-ground areas being either more racially mixed or having relatively higher percentages of white residents. With one of the highest homeownership rates in the city, many families have lived in the neighborhood for generations, and it was this deep connection to place and community that guided residents' determination to come home and rebuild. Further, residents' advocacy for a right to return also drew on a deep foundation of political and environmental justice activism dating back to the early twentieth century.[43] It was this multifaceted and intergenerational history of place-based resistance and activism that fueled residents' post-Katrina organizing, which interwove environmental and social dimensions.[44] Though the city-led and private planning and design efforts discussed previously failed to engage with the depths of anti-Blackness evident across the city, eight months after the storm, Lower Nine residents engaged in their own sustainable restoration

Figure 2.3.2
Sustaining Black Futures. Multimedia collage by the author.

planning efforts that put forth an understanding of sustainability, which enmeshed the neighborhood's economic, environmental and social future.

One of the first organizations to emerge after Katrina was the Lower Ninth Ward Center for Sustainable Engagement and Development (CSED), founded in 2006 by residents Pam Dashiell and Charles Allen. The CSED's mission is to revitalize the "Lower Ninth Ward community by creating a thriving urban landscape through environmental stewardship."[45] Their work, which has since grown to include place-based projects like community and environmental education in Bayou Bienvenue and a tree nursery, first focused on planning advocacy for the right to return in the face of city-led efforts like the BNOBC plan. This vision for recovery, the Sustainable Restorable Plan for the Holy Cross District 7 and Lower Ninth Ward, included community meetings and design workshops and focused on the larger goals of prevention, protection, prosperity, posterity, and people.[46] Residents' final recommendations were neighborhood and district-specific, drawing on an idea of sustainable development at the intersection of economic, social, environmental, and political repair that informed residents' vision for the future.

In terms of the built environment, Lower Nine residents advocated for property-scaled analyses of vacant lots for infill residential and commercial redevelopment at the same time that they insisted on a right to return across the entire neighborhood. In contrast to proposals to maximize density on higher ground with large-scale redevelopment projects, residents recommended policies that enabled lower-income families to rebuild low-scale, energy-efficient housing that fits within the existing neighborhood fabric. For residents, energy efficiency and green space redevelopment were simultaneously environmental and economic issues in that they could reduce economic burdens on the neighborhoods' lower-income families while also mitigating heat island impacts.

Drawing on long histories of food-growing traditions and land-based sustenance, residents also recommended supporting and expanding existing community gardening organizations to ensure that the neighborhood's green footprint was closely linked to residents' own organizing efforts. Further, residents detailed environmental racism concerns, using this planning effort to call for levee and flood wall repairs and an environmental impact statement from the Army Corps of Engineers before any dredging of potentially toxic soils in the Industrial Canal could take place. Across the plan, residents produced a set of recommendations that reinforced the links between the environmental, social, infrastructural, and political dimensions of futurity and community sustainability.

The overlaps and congruencies between urban sustainability and the neighborhood's economic and social recovery are apparent in residents' continued advocacy and community sustainability work in the last two decades. For instance, environmental concerns sparked renewed interest in Bayou Bienvenue, and, in the year after the storm, residents partnered with a local architecture firm to build a viewing platform on Bayou Bienvenue. In turn, this platform has provided the literal and metaphorical space to engage residents in further restoration efforts. For instance, Sankofa Community Development Corporation is working to restore the land and waters of Bayou Bienvenue through the Sankofa Wetland Park and Nature Trail, which focuses on 40 acres of wetlands in the Lower Ninth Ward

to "help with flood protection, as well as environmental education, community revitalization, economic development, and recreation."[47] Their work includes environmental and water monitoring, as well as master planning, clearing of invasive species and overgrowth, native tree and iris planting, wildlife tracking, and path creation.[48]

By many metrics, the neighborhood is still one of the slowest to recover from Katrina, yet it is profoundly progressive in terms of residents' understanding of and activism for the interdependencies between their environmental, social, economic, and built worlds. This intersectional understanding of sustainable development is the lens through which residents insist upon their geographical and social futurity. Rather than seeing their topographic conditions as a metric for abandonment, their work, through its many facets and targeted efforts, is deeply grounded in an understanding of sustainability that is nuanced, complex, and inherently contextual.

Lower Nine's understanding of sustainable Black futures directly challenges the histories of dispossession and abandonment, not only by refusing the abstraction of city-led efforts like the BNOBC and New Orleans Water Plan but also by offering a fundamentally different metric for sustainable Black futures in the very land and social fabric that has sustained the community for generations. Thus, while still challenged by larger racialized systems, Lower Nine citizen engagement in urban planning and environmental justice activism, as well as the community's land and water restoration and design and landscape agency, are critical to how we might better imagine aligning the goals of reducing vulnerability to climate change and flooding without further racialized dispossession.

ARCHITECTURE ON THE GROUNDS OF RACIAL JUSTICE

This chapter argues that while commitments to sustainability development are necessary for rethinking New Orleans's urban development in the wake of Hurricane Katrina and the increasing vulnerability of the city, the apolitical nature of these debates when set within a racialized recovery and a city steeped in the historical and contemporary spatialities of racial processes is entirely inadequate for pairing sustainable redevelopment with racial justice. The disregard for racial equity throughout city- and private-led planning and design efforts is a testament to how far apart these paradigms are in terms of both theory and practice.

Sustainability directives can pair uneasily with or even negate racial justice work if they do not specifically account for the intersectional, historical, and ongoing logics of race, which, as scholars are increasingly arguing, are inherently spatial.[49] Further, recent scholarship shows definitively how greening efforts in cities in the global North and South, whether through green infrastructure investments or sustainable design strategies, lead to racially unjust outcomes, further heightening and exacerbating the lived realities of racism through displacement to more vulnerable areas and increased economic vulnerability. The potential for sustainable development to intersect with "group-differentiated vulnerability to premature death" through increasingly racialized climate and development vulnerability should arguably be the center of how we conceptualize and ground sustainability

directives, practices, and projects.[50] Yet much urban development – whether through redevelopment planning or the design of green infrastructures – sidesteps the possibilities of thinking about sustainability as if Black Lives Matter.[51]

NOTES

1 The Lower Ninth Ward is both a district and a neighborhood within this same district. As a district, it is made up of two neighborhoods: the Lower Ninth Ward, which is located north of St. Claude Avenue and stretches back to Bayou Bienvenue, and Holy Cross, which is located south of St. Claude toward the Mississippi River. Unless specifically noted, throughout this chapter, I refer to the Lower Ninth Ward as the larger district.
2 United Nations Brundtland Commission 1987.
3 Brand 2015.
4 See the Lower Ninth Ward's 2006 Sustainable Restoration plan for a detailed discussion of when residents were allowed to return and the hurdles they initially faced.
5 Bledsoe 2020; Gilmore 2002; Johnson 2011.
6 Bonds and Inwood 2016.
7 Hunter and Robinson 2018; Anguelovski et al. 2022; Anguelovski and Connolly 2021.
8 Campanella 2023.
9 While the issue of subsidence has gained attention since Katrina, it was not new information. Indeed, the survey descriptions from the 1930s HOLD redlining efforts noted subsidence and ensuing property damage occurring in areas like Lakeview, a neighborhood toward Lake Pontchartrain, as early as the 1930s when the neighborhood was largely still being developed. See Brand 2022.
10 Brown and Théard 1895; Data Center 2005a, 2005b.
11 Maroon communities are independent settlements often established by formerly enslaved Africans. In New Orleans, maroon communities are known to have lived in Bayou Bienvenue, which provided protection through its dense growth and waters.
12 Allen 2019, 2022; Bledsoe 2017; Hosbey and Roane 2021.
13 Brand 2022.
14 Campanella 2023; Colten 2002.
15 Department of the Army 1966; Parker 2003; Sewerage and Water Board of New Orleans 1965.
16 Department of the Army 1966.
17 Committee on Homeland Security and Governmental Affairs 2005; Van Heerden 2007.
18 Bring New Orleans Back Commission 2006.
19 Bates and Green 2009; New Orleans Fair Housing Action Ctr. v. US Dept. Of Housing, 639 F. 3d. 2011.
20 United States Census Bureau and American Community Survey (ACS) 2010–2022; United States Census Bureau 2000.
21 Bring New Orleans Back Commission 2006.
22 Hardy, Milligan, and Heynen 2017, 63.
23 Lamb 2020.
24 Brand 2022.
25 Brand 2015; Lamb 2020; Nelson, Ehrenfeucht, and Laska 2007; Reardon et al. 2009. See also Hardy, Milligan, and Heynen 2017 and their discussion of racial coastal formation. Though focused on work with the Gullah/Geechee Nation, their argument speaks to the overarching failure of adaptation planning to engage with the ongoing impacts and new kinds of systemic racism.
26 The BNOBC's full plan included a phased rebuilding approach, and the city's 2007 Recovery Plan, led by the head of the city's redevelopment, included a targeted, catalyst approach to redevelopment.

27 Waggonner and Ball led the Dutch Dialogue planning process between 2008 and 2010, which then, with public funding, transitioned into the Greater New Orleans Water Plan 2013.
28 Agyeman, Bullard, and Evans 2003; Hardy, Milligan, and Heynen 2017. See also Chapter 1.3 in this volume.
29 United Nations Brundtland Commission 1987.
30 Anguelovski and Connolly 2024.
31 Notable exceptions are Anguelovski et al. 2020; Hosbey, Lloréns, and Roane 2022. Also, Agyeman, Bullard, and Evans 2003; Bullard 2018.
32 Bledsoe 2020, 1.
33 Lipsitz 2011; McKittrick 2006; McKittrick and Woods 2007; Woods 1998, 2017.
34 Bonds and Inwood 2016; Bullard 2018, 1996; Bullard, Johnson, and Torres 2004; Pellow 2000; Pulido 2015; Ranganathan 2016; Seamster and Purifoy 2021; Wright 2010, 2003.
35 Lamb 2020.
36 Harris 1993; Hardy, Milligan, and Heynen 2017.
37 See, in particular, the Louisiana Fair Housing Action Center's advocacy work and reporting on the Road Home program. While the Road Home's initial framework for funding allocation was later ruled discriminatory, the resulting legal decision was not retroactive to homeowners who had already accepted the funding. New Orleans Fair Housing Action Ctr. V. US Dept. Of Housing, 639 F. 3d.
38 There has been extensive research on the levee failures and rebuilding, including the wider flood protection system.
39 This is *not* to say that lower-lying areas are not prone to flooding. In New Orleans, this is particularly true during major rain events when the city's outdated pumping system either fails or cannot keep up with stormwaters. Before and since Katrina, parts of the city have been flooded in these situations. While this is again dependent on infrastructural systems (in this case, pumps rather than levees), what is clear is that flooding vulnerability is not solely tied to topography but instead is linked to more complicated infrastructural failures and contextual realities.
40 As I have written elsewhere, lower-lying areas that were heavily damaged during Katrina but were more affluent and predominantly white were never under consideration as future green spaces. Indeed, these areas, such as the Lakeview neighborhood, now have some of the highest property values in the city, and private and public investments have directly aided this recovery. See Brand 2022.
41 Waggonner and Ball Architects 2013.
42 This vision was also depicted in earlier proposals, including the Dutch Dialogues planning effort. The continuity between these planning efforts, or the lack of change in their proposal for the Lower Ninth Ward, indicates that no substantive analyses or resident participation changed their initial recommendation.
43 At the time of writing, the city had just marked the 19th anniversary of Hurricane Katrina. Lower Ninth Ward Center for Sustainable Engagement and Development 2006.
44 Landphair 1999, 2007.
45 Lower Ninth Ward Center for Sustainable Engagement and Development (CSED) n.d.
46 As the plan states, the community was assisted by the Tulane/Xavier Center for Bioenvironmental Research and the Louisiana Department of Natural Resources (DNR) and outside specialists in sustainable community development, including architects, urban planners and community sustainability experts. Lower Ninth Ward Center for Sustainable Engagement and Development 2006.
47 Sankofa Community Development Corporation n.d.
48 Sankofa Community Development Corporation 2021.
49 Lipsitz 2011.
50 Gilmore 2002.
51 Koh 2017.

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2.4 Market Publics in Urban Africa

Reading Self-Organized Spaces of Exchanges and Material Flows at Onitsha Markets in Nigeria

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Onitsha, like most cities in post-colonial Africa, is urbanizing exponentially, atypically without industrialization, and is confronted with myriads of developmental challenges, including inadequate basic infrastructure, deficient spatial quality, and a lack of sustainable urban growth. Current planning policies and approaches have failed to improve the living conditions of the citizens and are mostly structured using the colonial logic of extreme otherness to benefit the political class. Such policies are segregationist, non-contextual, obsolete, and, in most cases, unimplementable.

Onitsha is a city in southeastern Nigeria that comprises a conglomeration of markets run by self-organized social systems that define and drive the city's exponential urban growth processes. The markets in Onitsha provide socio-cultural, socio-economic, and socio-political platforms for most citizens in the city. Through an analysis of the making and uses of urban market spaces in the city, this chapter presents critical insights on the self-organized urban dynamics of space production and negotiations of spatialities in post-colonial contexts.

The chapter also provides insights into how markets in Onitsha and their constituting spatialities are inextricably interwoven with material flows, urban transformations, growth, and livability in the post-colonial city. The modes of production of spaces in Onitsha reflect emergent behaviors in various ways. They are organic responses to and survival mechanisms for extreme uncertainties emanating from the entrenched colonial planning and governance logic of extreme otherness in Nigeria. This chapter contributes to the discourses on emergent dynamics and self-organization processes of urban growth in post-colonial urban Africa and further suggests potential strategies towards sustainable, livable, equitable, and just urban futures.

THE URBAN CONTEXT

Cities in Africa urgently need alternative urbanism strategies to confront their ongoing grand challenges. More than half a century has passed since most African countries were declared independent, and yet, urban poverty and dystopian inclinations continue in cities across the African continent. Current planning approaches in most of these cities have failed to improve people's living conditions and appear to be designed for the political class. Many strategies are

DOI: 10.4324/9781003480426-11

segregationist, non-contextual, and impossible to implement. In Nigeria, one could argue that people-oriented planning policies are largely nonexistent.

The markets at Onitsha represent a microcosm of spatial production in post-colonial African cities shaped by self-organized and emergent spatialities.[1] They provide socio-cultural, socio-economic, and socio-political platforms for most of the citizens in the city. These markets are archetypes of urbanity that exemplify emergent infrastructures of exchanges and material flows in the city. Through spatial readings of urban market spaces at Onitsha, it appears that these markets' spatialities are interwoven with material flow processes, transformations, growth, and the city's livability. Thus, the city is a market, and the market is a city.

The presiding notion in earlier studies of the market phenomenon in post-colonial urban Africa was that market activities were on the margins. Referred to as informal or periodic markets, it was assumed they would eventually fade away.[2] Today, by contrast, we understand that they have persisted and become the dominant spatiality. I call this phenomenon a *market public*, defined as the totality of the self-organized ensemble of exchanges and material flows, in which citizens adaptively construct spaces amid extreme *otherness*, rapid urban growth, and the conditions of uncertainty.

The observed self-organized forms of space production, often described as informality, is a reaction to the contestations and survival mechanisms in the face of extreme otherness and the violence imposed by the post-colonial African state. Although informality as a conceptual framework has been useful in unraveling the mechanisms of space production in the post-colonial context, it is currently obsolete, especially as a planning tool for livable and sustainable growth. Ontologically and epistemologically, informality is a colonial relic that has inadvertently promoted the institutionalization of extreme *otherness* in urban Africa. If over three-quarters of economic production in urban Africa, as exemplified by the Onitsha market phenomenon (for example, through retailing, transportation, services, housing, manufacturing, and infrastructure networks) are categorized as informal, then what justifies the continued epistemological *othering* of these dominant urban spatial dynamics in the post-colonial context?

The markets in Onitsha exemplify sites of contestation between the state hierarchies and the trading networks of merchants. These contestations catalyze the emergence of large urban complexes that encompass self-organized spaces of exchanges and material flows in the city. The constant contestations are a result of the dual nature of the post-colonial African state (often seen as formal/informal) and the failure of political actors to outlive or reimagine the double-consciousness mindset that has perpetuated the dichotomy.[3]

Peter Ekeh's seminal 1975 article, "Colonialism and the Two-Publics in Africa: A Theoretical Statement," presents an insightful lens for the understanding of the dichotomy phenomenon and, subsequently, the emergence of a new form of spatiality – a *market public* at Onitsha. The *market public* is conceptualized to interpret the multi-layered complexity of the African city, with juxtapositions that emerged from the colonial legacy of the *Two Publics* within the Nigerian state. *Market publics* embody self-organized urban spatial dynamics amid extreme otherness and extreme uncertainty. Through the urban market phenomenon in

Onitsha, the citizens experience the real publicness of the city. The ancestral settlements among the Igbo (including Onitsha) before colonization never had informality.[4] It was the introduction of the township ordinances that gave rise to the formal/informal dichotomy.[5]

In the following section of the chapter, I present Onitsha markets as spaces of exchanges and material flows. In the next two sections, I present the readings about these self-organized phenomena and the various forms of emergent spatialities, respectively. I conclude with critical perspectives on how to rethink the post-colonial African city beyond informality and suggest further strategies toward sustainable, livable, and equitable urban futures.

BEYOND INFORMALITY: EXCHANGES AND MATERIAL FLOWS AMID EXTREME OTHERNESS

Markets are primeval urban elements of human settlements as well as public spaces of pluralities in urban Africa.[6] The market phenomenon in Onitsha reflects the culmination of everyday life and how spaces are structured at the intersections of physicality, flows, and sociality within the post-colonial African city. Markets in Onitsha embody an archetype of self-organized urbanity amid an apparent disorder and are pivotal in the understanding of urban dynamics that foster complex communities of exchanges and productions.

These communities of self-organized networks of traders create cooperation opportunities involving trading, artisanship, services, logistics, jobs, and welfare amid contestations with the post-colonial state hierarchies in the city. The resulting urban dynamics have given rise to distinct architectural productions and territorial organizations in the rapidly growing city. These productions are dynamic, flexible, adaptive, and ephemeral and often categorized as urban informality. Figure 2.4.1 shows two sets of photos taken in 1962 and 2018, respectively, that depict the so-called informality with a striking sameness even after more than half a century. Figure 2.4.2 shows a juxtaposition of relationships between the supposedly formal (commercial banks and telecommunication multinational corporations) and the supposedly informal (kiosk vendors). These observations highlight how the concept of informality is limited in the understanding of the emergent urban phenomena in post-colonial urban Africa. The various self-organization processes erroneously conceptualized as informality are instead survival responses of a people amid the conditions of extreme *otherness* and uncertainty.

The formal/informal dichotomy in urban Africa takes a departure from the International Labor Organization's 1972 report.[7] There are several interpretations of informality under different schools of thought, such as dualism (which promotes support for the dichotomy),[8] legalism (which promotes legalization through property rights as a panacea for development),[9] voluntarism (which promotes the choice of citizens opting out of the systems),[10] and structuralism (which argues that informality is because of capitalist exploitative mechanisms).[11] Lastly, there are proponents of inclusion (who emphasize the need to encourage participation and a hybrid approach as a way to collapse the dichotomy).[12]

Figure 2.4.1 Spatial appropriations and urban informality at Onitsha in 1962 (images left) and 2018 (images right). Photos left: Richard Henderson. Photos right: author.

Figure 2.4.2 Spatialities linked together beyond the formal/informal dichotomy. The photo shows a bank branch, a telecommunications office, and a kiosk vendor who sells telecommunications call credits via a payment system issued by the bank. Photo by author.

One major shortcoming of these interpretations is that they focus on an ontologically imposed dichotomy that is based on the colonial logic of extreme *otherness* and does not reflect the reality for Onitsha nor support a sustainable future for post-colonial urban Africa. While many scholars are using the term to unravel the urban dynamics and learn various ways to improve the living conditions of people in urban Africa, it appears that the Nigerian State political actors are using the concept of informality to entrench and reinforce the segregationist nature of the post-colonial state, often through extreme violence.[13] In essence, the concept of informality in Onitsha appears to be a question of the rights to construct spatialities and achieve access to the city. It is crucial to expand the understanding of

the informality framework among the various stakeholders, including the perspectives of the urban *Other*, who is yet to speak.[14]

Prior to ILO's adoption of the formal/informal concept, some scholars were critical of how informality was erroneously confused with the urban poor.[15] These scholars argue that the formal/informal dichotomy is a crude and simplistic division of all economic activities in the newly independent African states. Geographer R. J. Bromley[16] considers the definitional problems attached to earlier criticized dichotomous models put forward by ILO as politically utopian and identified five attitudes to the informality framework, namely:

1) Total ignorance or apathy (of the phenomenon),
2) Stubborn advocacy (those who believe that the existing formal/informal dichotomy is good),
3) Flexible advocacy (those who admit that the literature has deficiencies but wish to produce policy formulation with the existing frameworks),
4) Mild opposition (those who believe the dichotomy is what is known for now until there is an alternative),
5) Strong opposition (those who believe that the formal/informal dichotomy is incorrect, totally inadequate, and who would rather work with different conceptual frameworks).

Looking at the various attitudes towards the informality framework, one can detect shifts in epistemological positions from (1–2), (3–4), and last, (5) (which seems to have been largely ignored by the various schools of thought on informality). Findings at Onitsha demonstrate the need to identify with the fifth position (5), which is a strong opposition to the informality conceptual framework as a way forward, especially now that the so-called informal has decided to speak. Informality as a framework for urban governance and development in urban Africa is inadequate and is rather a euphemism for extreme *otherness*.

Political scientist and sociologist Peter Ekeh[17] concretely conceptualized the existence of a dichotomous phenomenon and dialectical relationship between what he referred to as "Two-Publics" in post-colonial Africa, as opposed to the "One-Public" that exists in the West. He argues that the distinction between the private realm and the public realm over the centuries in ancestral Africa has acquired a peculiar Western connotation. In ancestral Africa, the private realm and the public realm have a common moral foundation. In post-colonial Africa, by contrast, the private realm is differentially associated with the public realm in terms of morality. This has manifested itself as two different types of public realm: the primordial public and the civic public.

The "primordial public" is linked to primordial groupings, ties, and sentiments that influence one's public behavior and operate on the same moral imperatives as the private realm. By contrast, the "civic public" is historically associated with the colonial administration and has become identified with the structures of coloniality of power for its legitimacy: the military, the civic service, and the police.[18] The successive *othering* of spatiality through the civic public introduced cultural violence that includes a change in land tenure systems and place-renaming through

the indirect rule ideology.[19] The British colonial administration in Nigeria also introduced the warrant chiefs among the Igbo to facilitate a hierarchy, whereas the socio-political structure of the ancestral Igbo is inherently a fractal network and, thus, a precursor to the formal/informal dichotomy.[20] Consequently, the so-called informal (urban *Other*) become tactical, fluid, adaptive, and insurgent to claim their right to the city. The constant contestations between the hierarchy of the state and the fractal network of the market organizations have stifled real progress towards achieving a livable urban future in the post-colonial city.

SELF-ORGANIZED URBAN DYNAMICS AMID UNCERTAINTY

The self-organized networks in Onitsha markets trace their routes from the Igbo fractal networks associated with their social institutions.[21] These networks operate as an example of Peter Ekeh's primordial public. The social institutions are akin to what Manuel De Landa describes as social distribution systems, which often allow extensive urban complexes of productions to emerge and subsequently vanish.[22]

The structure of the primordial public in Onitsha is based on networks of traders, artisans, and transporters, with nodes via market locations, merchandise types, transaction size types, kinship ties, and social groupings. It is organized under one umbrella body known as Onitsha Markets Amalgamated Traders Association (OMATA). OMATA was founded in 1948 and became prominent in the 1950s among traders in the city as a form of protection from the colonial administration. OMATA has survived the British colonial administration, the Biafra genocide,[23] all the military dictatorships, and the current anocratic Nigerian state.[24]

OMATA has provided governance that is closer to traders, artisans, and Onitsha citizens and works to pressure the Nigerian state to provide infrastructure, review tenure laws, and the various restrictive legislations against trading interests. It operates on multiple scaled levels of recursiveness (as fractals) and in three major adaptations: Markets, Transportation, and Neighborhood systems. Figure 2.4.3 shows the structure of the civic public (at Onitsha) and its relationships

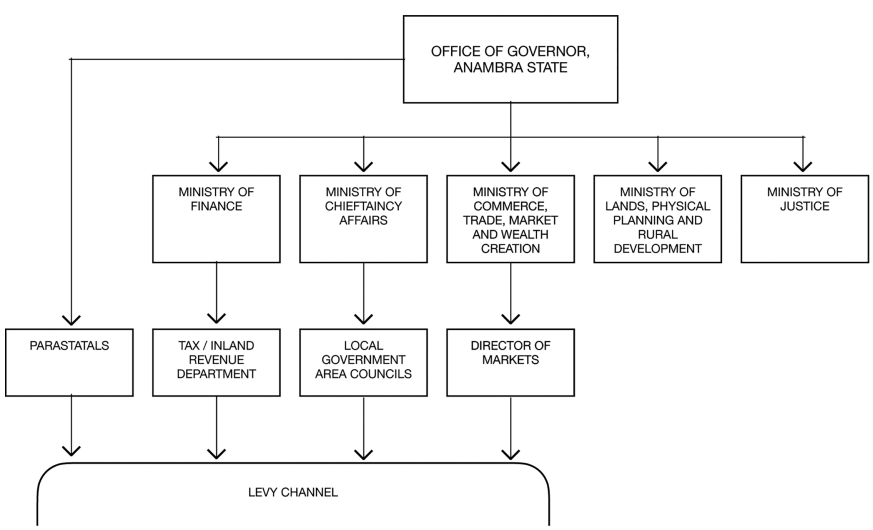

Figure 2.4.3
Government hierarchy at Anambra State as an example of a "civic public."

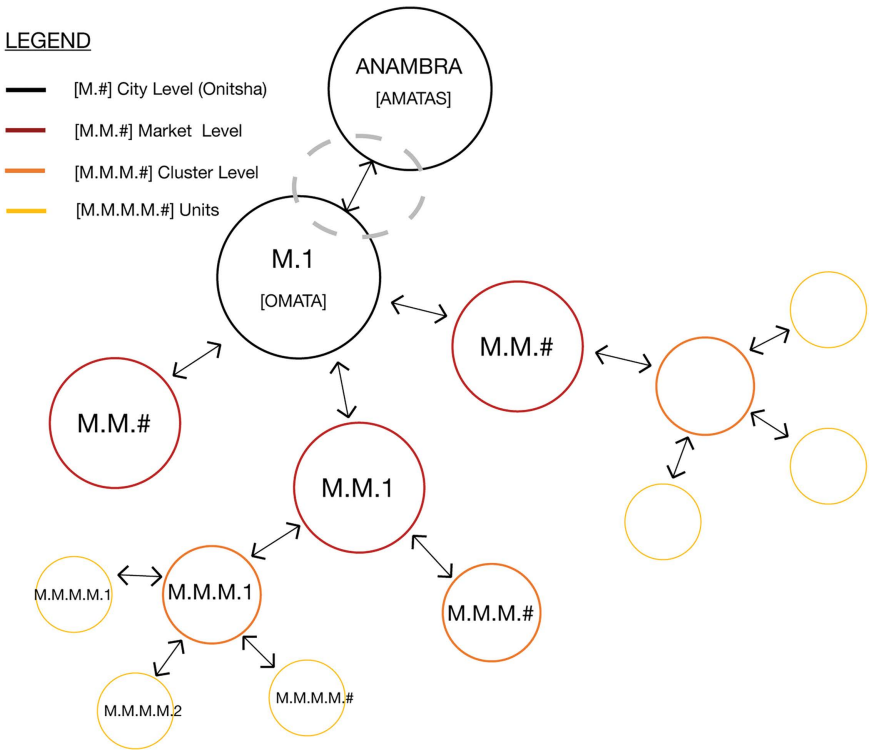

Figure 2.4.4
Fractal networks of OMATA at Anambra State as an example of a "primordial public."

with the markets through a levy channel. Figure 2.4.4 shows the nodal configurations of the primordial public (OMATA) based on the ancestral logic of fractals.

OMATA in Onitsha is an example of people as infrastructure,[25] an instance of economic, social, and political networks used to confront and cope with extreme *otherness*. Even amid more recent technologically and e-commerce-driven exchanges, the self-determined networks of market organizations depend on the bonds of kinship, ethnicity, and friendships.[26] OMATA leverages this self-organized agency by way of entrepreneurship and stakeholdership to reconfigure the spatialities of exchanges and material flows in Onitsha.[27]

Most traders, artisans, and transporters in Onitsha have a minimum of four memberships in social organizations. Primarily, these include membership in trade clusters, kinship ties groupings, neighborhood associations, and affiliations with religious organizations. Some traders belong to over ten different associations within the complex web of OMATA. These interrelationships based on various affiliations make the social network of OMATA not only resilient but also what Nassim Nicholas Taleb has called "antifragile."[28]

OMATA's social networks play huge roles in fundraising, apprentice training, litigation outside the post-colonial state courts, trade network reinforcements, diaspora connections, and the provision of welfare for its members. The sociality embedded in the OMATA networks shapes the spatialities of activities amidst Onitsha's uncertainties. The various units of OMATA are formed "people-up" according to market locations, types of commodities, types of services, volumes of trade, kinship relationships, gender, and other forms of social networks.

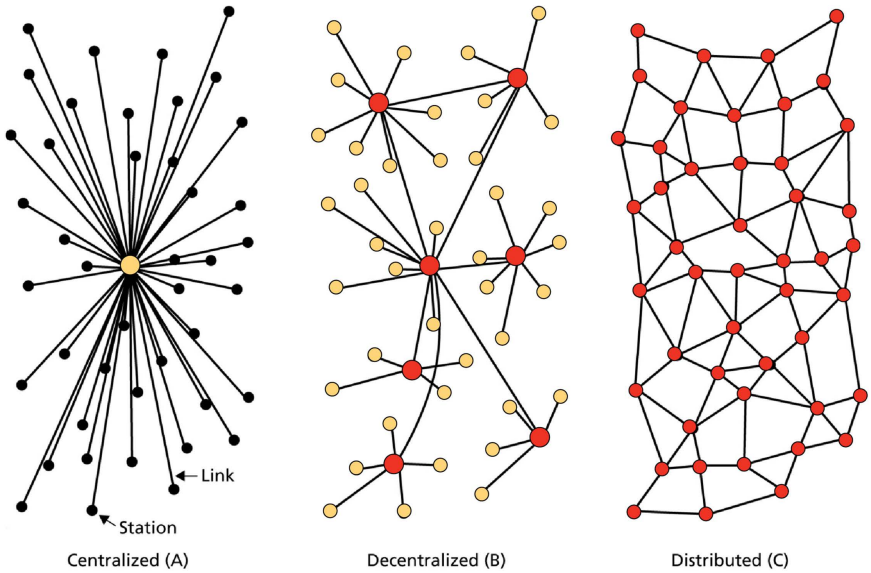

Figure 2.4.5
Network types developed by Paul Baran in 1964, used to demonstrate OMATA fractral networks and network types embodied in the fractal cultural logic among the Igbo at the family, village, and city-state levels.

People-up, often nodal, is the correct word here, as "bottom-up" suggests a hierarchy under a network and is thus a misnomer in this context. None of OMATA's associations are below another. They are simply nodes within a self-organized network, as shown in Figure 2.4.5. There are hundreds of nodes, which are made up of sub-organizations at Onitsha under the umbrella body of OMATA. Each of these organizations has internal legal, lending, disciplinary, representative, and administrative units and is reflected in the market, transport, and neighborhood sections of OMATA.

OMATA wields enormous political power, as these markets can also decide swing votes in Anambra (province) gubernatorial elections. Consensus by OMATA members is often totally and effectively executed. In 2018, for example, OMATA halted trading and city-wide transport activities, and a city of over eight million people stood still. This was possible because OMATA adapts to different network types depending on the scale of the jurisdiction. On the market site scale, it exhibits a distributed network of market segments. On the city scale, it exhibits a decentralized network system whereby the different individual market sites in the city act as nodes within the OMATA network. And on the scale of Anambra State (province), it exhibits a centralized network, whereby each of the markets in each city elects a single executive representative to liaise with the state officials (for example, Onitsha, Nnewi, and Awka cities).

The centralized network version is called the Anambra Markets Amalgamated Traders Association (AMATAS). The leadership of AMATAS usually plays a dual role of traders and politicians, belonging to both the primordial and the civic publics. Thus, the market organization adapts to a network type (centralized, decentralized, and distributed), depending on the vulnerability and exposure to the civic public. Centralized networks pose the highest risk of ruin; the decentralized networks are resilient, while the distributed networks are antifragile (as they multiply

further at any slightest disturbance).[29] In essence, the self-organized nodes in these networks respond to the degrees of uncertainty within the system, adopting an embodied fractal localism that traces its roots to the intrinsic cultural logic of fractals among the Igbo.[30]

Although this form of self-organized people-agency is often portrayed negatively as the "reign of guilds,"[31] "shadow cites,"[32] or "shadow economies,"[33] OMATA (as a primordial public) is an example of what Faith Ikioda refers to as "communities of practice" in her explorations of the role of market traders in Lagos, Nigeria.[34] This is in contrast to the post-colonial state (as a civic public), which, while perceived as visible, also has a darker side mainly linked to extraction, rent-seeking, racketeering, and corruption.[35]

Blatant corruption or embezzlement in a primordial public, exemplified by OMATA, is almost unheard of. An act of sabotage to the network often attracts immediate consequences that can be extended to one's lineage and is sometimes as severe as banishment from the community.[36] OMATA network extends to other cities in Nigeria, especially Lagos (including markets and wharves), as well as abroad (mainly in sales representations and factories). The self-organized networks of exchanges and material flows at Onitsha provide a valuable lens through which to further understand the spatial dynamics of both the market and the city amid the conditions of extreme uncertainty.

CONTESTATIONS WITHIN THE TWO-PUBLICS AT ONITSHA

Peter Ekeh's two publics constitute the two different constructions of spatialities running parallel to each other at Onitsha. The contestations between self-organized networks such as OMATA (as primordial public) and the dominant hierarchies of the state (as civic public) define the territorial organization and urban dynamics in Onitsha. The contestations fluctuate under prevailing contextual forces, and material flows within the city and often manifest as tenure restrictions and rent-seeking activities. For example, a secure tenure condition, either through the possession of an official lease-hold title deed (also known as a Certificate of Occupancy) or through the dominant presence of a primordial public, incentivizes further investments in properties and infrastructures. Under weak tenure conditions, by contrast, state officials usually evict traders from locations in the city and construct new shops on the same property. It appears that the civic public waits for the market's organic clustering and operations to be saturated before redeveloping confiscated market sites. The shops in the newly constructed markets are often not affordable to the traders previously occupying the location. A vicious cycle thus ensues, whereby political actors wait for locations to appreciate in value before re-appropriating them as prime real estate (essentially via state capture).

The proposed legalization of title deeds to formalize the informal[37] has been abused in Nigeria. Such formalization has been conducted under the ruse of Internal Generated Revenue (IGR) and has taken place without an effective social contract with the citizens.[38] It is also erroneous to assume that Nigeria's

traders and artisans do not pay taxes, as claimed by some state officials and policy-makers. In Onitsha, all channels within the hierarchy are primarily used to collect levies and taxes from traders, transporters, and artisans. One could argue that political actors in Nigeria have refused to reform the inherited colonial political model of extreme *otherness* to instead engender a system that will decentralize power and exterminate rent-seeking, cronyism, and corruption.

The emergent phenomenon erroneously referred to as informality can be understood as the manifestation of a survival mechanism against entrenched and extreme *otherness*. The contestations of spatiality and everyday life in the Onitsha market reflect what James Scott refers to as "infrapolitics" and "hidden transcripts" of how people employ strategies of resistance to evade command-and-control governance models in the city.[39] For example, the ephemeral appropriations by traders seen on the streets are a form of resistance and a survival mechanism in response to the precarious tenure in Onitsha: constructions of spatiality that respond to material flows and exchanges amid tenure uncertainty. These flows are ephemeral, adaptive, and under constant flux of unbuilding and rebuilding.

The protean nature of the contestations at Onitsha markets is interwoven in such a way that members of the Onitsha markets association (primordial public) are sometimes also state officials (civic public). Amid the various contestations, there are also co-productions between the state officials (civic public) and OMATA (primordial public), which is apparent when considering infrastructure provisions, public transportation, utilities, sanitation, security, taxation, and market management. The resulting hybrid relations in Onitsha markets cut across many different layers of the city and often unfold as a self-organized adaptive response to the city's existing state hierarchies. In fact, Two-Publics within the Nigerian state have enabled an artificial segregation in the public realm that embodies a dichotomy in which the government is seen as an external entity that is different from the people. The constructions of spatialities in Onitsha are thus defined by a delicate relationship between the civic public and the primordial public with respect to taxation, property values, and tenure systems.

The relationship between civic and primordial publics is crucial for the de-escalation of tensions between the market organizations and the city's task force;[40] it is also crucial for the functioning of vigilante security for all markets in Onitsha. Each spatial unit in the markets (often designated as Plaza, Line, and *Ọgbọ*) has its own vigilante security, which operates as a distributed network in the form of fractals.[41] The vigilante members understand the local context and cooperate with the national police officers, who might not even understand the local languages in the section of the country where they are posted for service (see Figure 2.4.6). This is an example of how Nigerian political actors have failed to rethink the colonial model to better manage the multi-ethnic nature of the post-colonial state. Further understanding of the contestations and co-productions would lay a foundation for developing a broader framework and tools to engage with the political and spatial complexity in post-colonial Nigeria as well as contemporary urban Africa beyond the conceptual framework of informality.

Figure 2.4.6
A vigilante officer on duty. This security network is embedded in the fractal logic of OMATA and usually cooperates with state police in the markets. Photo by author.

MARKET PUBLICS IN URBAN AFRICA

Markets in Onitsha function as the core social infrastructure of exchanges and material flows in the city and thrive in the plurality of self-organized networks.[42] Markets in cities foster a melting pot for different scales of diversities: goods, people, ideologies, and languages. The constant contestations seen in Onitsha markets between the state hierarchy of political actors (the civic public) and the self-organized networks of social institutions (the primordial public) shape the mechanisms of space production in the city.

Although the physical infrastructures at Onitsha markets appear disorganized, on closer inspection, the social infrastructures of people and their relationship to the material flows and exchanges in the city reveal a self-organized and emergent network. The prevalence of the self-organized market phenomenon in the post-colonial context demands an approach that is centered on exploring socio-spatial realities amid extreme *otherness* and uncertainty.[43] There is an urgent need to transcend the existing constructions of spatialities in Onitsha to work towards a livable, just, and sustainable future.

Many scholars have acknowledged that urban policies in most African countries will fail if they do not recognize the contextual realities, multiple levels of complexity, and uncertainties in the continent.[44] Effective urban governance in an African city such as Onitsha requires the adoption of interdisciplinary inquiry on

social agency and the intersecting networks of exchanges and material flows in the city. It is apparent that a paradigm shift in ways of knowing, methods of investigation, theorizing, and new forms of spatial practice for urban Africa is paramount.

To effectively engage with the Onitsha market phenomenon within the market public, it is important to re-examine the role of architecture, urban design, and planning in such a dynamic context (as exemplified by material flows and exchanges). Architecture constitutes a projective thinking into the future, which demands a synthesis, as well as systems thinking embedded within the cultural sensitivities of a society, local techniques, crafts, and materials in a given context. Applying a science of complexity and emergence in the case of Onitsha markets' socio-spatial phenomena would foster architecture and urban planning that is sensitive to the local context, human experiences, and the environment.

It is time to rethink the future of the architecture, urban design, and planning disciplines, as well as their roles in post-colonial Africa with its urban conditions rife with extreme *otherness* and uncertainty. This would allow a reimagining of the Two-Publics situation, as exemplified by Onitsha in Nigeria. The observed self-organized urban dynamics in a Two-Publics context like the one in Onitsha has given rise to a type of emergent spatiality, which I refer to as "market publics." Market publics are defined by the market phenomenon, whereby citizens use OMATA (a mesh of fractal social networks intrinsic to the cultural logic of the social, political, economic, and spatial life of the Igbo) to adaptively appropriate spaces under extreme *otherness* and uncertainty emanating from impositions by the post-colonial state.

Market publics engender the meeting point for both the primordial and civic publics. They determine the mechanisms of material flows and exchanges in the city, both as a dissonance in the form of contestations and as a resonance in the form of hybrid relations and co-productions. Market publics are conceptualized to interpret and appreciate the multi-layered complexity of the post-colonial African city. As seen in Onitsha, market publics provide a new lens to reimagine the entrenched colonial logic of extreme *otherness* in planning, policy, and governance towards a livable future for contemporary urban Africa.

CONCLUSION

This chapter presents a critical reflection on the self-organized forms of space production at Onitsha in Nigeria driven by a market phenomenon that is currently interpreted as informality. These self-organization processes in Onitsha markets are survival mechanisms and represent resistance to the extreme *otherness* and uncertainty that appears as a recurring phenomenon in post-colonial urban Africa. I have argued for the need to rethink the current entrenched colonial logic of extreme *otherness*, currently conceptualized as informality, which is incapable of addressing the developmental challenges and related complexities in contemporary urban Africa. In a supposedly independent country, no citizen in his or her own country is ontologically or epistemologically informal. Further interdisciplinary explorations and insights using a decolonial lens are crucial for reimagining spatial mechanisms and subjectivities beyond the informality framework. An *emergent*

spatialities framework could be considered as an alternative with which to read, design, and plan beyond the current two-publics paradigm. This is especially true for post-colonial contexts undergoing rapid urban growth amid conditions of extreme uncertainty. Ongoing research is needed to explore the pluriversal subjectivities of knowledge and design, in order to reimagine the entrenched and obsolete colonial subjectivities of spatial production, with the goal of instituting equitable, livable, and sustainable futures for all.

NOTES

1 Chukwuemeka 2022b.
2 Hill 1963, 1966a, 1966b; Hodder and Ukwu 1969; Eighmy 1972; Onyemelukwe 1974; Symanski and Webber 1974; Bromley 1975; Smith 1978.
3 Du Bois (1961) conceptualized *Double Consciousness* as the psychological stress African Americans experienced as "always looking at oneself through the eyes of a racist society and measuring oneself by the means of a nation that looked back in contempt." This phenomenon could also be seen among the generations of Africans who inherited the colonial states (who are mostly currently in power), and their struggle to reconcile their African heritage with an upbringing in a European-dominated society. It is akin to Achebe's "home and exile" (Achebe 1998) of his similar experience as an African child growing up in British colonial Nigeria. See also "Inside World vs Outside World," *Beast of No Nation* 1989, by Fela Kuti, the activist-musician and songwriter.
4 Igbo is one of the 252 ethnic nationalities within the current Nigerian State with distinct languages, cultural practices, political and economy systems. See Blench 2020.
5 See Lugard 1965; Home 2019 on colonial township ordinances.
6 Chukwuemeka et al. 2020.
7 ILO 1972.
8 Hart 1973; ILO 1972.
9 De Soto 2000; de Soto, Vargas Llosa, and Abbott 1989.
10 Levenson and Maloney 1999; Maloney 2003.
11 Benton, Portes, and Castell 1989; Moser 1978.
12 Chen 2012; Roy 2005.
13 Chukwuemeka 2022b.
14 The formal/informal designation is primarily a political category of extreme otherness and consequently, often sets the precedence for economic and social categories.
15 Bromley 1979; Moser 1978.
16 Bromley 1979.
17 Ekeh 1975.
18 See Quijano 2000 on the coloniality of power.
19 Indirect rule ideology meant that Africans were largely excluded from participation in urban governance but included in the execution of its machinery. See Achebe 1998, 2000, 2009 for warrant chiefs among the Igbo of southeastern Nigeria.
20 See Home 2019; Lugard 1965.
21 Chukwuemeka 2022a.
22 De Landa 2003.
23 See Achebe 2012.
24 See Ellis 2016 on the nature of governance systems in Nigeria.
25 Boeck and Plissart 2014; Simone 2004; Trovalla and Trovalla 2015.
26 Kinyanjui 2019.
27 See Chukwuemeka 2022b on the critique of informality and on *stakeholdership* (a condition whereby the entities or individuals making a decision on behalf of another entity, or individuals, have a direct benefit or loss relationship from those decisions). It is akin to Taleb's *Skin in the Game* 2018.

28 See Taleb 2012.
29 See Baran 1964 on the three types of networks in a dynamic system.
30 Chukwuemeka 2022a.
31 Ogilvie 2014.
32 Neuwirth 2005.
33 Schneider and Enste 2000.
34 Ikioda 2014.
35 See Mignolo 2011; Quijano 2000 on the darker side of modernity.
36 In Onitsha markets, the most severe form of punishment is banishment from a social group. This has been the model for severe punishment among the Igbo, culturally and historically, which is different from the physical incarceration model introduced by the colonial administration. See also Achebe 1959.
37 As proposed by de Soto, Vargas Llosa, and Abbott 1989 and also de Soto 2000.
38 See Oyesola 2017.
39 Scott 1990.
40 A task force is a group of civilians, often mixed with police officers, empowered by the provincial or municipal administrations to enforce policy (often collection of levies and taxes).
41 The markets in Onitsha have an internal morphological logic for each of the segments according to merchandise sold, namely *Plaza*, *Ọgbọ*, and *Line*, which translate to shopping malls, market segments, and market sectors, respectively.
42 Chukwuemeka 2024.
43 Chukwuemeka 2022c.
44 De Satgé and Watson 2018; Pieterse 2008; Simone 2004; Watson 2009a, 2009b.

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2.5 Taking Matters into Their Own Hands

The Vauban Housing Community (1993–2003), Ekostaden Augustenborg (1998–2002), and Marmalade Lane Co-Housing (2006–2018)

Alexandra Staub

In 1993, a small community group in the southern German city of Freiburg developed ideas for converting the former site of military barracks into a car-free and ecologically based housing estate. The resulting "Quartier Vauban," a citizen-driven housing estate based on self-help principles, quickly became known as a model for ecologically and socially sustainable housing. Several years later, the Augustenborg district in Malmö, Sweden, was retrofitted as an ecological housing estate that aimed to set new standards for holistic urban design, including urban farming. In 2006, a citizen group in Cambridge, U.K., developed ideas for a co-housing community that became known as Marmalade Lane. As in Vauban, co-design and ecological features were central to the concept, which stresses social and community benefits for the residents.

This chapter traces these groundbreaking projects and discusses the mechanisms by which they were planned and created. A special focus is on the projects' social sustainability, as measured through residents' agency in determining their own housing welfare (including Sherry Arnstein's "Ladder of Citizen Participation" as introduced in Chapter 1.2) and the role of financing models in advancing citizen sovereignty.

THE VAUBAN HOUSING COMMUNITY IN FREIBURG, GERMANY (1993–2003)[1]

The Vauban housing community began in 1992, when French troops stationed in Freiburg, Germany after World War II were withdrawn, vacating an area of army barracks that had been constructed in the 1930s. The Freiburg Municipal Council decided to convert the site into a new city district with housing for 5,000 people to be constructed by 2008 (Figure 2.5.1).

The first organization to become involved in the process was a communal housing collective called S.U.S.I. (*Selbstorganisierte Unabhängige Siedlungs-Initiative*, or Self-Organized Independent Settlement Initiative), a group of mostly young people who took over several barracks as squatters, turning them into communal housing. S.U.S.I. residents championed the barracks' renovation as housing for low-income residents who would take on much of the construction work themselves to reduce costs. In 1990, they were able to convert four of the buildings into housing with 45 units, some of which were communal. Further housing was created by allotting open spaces to permanent caravan and container

DOI: 10.4324/9781003480426-12

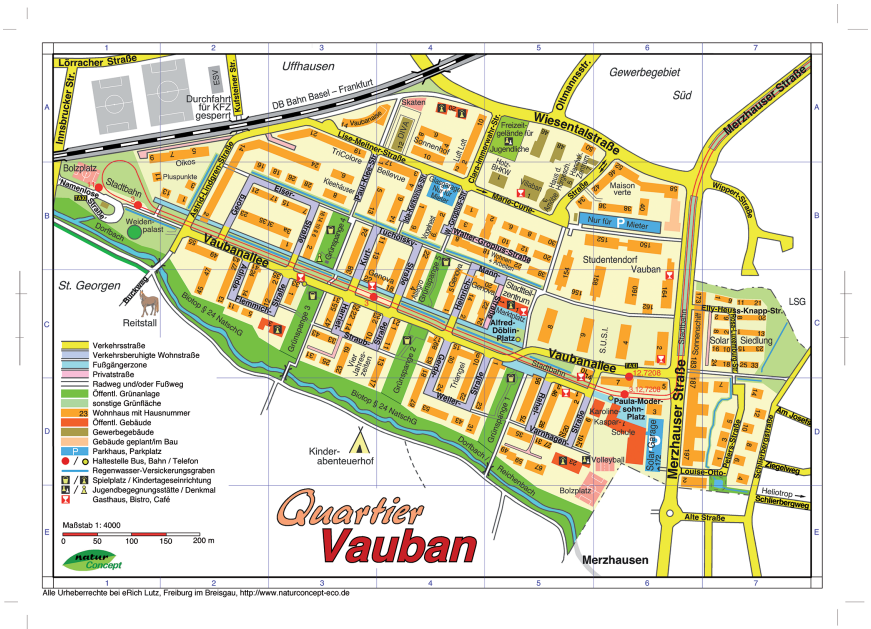

Figure 2.5.1
Plan of Vauban. Plan by Erich Lutz

parking. In a self-help process, the group also constructed necessary infrastructure, such as a playground, a communal meeting spot, a food coop, and small workshops. The city converted ten further buildings into student housing for the nearby University of Freiburg in 1993. S.U.S.I. continues to occupy a section of the Vauban site to this day with about 200 residents[2] and provides a reminder of the communitarian beginnings of the Vauban design process.

Citizen involvement continued when, in 1994, the city of Freiburg announced an urban design competition to assist in a new development plan for the site. The winning entry, by the architecture firm Kohlhoff & Kohlhoff in Stuttgart, saw a series of parallel north-south residential streets emerging from an east-west boulevard that connects the main parts of the district, including the town square, shops, a community building, and a plaza that contains the district's schools. A tram line passes through this main street and brings residents to the center of Freiburg. The site is bordered by a major railway line to the north; to the south, the site opens to a creek and expansive landscapes. Three park-like "bands" run parallel to the residential streets and provide internal green spaces for the community. While several parts of this plan were changed, such as the concept for car parking and other technical infrastructure, the social aspects of pedestrian-based streets suggested by the plan became a key feature of the district.

In 1995, the *Forum Vauban* formed as a citizen's association to take on responsibility for fleshing out the site plan. *Forum Vauban* established sub-committees to develop concepts for traffic, energy, building collectives, and social issues; members took part in workshops to facilitate learning about co-design. The volunteer groups of citizens interested in moving to Vauban were responsible for working out a holistic concept for the social and ecological aspects of the model district and were supported by a team of assistants, paid for by the city, and through

various national and EU grants. One of *Forum Vauban*'s tasks was to advertise their ideas for the new district in order to recruit further residents. In 1999, Forum Vauban turned from district planning to considering aspects of social integration.

Many properties in Vauban were bought by *Baugruppen*, small building collectives that purchase a plot of land to create multi-family or linked single-family housing for the collective. The *Baugrupppen* model of building has existed in Germany for decades and allows households to shape their own housing while saving time and costs. Working together with an architect, groups of residents plan their housing and tailor it towards a more collective living form than would be possible with speculative housing funded by a developer. The process requires active participation by all parties since contracts and decisions are made jointly. Building collectives typically choose a legal form called a "partnership under the civil code," which spells out the rights and responsibilities of the group. In some cases, the group manages its own financial and legal needs, such as hiring construction firms, obtaining all permits, and handling the payments. This saves on administrative and professional service costs, yet also requires that at least some of the group members have a good knowledge of the building process.[3]

For many households, the *Baugruppen* model means a path to affordable homeownership. Forum Vauban initiated and advised many of these groups, while federal programs assisted groups financially, for example, through low-interest loans issued by the *Kreditanstalt für Wiederaufbau* (KfW), as well as federally funded subsidies for eligible families with children (*Baukindergeld*).[4] Vauban resident groups additionally negotiated with local banks for low-interest loans, another instance of self-organized community help.[5] Vauban had a total of 60 building collectives as of 2014. Many focused on concepts such as building to a low-energy or passive house standard, creating multi-generation homes, or using innovative and ecologically forward-thinking materials.

In addition to the building collectives, 73 apartments were planned as part of a sprawling complex called "Genova" (Figure 2.5.2), organized as a *Wohnungsbaugenossenschaft* (housing cooperative). Based on a housing form common in early twentieth-century Germany, Genova was funded through a combination of membership fees, private loans, state-subsidized loans and grants, and bank loans, with the building costs designed to be amortized over a space of 30 years.[6] Over half of the Genova apartments are rental units with some degree of rent control, while the others are owner-occupied. Many owners have agreed that if they wish to sell the apartment, Genova may purchase it for the original sales price, thwarting speculative purchases.[7] In addition to common areas such as terraces, a large multi-purpose room, laundry facilities, and a guest suite, residents share responsibilities for garden care, snow removal, and other tasks. The spacious apartments have two to four bedrooms, a large common area with a kitchen, and a balcony, and were constructed to be adaptable. Floor plans and mechanical installations allow for apartments to easily be altered or divided as household sizes change, with the housing cooperative often paying for alterations. Residents report a neighborly atmosphere through the shared spaces and responsibilities, with many residents showing a great deal of social initiative in the complex.[8]

Figure 2.5.2
The Genova project in Vauban is a modern-day housing cooperative with 72 units. Photo by author.

Figure 2.5.3
Many of Vauban's streets are pedestrianized, creating play spaces for children. Photo by author.

Today, the district is 41.3 hectares large (about 102 acres), about half of which is residential. Many residents use bicycles for transportation, and car parking is not allowed on the residential streets. Residents who own cars must pay for their parking spot in one of the communal garages, thus putting the cost burden on car owners rather than on the community at large. The car-free concept has proven to be successful, as Vauban has 17 cars per 100 residents, in contrast to over 50 cars per 100 residents in Germany nationwide.

The residential streets (owned by the city) have no sidewalks, as the streets function as pedestrian zones (Figure 2.5.3). This means that yard areas in front of the houses can take up space that would otherwise be occupied by sidewalks. Many residents have set up seating areas, extensive plantings, or bike parking in those areas, further connecting them socially to the public space of the streets.

The district has supermarkets and a drugstore, services, schools, and day-cares so that everyday needs can be met with a minimum of travel time. A market square and a multi-story community center called *Haus 037* provide a central focus for the district (Figure 2.5.4). The original plan called for the creation of 600 jobs in the district; in addition, studios and workshops allow small enterprises to set up shop. The district has a great deal of infrastructure for children, although, as one resident pointed out, youths often yearn to experience more than the district has to offer, and housing may need to be retrofitted as residents grow older and experience increased mobility issues.

Forum Vauban disbanded in 2004 because of a financial crisis and was replaced by a new District Association, founded in 2005. The District Association continues to represent Vauban in official capacities, while various ad-hoc committees are responsible for issues such as traffic and mobility, event planning for the market square, and architectural and landscape design. The Association also

Figure 2.5.4
Vauban's market square with the communal "Haus 037" in the background. Photo by author.

organizes district festivals, publishes a district newsletter, and organizes quarterly district meetings. These meetings allow social and municipal agencies to present their work, which includes social, political, and cultural projects, networking between agencies, organizations, and the city, and regular district-wide cultural events. Vauban has attracted a large number of resident artists, and cultural activities have taken on great importance.

VAUBAN: ELEMENTS OF CONTINUED COMMUNITY ENGAGEMENT

Vauban follows ideas of "expanded civic participation," in which citizens have taken on major roles in shaping the district physically, administratively, and socially. Citizen engagement has not always meant that residents have had complete control. While residents successfully negotiated with the city planning office to circumvent parking regulations for the quarter's residential areas, they were less successful in petitioning to preserve three of the original barracks on the site, a plan that was rejected as the municipality was not willing to compromise on a financing plan.[9]

Governance and planning in Vauban have remained local: initiatives are developed, decisions are made by community residents, and any problems are worked out locally. The district has two administrative employees, with other work being performed through volunteers. The district's administrative relationship with the city government is formalized through the District Association, which meets with the municipal government every two months.[10] Residents of all ages interviewed for a 2012 documentary film emphasized the exceptional feeling of community in Vauban, a factor that was enhanced by residents' abilities to considerably shape their physical and social environments.

Vauban's ad-hoc committees and building collectives have guaranteed a high degree of citizen engagement in and control of both building and social processes at different scales. Such engagement is certainly made easier through an existing culture of self-help that started with alternative culture movements in the 1970s, including Germany's ecologically based "Green" political party. In Freiburg itself, citizen engagement was animated in the 1970s with a strong grassroots movement protesting a planned nuclear reactor in the nearby farming village Wyhl.[11] Successful political activism accelerated the self-directed citizen engagement that helped found Vauban two decades later, and local residents seek shared governance and decision-making to the present day.

Internationally, Vauban has served as a model community both socially and ecologically; for example, the district was presented at the 2010 World EXPO Exhibition in Shanghai as an example of sustainable urban design. Despite international success, however, founding community members note that repeating the Vauban experience would be difficult today, as young families are less inclined to invest the (unpaid) labor required for citizen-led planning, and the current municipal government in Freiburg has allowed profit-oriented investors to take charge in new districts being planned. Residents have further critiqued the Vauban process as not doing enough for low-income citizens. The many *Baugenossenschaften* have created an owner-dominated market in the district, and price controls for rental units are set to expire,

with little possibility for low-income residents (aside from those in S.U.S.I.) to find housing in Vauban. Although social sustainability, as measured through equity and opportunity, is seen as advanced relative to other areas in Germany, founding members of the community agree that even more could be done.[12]

EKOSTADEN AUGUSTENBORG IN MALMÖ, SWEDEN (1998–2005)[13]

In contrast to Freiburg-Vauban, the Ekostaden Augustenborg project in Malmö reconceptualized an existing district constructed between 1949 and 1952 to provide worker housing for a rapidly industrializing city. Augustenborg was designed as a "neighborhood-unit" project when it was first constructed, an idea initially developed by Clarence Perry and articulated in the *Regional Plan of New York and Its Environs* in 1929. Perry's plan called for a park-like environment, with green spaces that would stretch between and around housing areas. In Sweden, the neighborhood concept became part of a postwar "*Folkhem*" model, a social-democratic idea of a good urban life for all. Today, just over 90% of Augustenborg housing is owned by the municipal housing company MKB Fastighets AB, and currently makes up a third of Malmö's rental housing stock.

By the 1980s, with the collapse of Malmö's shipbuilding industry, the Augustenborg area had a high unemployment rate and one of the lowest per-capita incomes in Sweden. The apartments felt inadequate and dated, and many remained empty. In the late 1990s, the city of Malmö decided to shape the Augustenborg district into a new "eco-city" to revive the area environmentally and socially. Today, Sweden considers the project a model for the regeneration of older housing complexes (Figure 2.5.5).

Augustenborg is 33 hectares large (approx. 82 acres) with a population of 3,900 as of 2020. There are 900 one-person households, over half of the total. Many of the existing residents are older and have lived in the area for decades, although younger people are increasingly moving into the area. Most of the apartment blocks are three stories high, with some buildings seven and one (the "Greenhouse Tower") 14 stories high (Figure 2.5.6).

Augustenborg's initial landscape concept was developed by Birger Myllenberg and conformed to the ideals of the postwar era. The district had many gardens designed to provide recreational spaces for all ages, including a large communal park at the district's southern edge. As in Vauban, a central square anchored the district and had amenities such as shops, a post office, and community services such as a laundry and hairdresser. The aesthetic was one of postwar modernism, with slim lines and a sparse elegance of forms.[14] Aesthetic dimensions changed over the years, as façades and paving were replaced with coarser materials and secondary structures such as playground equipment and storage structures were renewed, often with more rustic materials and dimensions.[15]

Augustenborg's renewal in the 1990s saw new priorities emerge, with a focus on experimental measures towards more environmental sustainability. The restructuring of Augustenborg was largely driven by key players in Malmö's Internal Services Department, Water and Sewage Department, Streets and Parks Department, the municipal housing company MKB, and the Augustenborg

Figure 2.5.5
A communal courtyard in Augustenborg. The houses from the 1940s have had their façades renewed. Photo by author.

Figure 2.5.6
The Greenhouse Tower in Augustenborg. Large balconies were designed for urban farming. Photo by author.

schools. The city government gave agencies a large latitude to make changes, and their holistic interplay became a major aspect of restructuring the district. Rather than seeing individual projects as discrete efforts under separate jurisdictions, agencies coordinated their efforts so that individual measures to improve the district worked together. Funding for restructuring was obtained through national and EU grants, with municipal funds making up the rest.

Leaders in the municipal agencies first surveyed residents in 1998 to find out what they liked about the area and what changes they wanted to see. Residents listed desires such as flood mitigation, more green spaces, and new playgrounds. Above all, they spoke about the need for lower living costs, which opened discussions about lowering residents' energy costs through encouraging behavioral changes as well as through technical means. Other ecological measures, such as façade renovations and recycling systems, were discussed with residents before being implemented. Major changes, however, were largely decided by technical experts and included landscape restructuring and the installation of green roofs to reduce flooding problems.

Stormwater management became a key aspect of Augustenborg's landscape renovation (Figure 2.5.7). The existing wastewater system that mixed household wastewater and storm runoff was no longer adequate, leading to sewage backups and flooded cellars. Working out a new system required coordination between the water and housing authorities, with the latter being able to authorize changes to the topography. The new stormwater concept included rooftop gardens to absorb precipitation, including a 9,500 m^2 (about 2.3 acres) green roof demonstration site, as well as surface-level landscape designs to channel rainwater. The new drainage system, which de facto separated stormwater from wastewater, became

Figure 2.5.7
Augustenborg's expansive green spaces have been reconfigured to incorporate sophisticated water management features, like this retention pond. Photo by author.

possible in part through the contiguous green spaces initially planned as part of the neighborhood unit concept.

At the time of Augustenborg's restructuring, many of the residents had lived in the area for years. Planners thus sought to achieve residents' buy-in by integrating them into the ecological renewal process in several ways. Residents were invited to planning meetings, with about 10% of residents attending any given meeting.[16] New community gardens created spaces where residents could bond through growing plants, playgrounds were refurbished, and shared recycling centers were installed. The local school took on ecological projects in Augustenborg as a further opportunity to anchor young families through community projects. These projects were all designed to provide opportunities for resident interaction and collaboration.[17]

The newly built, 14-story "Greenhouse Tower" became a key aspect of Augustenborg's renewal. Designed by Jaenecke Arkitekter and completed in 2016, the tower's height and futuristically curved façade with prominent balconies set it apart visually from its surroundings. The building contains 56 apartments, of which 32 have one or two bedrooms and 12 have three or four bedrooms. There is also a block of 12 student rooms, while the ground floor contains a multipurpose room, laundry room, and gym. The house offers secure bike storage, and residents can borrow cargo bikes to transport loads. Two shared terraces offer additional common spaces, including a dome-shaped greenhouse and communal beehives. Although the large 20 m^2 balconies were initially conceived as spaces for urban farming, many tenants now use the balconies as personal outdoor terrace spaces instead.[18]

Greenhouse tower has a litany of energy- and water-saving features, including photovoltaics and other renewable energy sources, smart sensors, wastewater purification of laundry water, and mechanisms by which households can receive feedback on their hot water and electrical use. Planners thus combined technical means to reduce energy and water use with feedback methods in an attempt to alter residents' behavior. Social scientists analyzed the effects of personal attitudes, social norms, and control over the ability to perform a specific behavior, such as recycling, while other researchers measured the greenhouse gas emissions from each household to determine per capita yearly emission levels. They also interviewed residents both before and after moving into the units to track their experience with the new housing. Researchers found that residents readily adopted some of the ecological measures introduced, but an overall decarbonizing effect through building measures was not achieved.[19]

Because Greenhouse Tower was a "prestige" project for MKB and rents are higher than in the surrounding apartments, the residents of the tower are perceived as elite within the complex. Rents in Greenhouse are, on average, 45% higher than in the rest of Augustenborg. As one observer commented, MKB's interest in using smaller, high-profile projects to enhance an entire area has become a departure from postwar Swedish trends that attempted to improve housing equally for all, for example, through the "*Folkhem*" project that provided housing for the masses.[20] This small-scale "stimulus" model has not been without its challenges. For example, employee fluctuation in city agencies has stymied several projects as proponents of innovative ideas move on.[21]

Augustenborg residents perform some self-organization, for example, by initiating social events through social media groups.[22] Community governance, however, is not a part of Augustenborg. MKB has encouraged community organization in Greenhouse Tower, yet even here, community-building was initiated by the housing agency rather than by the residents themselves. Above all, MKB has not attempted to integrate Greenhouse residents with other Augustenborg residents, for example, by planning events open to the two communities.

Overall, residents of Augustenborg have been involved in only minor ways in designing Augustenborg's features. Residents have helped design furniture in the town square, created a car-share service, and run the local theater as well as a local café. Together with MKB, they created the centrally located community garden. A local resident has also started a popular children's after-school program that offers job training and other social services.[23] While residents have had some input into Augustenborg's planning, they are subjects rather than actors in the participatory process itself. As a project manager for the Eco-City noted: "MKB [the housing agency] wants to constantly build on the Eco-city by using Augustenborg as a testbed for innovative environmental projects that can be applied elsewhere in its portfolio as well."[24] Trevor Graham, a project leader for Ekostaden Augustenborg, has also admitted that residents' lack of agency has diminished citizen involvement in many projects, noting that, "We now need to find new ways to do things, based on letting go of power. In order for people to become involved they need to have more control."[25]

MARMALADE LANE CO-HOUSING IN CAMBRIDGE, U.K. (2006–2018)[26]

Marmalade Lane is a co-housing project in Cambridge, U.K., with 42 co-designed homes organized into a community based on shared and cooperative values. Completed in 2018, the site includes both single-family homes and apartments, as well as communal facilities that are owned and managed jointly (Figure 2.5.8). No affordable housing was planned for the site.[27] House forms include spacious single-family row houses, ranging from 79–125 m^2, several row houses with two apartments (one on each floor), and a separate apartment building with 11 apartments and two guest rooms accessed through exterior balconies. The project was the result of a partnership between the TOWN development firm, Trivselhus U.K., Mole Architects, and the K1 co-housing group.

The initial co-housing clients were recruited by Cambridge Architectural Research, a research-based consultancy for built-environment questions. Together, they created a design brief for the site and invited developer/architect teams to submit design and financial proposals. An important consideration was that developers should be familiar with the co-housing concept in order to establish trust among all parties. The model is similar to the German *Baugemeinschaft* model in that future residents are involved before the design phase starts, yet also different in that design and planning were largely led by a consultancy and developer team, with the developer serving as a "gatekeeper" to the architects.[28]

Figure 2.5.8
Marmalade Lane's central pedestrianized street. Photo by David Butler, ©TOWN.

Development team TOWN, Trivselhus, and Mole Architects submitted the winning master plan. The developer then purchased the land for the project from the Cambridge City Council, with future residents reserving their spot in the project. Since the developer took on the financial risk, commercial considerations were foregrounded from the start, with the developer using marketing tools such as offering discounts to clients who committed to the project early on.[29]

Building designs were part of the bidding process undertaken by developer-architect teams, with residents providing input at the judging phase through a "scoring" process. In this way five house and apartment types were set that could then be individualized according to resident demands. Residents were able to configure floor plans, kitchen and bathroom amenities and fittings, and one of four brick exteriors.[30] To detail designs for houses, landscaping, shared spaces, and energy concepts, the developer and Mole Architects met with the future residents every few weeks. Small groups took on specific tasks, and designs evolved through discussion.[31]

Marmalade Lane offers common ecological systems such as triple-glazed windows, mechanical ventilation with heat recovery units, and air-source heat pumps for space and water heating.[32] Although the original design brief called for houses built to a passive house standard, the resident group chose not to pursue this for cost reasons, and a lower standard (35kWh/m²/yr) was adopted.[33]

As in Vauban and Augustenborg, Marmalade Lane offers opportunities for reduced car use through car sharing and shared cargo bikes. There are 1.5 parking spots provided per residence, allowing 61 cars per 100 residents,[34] yet most of the development is car-free, with parking provided at the eastern edge of the site. Alternative forms of transportation are encouraged through the development's connections to bike paths and a bus route.

In addition to the car-free main street, residents can meet in the "common house," which offers a multi-use space with a kitchen that is used for community meals and other gatherings. The house contains a children's playroom, a laundry room, two multi-use areas that can be used for various meetings or classes, a workshop as a shared hobby space, a "toolshare," and a gym. The upper floor contains guest bedrooms that residents can book when they have visitors. Exterior spaces include a large, shared garden that offers space to grow food. Facilities are maintained through leveraging a resident service charge rather than having the residents perform maintenance work themselves.

Marmalade Lane is much smaller than Vauban (42 households on 0.87 ha for Marmalade Lane vs. 2644 households on 41.3 ha for Vauban,[35] although the two complexes have some common features. In both projects, residents joined into an "intentional community" before construction started, although Marmalade Lane's conceptual formation was set by the developer and residents had less say in configurations or the aesthetic language. Vauban saw many smaller construction groups plan individual buildings with more heterogeneity in typologies, floor plans, and aesthetics. Funding patterns were also different, with Marmalade Lane's developer funding the project upfront,[36] while in Vauban, future owners used their own savings, subsidized grants and loans, and sweat equity to fund the projects.

Marmalade Lane has been seen as exemplary in the U.K., where top-down frameworks and legal barriers related to financing, planning, and land use have created barriers to co-housing.[37] While the project is limited largely to those who can afford to be homeowners, the sense of community provided through planning and living in the project remains high.

CONCLUSION

Vauban, Ekostaden Augustenborg, and Marmalade Lane, three projects initiated in the 1990s to early 2000s, were all designed with ecological and social sustainability in mind. While "building green" had gone mainstream by the 1990s, especially in Germany with its early adoption of energy-efficiency building codes, it is illustrative to see how these three seminal projects have addressed issues of *social* sustainability, which in all three projects was directly or indirectly defined as offering housing and related infrastructure that would meet needs and desires of its residents while supporting a strong sense of community cohesion.

Vauban was characterized by a self-selection process in which like-minded citizens who had experienced the successes of citizen activism chose to establish an ecologically oriented community based on principles of solidarity. Political activism was part of the local culture and arguably helped foster a sense of increased agency and support. Ideals of communitarianism and a strong awareness of environmental concerns made possible a group-led process that favored long-range community benefits over shorter-term market profits, which became a political and social vision. While the Vauban planning process was time-intensive for those involved, communal decision-making helped further community solidarity and

encouraged citizens to work towards change, for example, when residents successfully negotiated with the municipality for variances in zoning codes.

Augustenborg's restructuring was born out of holistic ecological thinking, although the quarter's residents had relatively little input in the process. Augustenborg's historic neighborhood plan gives the district a spatial and social identity that has encouraged resident interactions. Residents meet in the common green spaces and organize events over social media groups. This degree of community involvement, however, is independent of the district's remodel. The district's built-environment issues, such as flooding problems, were identified by residents but solved by technical experts and policymakers in the city administration; the social innovation touted in studies reflects the unusual degree of cooperation across agencies, not the involvement of residents in the planning process. Lack of resident agency has had repercussions; for example, the radical urban farming idea the housing authority initiated with the Greenhouse Tower has largely fallen out of use, as residents prefer to use the generous balconies as an outdoor living space.

Marmalade Lane, a much smaller project than either Vauban or Augustenborg, has tried to combine co-housing agency with an investor financing model. The project's ecological approach, initiated by the developer and architect, led to energy-efficient buildings made largely of renewable materials. Although residents were not as heavily involved in planning as in the Vauban example, the joint planning experience, as well as the collective spaces offered, have led to strong feelings of community that have continued to the present day.

Sherry Arnstein's "Ladder of Citizen Participation" (presented in Chapter 1.2) provides a useful tool for establishing the degree of resident agency in the planning process. The provocative "Ladder" presents a scale to measure the extent of citizens' power in determining a plan and/or program that affects their everyday lives. Arnstein's "Ladder," presented in the context of 1960s urban renewal in the United States, remains valid today as it illustrates power relationships between designers and policymakers and the citizens for whom they plan.

Measured on Arnstein's scale, Freiburg-Vauban's citizen participation would rank at the top, with *citizen control* allowing citizens "full managerial power." Vauban's physical and social planning was largely citizen-driven once the urban master plan was proposed, with citizen groups directly negotiating with the municipal government and the self-organized building groups taking the lead on planning the buildings. The built community provided a framework for social engagement and organization, with communal spaces encouraging interaction.

Marmalade Lane ranks somewhere in the middle of Arnstein's "Ladder," perhaps at the level of *partnership*, which "enables [citizens] to negotiate and engage in trade-offs with traditional powerholders." While the developer and architect provided a framework for the project, future residents of the community were able to determine aspects of their homes and offer input regarding common spaces. Residents also made some financial decisions, for example, rejecting a passive house standard due to increased construction costs. As in Vauban, common spaces planned as part of the co-housing concept provided opportunities for community interaction.

Augustenborg ranks far lower on the citizen participation scale, perhaps at the level of *placation*, which Arnstein puts into a category of "tokenism." Here, citizens are given a voice yet "lack the power to insure that their views will be *heeded* by the powerful."[38] While citizens were surveyed about their desires, ideas were largely developed and pursued at the administrative level.

The financing models used for the three projects have created another measure of social sustainability, one that reflects the challenges of systems geared toward allowing capital to determine what will be built. Marmalade Lane was designed for owner-occupants, in part to create resident continuity. This has meant that only those with the means to own their homes have been able to take part in the resulting social project, making adequate wealth a criterion for inclusion.

Vauban, too, has been criticized for its high degree of homeownership and dearth of affordable housing, which in the German context means state-subsidized and rent-controlled housing. A quarter century on, the district has been chastised as too economically homogenous despite the continuation of the communitarian and affordable S.U.S.I. project. While the savings inherent in the *Baugruppen* model allowed households with more limited means to build their own owner-occupied homes, the resulting expansion in property values has meant that future residents in much of Vauban's housing will need to bring more wealth to the table, creating an economically privileged social enclave within greater Freiburg.

Of the three examples, Augustenborg is the only one that consists almost entirely of rental units owned by the municipality. This vestige of Sweden's commitment to public services and social investment has allowed Augustenborg to remain a mixed-income community despite the economic stratification of the district introduced through the more prestigious Greenhouse Tower complex. On the measure of access equity independent of financial ability, social sustainability in Augustenborg remains high.

The three projects together show how design and planning agency exists hand-in-hand with financial agency. While both Vauban and Marmalade Lane allowed citizens large latitude in co-designing their own housing, only Vauban's protagonists actively sought funding structures that would help incorporate those typically shut out of the housing market – which included advocating for retention of the low-income S.U.S.I. project. In Augustenborg, rental prices set by a state agency assured that housing would remain accessible, yet planning leadership by those same agencies meant that residents had far less influence over design and planning choices in their community.

Creating structures that allow a broad band of income groups to co-design or develop their own housing with attractive communal infrastructure requires the political will to create financial instruments geared toward this process. In the examples cited here only Vauban has come close to realizing such an ideal. In a world dominated by the rules of market economies, disrupting existing processes in favor of socially sustainable thinking asks that both citizens and policymakers come to the table with far-reaching visions for achieving this aim.

NOTES

1 Unless otherwise noted, information about Vauban and its history is taken from two almost identical publications from the Vauban District Association, *Quartier Freiburg Vauban: A Guided Tour* (2009), *Quartier Freiburg Vauban: Ein Rundgang*, 3rd edition (2014); a documentary video by Bodo Kaiser, *Vauban: Perspective of an Urban District* (2012); and Carsten Sperling's paper, "Collaborative Planning and Mobility Concept of Freiburg-Vauban." I would like to especially thank Vauban founding members Carsten Sperling, Almut Schuster, and Reinhild Scheppers for their insights into the design and planning process, as well as Marion Lichtenauer und Oliver Kölling for their tour of the Genova complex.
2 Interview with Almut Schuster, Forum Vauban founding member, on June 13, 2024.
3 Schwäbisch Hall n.d.
4 Kreditanstalt für Wiederaufbau (KfW) n.d.
5 *Vauban Actuel* 1997.
6 *Vauban Actuel* 1996.
7 The agreements to sell apartments back to the cooperative for the initial sales price is a testimonial to the social thinking of Genova residents, as market rates of area apartments have risen sharply over the past decade. See Immobilien GmbH n.d.
8 I would like to thank longtime residents Marion Lichtenauer and Oliver Kölling for providing information about the Genova apartment complex on June 14, 2024.
9 Interview with Almut Schuster on June 13, 2024.
10 Interview with Almut Schuster on June 13, 2024.
11 Landeszentrale für Politische Bildung Baden-Württemberg n.d.
12 Podium Discussion "25 Jahre Vauban: Bilanz und Perspektiven" on June 12, 2024.
13 Unless otherwise noted, Information about Ekostaden Augustenborg is taken from Månsson, Monika, and Bengt Persson, ed. *The Eco-City Augustenborg, Experiences and Lessons Learned*. Malmö: Arkus 2021. As information is often repeated, page numbers are included only where information was presented in a single location. I would like to thank Helen Johansson, formerly of the Scandinavian Green Roof Institute (now Green Blue Guide), and Greenhouse Tower resident Agneta Timotej for their tours of Augustenborg and the Greenhouse Tower, respectively.
14 Månsson and Persson 2021, 134.
15 Månsson and Persson 2021, 136.
16 Interview with Helen Johansson, owner and founder of Green Blue Guide, former CEO Scandinavian Green Roof Institute, July 1, 2024.
17 Månsson and Persson 2021, 137–38.
18 Interview with Helen Johansson, July 1, 2024.
19 Månsson and Persson 2021, 90–95.
20 Månsson and Persson 2021, 106–9.
21 Interview with Helen Johansson, July 1, 2024.
22 Interview with Helen Johansson, July 1, 2024.
23 Månsson and Persson 2021.
24 Månsson and Persson 2021, 193.
25 MKB and and Malmö stad n.d.
26 Unless otherwise noted, information about Marmalade Lane is taken from the following websites: http://www.marmaladelane.co.uk; https://www.wearetown.co.uk/projects/marmalade-lane/; http://www.cambridge-k1.co.uk, all accessed July 14, 2024.
27 "Prospectus for Enabled Cohousing Development, K1 Site, Orchard Park, Cambridge" provided to the author by the TOWN development firm.
28 Personal correspondence with Frances Wright of TOWN on June 3, 2024.
29 Dove 2020.
30 Dove 2020.
31 Personal correspondence with project architect Meredith Bowles from June 5, 2024.

32 Dove 2020, 101.
33 Personal correspondence with project architect Meredith Bowles from June 5, 2024.
34 Personal correspondence with Frances Wright of TOME June 10, 2024.
35 Hill 2018; Freiburg Amt für Bürgerservice 2021.
36 Clark 2022, 28.
37 Newberry, Harper, and Morgan 2021.
38 Arnstein 1969, 217, italics in the original.

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2.6 Community Engagement in Low-Income Housing in Brazil

A Pathway to Social Sustainability

Clarissa Albrecht, Maristela Siolari, Hung Luong, and Esther Goldberg Karfunkelstein Lima

The housing shortage in Brazil is a severe social issue, with a deficit exceeding six million units, as reported by *Fundação João Pinheiro* (João Pinheiro Foundation). Notably, 74.5% of this deficit affects low-income populations earning zero to three minimum wages – Brazil's minimum wage being around $260 per month in 2024, with women as the primary breadwinners in 62.6% of these households.[1] These families often live in high-risk or informal, precarious conditions. Real estate market dynamics and ineffective public policies exacerbate this problem, highlighting the urgent need for integrated, sustainable solutions to secure decent housing for all. As government programs have fallen short, community-driven initiatives have become a promising alternative for empowering residents and addressing housing needs more effectively.

The housing shortage in Brazil involves both quantitative and quantitative deficits. The quantitative deficit reflects the insufficient number of housing units, while qualitative inadequacies pertain to the poor conditions of existing homes, which often lack basic amenities or have substandard building and land conditions. The *Fundação João Pinheiro*'s approach targets precarious housing, cohabitation, and excessive urban rent burden as components of these issues.[2] This comprehensive approach underscores the need for solutions addressing both the numerical deficit and qualitative deficiencies.

Households face inadequacies in three main areas: urban infrastructure, such as a lack of water, sanitation, garbage collection, and electricity; building conditions, such as inadequate water storage, use of non-bedrooms as bedrooms, and poor roofing; and issues with land use, such as land unsuitable for construction.[3] The complexity and dynamics of domestic groups, particularly low-income ones, require diverse housing solutions beyond mere adequacy. Solutions should accommodate co-housing due to financial or caregiving needs and provide spaces for informal income-generating work, such as larger kitchens for home-based food production, sewing rooms, or areas for hairdressing, manicure services, and laundry services. Understanding the distinct inadequacies of households is essential for developing targeted public policies tailored to each specific situation.[4] Addressing these issues often involves renovation rather than new construction.

Inadequacies affect 47% of Brazil's private urban homes, with 23% related to infrastructure, 18% to building conditions, and 6% to land problems.[5] While infrastructure inadequacies require public action aligned with urban planning, other issues can be addressed individually or collectively.

DOI: 10.4324/9781003480426-13

This chapter will provide a brief history of social housing in Brazil, setting the stage for a case study of a community-engaged project sponsored by *Arquitetura na Periferia* (Architecture on the Periphery). *Arquitetura na Periferia* is a non-profit organization that supports projects and construction for women in low-income communities on the outskirts of Brazil, offering guidance and technical assistance through women's empowerment. The case study offers a promising alternative toward helping to solve Brazil's housing crisis. This chapter explores how empowering women and fostering community involvement can create sustainable and impactful change in the realm of social housing.

SOCIAL HOUSING IN BRAZIL

A transformative period in Brazilian history set the stage for the country's current urban challenges. The abolition of slavery in 1888 and the Proclamation of the Republic in 1889 reshaped Brazil's social and economic landscape, spurring massive migration of formerly enslaved people as well as European immigrants to urban centers. This rapid and unplanned urbanization caused severe housing shortages and the rise of informal settlements or favelas in cities like São Paulo and Rio de Janeiro. The period also saw tensions between Brazil's modern aspirations and traditional practices, with urban centers becoming sites of social and economic conflict. Inadequate housing and sanitation conditions became prominent issues as the state and private investors focused on profit over livable conditions.[6] The complex interplay of social, economic, and political factors driving urbanization and housing in Brazil is presented in this chapter as having contributed to the nation's contemporary urban challenges.

URBANIZATION AND HOUSING IN BRAZIL FROM THE LATE NINETEENTH CENTURY TO THE EARLY TWENTIETH CENTURY

Urbanization in Brazil significantly accelerated at the end of the nineteenth century due to pivotal events such as the abolition of slavery and the Proclamation of the Republic. These events transformed the country's social and economic structure, directly influencing urbanization. The abolition freed about 700,000 enslaved people who received no support for their integration into free society. Lacking land, jobs, or housing, many migrated to cities in search of employment. Meanwhile, the Proclamation of the Republic encouraged European immigration to meet labor demands in agriculture and emerging industries.[7]

Most immigrants initially settled in rural areas, but many also moved to cities, taking up urban trades or joining the nascent industrial sector. This intense migration, combined with natural population growth, led to accelerated and disorderly urbanization, leaving Brazilian cities unprepared for the influx and resulting in precarious housing conditions.[8]

At the end of the nineteenth century, Brazil faced tensions related to the ideal of the Modern Movement and the process of modernization. Societal elites aspired to be modern, cosmopolitan, and civilized, yet the country remained entrenched

in relationships of favor, patrimonialism, and clientelism.[9] In the first two decades of the twentieth century, the country debated social and labor issues, particularly focusing on labor regulation within the industrialization process. Following the 1929 economic crisis, as a new economic landscape emerged, social issues gained greater political prominence. This occurred amidst competition among industrial, agro-export, and commercial groups for state control and influence to pursue their objectives. Social debates thus began to shift from traditional social concerns to issues of security and policing, forming an ideology of "social harmony."[10]

Economic growth and institutional development continued within an exclusive political framework. Even during a period of economic growth after World War II, Brazil's situation could not be compared to Europe's "thirty glorious years" or to other countries' Fordist and social-democratic modes of regulation. According to political scientist Lúcio Kowarick, Brazil's deprivation of rights had at least two primary sources: control and social accommodation through seeing problems as the result of destiny, luck, or divine will, and the suppression of individuals based on coercion, reinforcing the dynamics of subordination.[11]

In the housing sector, this period was characterized by episodes of rapid urbanization that led to significant real estate appreciation driven by an imbalance between supply and demand. Within the framework of a market economy, housing construction and commercialization were managed only haphazardly. In a society dominated by liberal economic principles, the rental housing market emerged as a highly attractive private investment opportunity, perceived as a low-risk endeavor. The mismatch between housing supply and demand, coupled with the absence of regulatory frameworks for landlord-tenant relationships, ensured high profitability for investors.[12]

Cities became arenas of social conflict, driven by the new political and economic order. Major metropolitan centers such as São Paulo and Rio de Janeiro became social battlegrounds, with elites aiming to Europeanize the city and impoverished working populations seeking minimal living conditions near their workplaces. With few options available to them, workers were forced to live in inadequate tenements. The authorities did not formulate significant policies to address the housing needs of immigrants and the impoverished. Instead, they blamed the victims of precarious living conditions for their plight. In other words, authorities and elites placed the responsibility for inadequate housing, sanitation, and health conditions on the poor residents themselves rather than recognizing these conditions as a result of structural failures and the lack of public policies. This discussion permeated urban issues in Brazil, especially in São Paulo and Rio de Janeiro, where sanitary interventions were linked to the idea of creating a "clean center."[13]

The lack of adequate and affordable housing in city centers led to squatters taking over unoccupied land in risky and marginal areas such as on hills and slopes. This gave rise to favelas, informal settlements with no legalized land ownership and characterized by the absence of basic infrastructure. During this period (the late nineteenth century and the first three decades of the twentieth century), the state's role in housing production was limited to encouraging private companies

to invest in corporate housing called "workers' villages." These programs were generally insufficient to meet all employees' needs.[14]

BRAZILIAN HOUSING POLICIES

Brazilian housing policies can be divided into three periods: before 1964 (pre-*Banco Nacional da Habitação*, National Housing Bank), from 1964 to 1986 (*Banco Nacional da Habitação* period), and after 1986 (post-*Banco Nacional da Habitação*).[15] In the first period, the *Institutos de Aposentadoria e Pensão* (Retirement and Pension Institutes) and the *Fundação da Casa Popular* (Popular House Foundation) were notable for their ambitious approach to urban housing. The *Institutos de Aposentadoria e Pensões,* established in the 1930s under President Getúlio Vargas's social security policies, provided housing for urban workers but were fragmented and lacked coordination, leading to uneven coverage. Nonetheless, this era saw diverse architectural experimentation based on "modern" principles.[16] Founded in 1946, the *Fundação da Casa Popular* aimed to build affordable housing for low-income workers but faced financial and operational challenges, limiting its impact.[17]

The creation of the *Banco Nacional da Habitação* and the *Sistema Financeiro de Habitação* (Housing Financial System) in 1964 marked a policy shift, with the *Banco Nacional da Habitação* funding large-scale housing with resources from the *Fundo de Garantia por Tempo de Serviço* (Severance Pay Indemnity Fund) to boost construction and employment. These projects often focused on quantity over quality, however, and only a third of the 4.5 million homes built were for low-income families.[18] Management issues led to the dissolution of the *Banco Nacional da Habitação* in 1986.

After the dissolution of the *Banco Nacional da Habitação*, Brazilian housing policy underwent multiple changes until the launch of *Minha Casa Minha Vida* (My House My Life) in 2009. Created by the federal government to reduce the housing deficit and stimulate the economy, *Minha Casa Minha Vida* provides subsidies and financing for low- and middle-income families. While it increased the number of housing units, the program has been criticized for its architectural and urban quality. A typical *Minha Casa Minha Vida* development is shown in Figure 2.6.1.

Minha Casa Minha Vida housing units are often small and have minimal flexibility, with repetitive designs that poorly adapt to residents' regional and cultural needs. Low-quality materials lead to structural and maintenance issues, and the units are usually located in peripheral areas lacking public transportation, paved roads, and recreational spaces. Additionally, the lack of resident participation in planning and construction results in projects that often fail to meet community needs.[19]

Brazil's housing deficit is both chronic, having persisted over decades, and acute, worsening despite significant resources and efforts. Housing programs have not effectively addressed the structural causes of the problem, aside from the *Plano Nacional de Habitação* (National Housing Plan). The deficit is primarily urban, reflecting the historical development of urban areas marked by rapid economic and industrial growth, inequality, and segregation.[20]

Figure 2.6.1
A typical housing development built under the *Minha Casa, Minha Vida* program. Photo by Ubirajara Machado.

EVOLUTION OF HOUSING RIGHTS IN BRAZIL

The 1988 Brazilian Constitution emphasized fundamental rights, but housing as a social right was only formally recognized through a constitutional amendment in 2000. Such rights are vital in a country with high unemployment, a significant housing deficit, and weakened social security. Historians Francisco Oliveira and Pat Thane both note the link between social organization, constitutional rights, and economic development.[21] While developed countries allocate substantial GDP percentages to social protection, Brazil's social rights largely remain unfulfilled.

Had housing been prioritized from the beginning, strategies to address the housing deficit could have been more effective. A genuine state commitment to housing might have prevented its transformation into a luxury commodity. Ensuring citizenship and housing for all remains a critical issue in Brazilian cities.

Despite the state's shortcomings in social housing, the topic has been central among Brazilian architects and urban planners. The 1931 *Primeiro Congresso de Habitação do Brasil* (First Brazilian Housing Congress) and the *Seminário de Habitação e Reforma Urbana* (Housing and Urban Reform Seminar) in 1963 were pivotal as they advocated for popular participation in housing policy decisions and raised awareness of citizen involvement in urban management.

A significant outcome of the *Seminário de Habitação e Reforma Urbana* was the Quadra Group's 1967 project in Rio de Janeiro's *Brás de Pina* favela, which focused on resident participation in housing improvements without forced removals. This project promoted inclusive urban solutions and land regularization.[22]

Historian Nabil Georges Bonduki also highlights various efforts to integrate housing issues into architectural education, culminating in the *Lei da Assistência Técnica para Habitação de Interesse Social* (Technical Assistance for Social Housing) in 2008.[23] Influenced by international thinkers like Hassan Fathy and

John Turner, this period marked a shift from modernist principles toward recognizing local knowledge and user diversity.[24]

Between the 1950s and 1980s, a new generation of urban professionals emerged, open to exploring new themes and methodologies. This period highlighted vernacular organizational forms, local knowledge, and everyday practices, recognizing users as unique individuals rather than generic "types." Architects and urban planners shifted from an authoritative role to one focused on mediation and dialogue. Their goal was to redefine design as a collaborative practice and a political tool in the fight for democratizing urban access and ensuring decent housing.[25]

SUCCESSFUL PRACTICES AND NEW PERSPECTIVES

Since its inception in 2009, the federal government's *Minha Casa Minha Vida* program has been Brazil's primary initiative for low-income housing. By offering below-market prices and interest rates, *Minha Casa Minha Vida* enables low-income families to acquire housing units in social developments designed through a top-down approach. Among the notable examples within the program are *Heliópolis Social Housing* (Figure 2.6.2) and *Jardim Edite Social Housing*. These projects stand out due to their successful urban integration, comprehensive infrastructure, community-building efforts, and innovative design with environmental sustainability solutions.

With a different perspective, the *Buenos Aires 350* project showcased at the "Time Space Existence" exhibition at the 2021 Architecture Biennale in Venice exemplifies a commitment to social responsibility in architecture. It emphasizes urban connectivity, cultural diversity, multifunctionality, and smart economic solutions, with a design focused on natural light and ventilation.

Figure 2.6.2
Heliópolis Social Housing by Biselli Katchborian Arquitetos. Photo by Nelson Kon.

Beyond these examples, *Arquitetura na Periferia* (Architecture on the Periphery) introduces a compelling model of activism for social sustainability and gender equity. This initiative employs a participatory, community-engaged approach, where a team of women works together to design and build homes for themselves and their families. The next section examines an *Arquitetura na Periferia* project in detail, highlighting its innovative methods and impact on social housing.

ARQUITETURA NA PERIFERIA: A MODEL FOR BUILDING COMMUNITY AND WOMEN'S AUTONOMY

Arquitetura na Periferia (Architecture on the Periphery) supports design and construction for women in extremely low-income communities on Brazil's urban peripheries. The project involves women in all decisions related to the design and construction of their homes, offering guidance and technical advice that foster women's empowerment (Figures 2.6.3 and 2.6.4). *Arquitetura na Periferia* is managed by the *Instituto de Assessoria à Mulheres e Inovação* (Institute for Women and Innovation Advisory) in Belo Horizonte, Minas Gerais, Brazil.

Founded by Carina Guedes de Mendonça, *Arquitetura na Periferia* was motivated by the stark social inequalities in Brazil and the profession's focus on more privileged social classes. *Arquitetura na Periferia* seeks to improve housing conditions for low-income families and enhance their planning capabilities.[26] Their approach challenges the rigid social structures and the exclusivity of opportunities for social valorization that are typically reserved for the upper class in Brazil. By offering technical advisory services in which clients drive decisions and project progress, *Arquitetura na Periferia* fosters a mutual exchange of information and empowerment. Empowerment plays a central role in *Arquitetura na Periferia* activities, and all phases of the project take place in small groups, allowing participants to build trusting and lasting relationships.[27]

One of the reasons for working exclusively with women is that they are often excluded and silenced during the construction process of their own homes.[28] *Arquitetura na Periferia* gives women autonomy in the decision-making process when improving their homes, a principle expressed symbolically in the organization's logo, which visually communicates that "women are the key."[29]

Arquitetura na Periferia operates primarily in informal settlements, referred to as *ocupações* or occupations, on the periphery of Belo Horizonte, Brazil. According to the 2022 census, an *ocupação* is defined as "the irregular occupation of land owned by others, public or private, for housing purposes in urban areas, generally characterized by an irregular urban pattern, lack of essential public services, and locations with restrictions on occupation."[30]

Architect and urbanist Carina Guedes de Mendonça describes an organized urban occupation as a collaborative effort between social movements and individuals without homes to settle on unoccupied land. Activists from social movements organize meetings to prepare future occupants by raising awareness about the importance of fighting for housing and coordinating material preparations for the initial occupation. This process can take anywhere from weeks to years.

Figure 2.6.3
Women collaborating in a construction project overseen by *Arquitetura na Periferia*.
Photo courtesy of *Arquitetura na Periferia*.

Figure 2.6.4
Participatory Design Workshop organized by *Arquitetura na Periferia*.
Photo courtesy of *Arquitetura na Periferia*.

The initial organization is crucial for community engagement, as confrontations with the police are common, given that the land is usually owned by the government or private entities.[31]

Mendonça assisted different groups of people in planning the future of their *ocupação*. She worked on typical architectural tasks in different *ocupações*,

allowing projects to have some characteristics of a formal city, such as the geometry of streets and lots.[32]

Residents of an *ocupação* are often people who spend a significant portion of their income on rent or who live in precarious conditions, such as those doubling up with family members.[33] Organized urban *ocupações* provide an alternative solution to the housing demand not met by public programs. *Arquitetura na Periferia* focuses primarily on these *ocupações* because the process through which they emerge broadens the population's access to political discourse and allows individuals to think critically about their social conditions.[34]

FINANCING AND SELF-CONSTRUCTION

The theoretical approaches proposed by Muhammad Yunus and Rodolfo Livingston for financing and self-construction, respectively, form the basis for *Arquitetura na Periferia*'s framework. Yunus's 2007 book, *The Banker of the Poor*, revolutionized the world of finance by introducing banking services to the impoverished. Through his Grameen Bank of Bangladesh, he established a microcredit program that provides small loans to people in extreme poverty, particularly women, to help them start small businesses. His microcredit concept has been adopted worldwide, including by *Arquitetura na Periferia* in Brazil.

Rodolfo Livingston is an Argentinian architect who introduced the concept of self-construction to housing construction workers in Cuba during the 1960s. His method moves away from seeing projects as singular and definitive solutions to embracing flexibility, adaptation, and modification over time. This perspective views housing design and construction as continuous, dynamic processes.[35]

Livingston's method involves understanding the client's needs through a series of interviews to establish a dialogue. The dialog occurs in three steps: pre-interview, interview, and visit. In the first interview, basic information is collected, and clients share their goals for their homes. The architect introduces several exercises to help the client better understand their own needs and explains the architect's working methods, important dates, and fees. After some time, the second step allows the client to revisit and adjust their desires to establish the basic idea for the project. Finally, the third step focuses on project development.[36]

Through this process, the client becomes more than a simple user of a defined, material object; she or he becomes the leading figure in a process and, therefore, also the development of the project. In architectural practice, this means the architect and client engage in a broad and systematic dialogue to define demands and share decisions and responsibilities.[37]

ARCHITECTURAL AND TECHNICAL ADVISORY

Currently, the Institute for Women and Innovation Advisory runs several activities for the *Arquitetura na Periferia* project, including technical advisory services, construction methods and components, and bioconstruction materials for capacity-building and training workshops. Community outreach is divided into two phases: planning and monitoring. During the planning phase, participants meet weekly

Figure 2.6.5
Before condition of a house renovated with *Arquitetura na Periferia* technical aid. Photo courtesy of *Arquitetura na Periferia*.

Figure 2.6.6
After condition of a house renovated with *Arquitetura na Periferia* technical aid. Photo courtesy of *Arquitetura na Periferia*.

with a project leader to develop ideas and identify their needs before executing the plan. Throughout this phase, *Arquitetura na Periferia* helps women to measure and plan drawings of their homes through various activities and workshops. Participants design and develop the project while *Arquitetura na Periferia* provides the necessary technical expertise.[38] Figures 2.6.5 and 2.6.6 show a successful example of design and construction based on *Arquitetura na Periferia* methods.

As part of the monitoring phase, participants and an *Arquitetura na Periferia* staff member visit the homes where the projects will take place. During the first project, participants expressed an interest in learning construction techniques from Mendonça. This interest led to the creation of the *Oficina de Construção*, the Construction Workshop, where a professional specializing in a particular aspect of construction is brought in to teach participants. These workshops empower women by teaching them skills that enable them to work on their own homes rather than relying on third parties.

AN INTERVENTION AT *OCUPAÇÃO DANDARA*

The first group of women to participate in *Arquitetura na Periferia* came from *Ocupação Dandara*, a settlement on the outskirts of Belo Horizonte, the capital of Minas Gerais, located in the neighboring municipality of Contagem. Forming this initial group proved challenging. Mendonça initially aimed to involve five to seven women, but there was reluctance among potential participants who feared that *Arquitetura na Periferia* might follow the pattern of previous projects that failed to deliver on their promises, collecting data without providing any tangible benefits.[39] Ultimately, three women – Adriana, Ana Paula, and Luciana – committed to the project. Although they joined *Ocupação Dandara* at different times and under different circumstances, they shared a common goal: to build their own homes, united by a foundation of trust.[40]

This analysis focuses on Luciana's project. Before moving to *Ocupação Dandara*, Luciana lived in the Novo Aarão Reis neighborhood, which began as an *ocupação* in 1994. With minimal infrastructure – no electricity or plumbing – she actively participated in community activities and earned a living by selling baked goods. Although she attempted to join government-funded housing programs, her efforts were unsuccessful. Community gatherings were common in Novo Aarão Reis, as many homes were in high-risk areas. It was during these meetings that Luciana learned about the planning of *Ocupação Dandara*. She attended some of the meetings and was eventually assigned her own lot. Mendonça later invited her to join *Arquitetura na Periferia* due to her previous involvement in community projects.[41]

Luciana, a mother of three children, initially aimed to add a second story to her home, complete flooring finishes, design a laundry room, and install proper sewage, as water was her main issue.[42] However, she struggled to grasp the full scope of the project, particularly the financing aspect. With *Arquitetura na Periferia*'s support, Luciana gained confidence and skills, learning measurement techniques and layout planning. *Arquitetura na Periferia* assisted her in designing her home and provided valuable skills that later enabled her to contribute to remodeling the community center. This involvement not only enhanced her community's urban environment but also empowered more people. Luciana's experience illustrates how *Arquitetura na Periferia*'s technical assistance for women benefits broader society, encouraging women to take proactive roles in community development.[43]

Initially, Luciana had difficulty conceptualizing spatial dimensions when sketching her home. As she worked through the project's various activities, her

understanding of spatial planning advanced. She realized that her original design was not the most practical. In her own words, "When you draw, you can have a better vision of how it is going to be."[44] Once the initial sketches were digitized and improved, participants were able to suggest final adjustments with increased confidence. Familiarity with the design process is cultivated through workshops that enable participants to visualize and discuss ideas.[45]

The monitoring phase introduces participants to basic financial and mathematical concepts to manage small loans and purchase construction materials. In this phase, each participant receives a small loan to help cover construction costs. The women collectively decide how much to save each month and set the loan repayment timeline. Participants are actively involved in establishing loan terms aligning the architectural project with practical execution conditions.[46]

Financing was a critical issue for the first group. Luciana's past experience with a loan, where she ended up repaying nearly double the amount borrowed, made her wary. In 2013, *Arquitetura na Periferia* was not yet a formal organization, and Luciana found it unusual that the loan had no interest rates. She was uneasy about repaying a loan to a person rather than an institution. Additionally, because *Ocupação Dandara* was not a legalized settlement at the time, the potential for eviction influenced Luciana's decision-making process regarding the loan amount.[47]

RECOGNITION AND IMPACT OF *ARQUITETURA NA PERIFERIA*

Arquitetura na Periferia has been growing in relevance and impact. After Mendonça completed her master's degree based on her initial work, the project continued through work with *Arquitetas Sem Fronteiras Brasil* (Architecture without Frontiers Brazil), a non-profit organization located in Belo Horizonte in the state of Minas Gerais. In 2015, while searching for financial assistance, *Arquitetura na Periferia* partnered with the larger foundation. *Arquitetas Sem Fronteiras Brasil* aims to promote integration between financial and technical resources to generate positive social and environmental impact in Brazil, focusing its funds on projects related to Black entrepreneurship, gender equity, environmental and climate change, and education.[48]

By 2018, *Arquitetura na Periferia* expanded its reach to other states with large low-income populations, introducing workshops and forming partnerships with businesses and universities. With this growth, *Instituto de Assessoria à Mulheres e Inovação* was founded under the *Arquitetura na Periferia* umbrella. New initiatives over the years have included volunteering programs, COVID-19 solidarity groups, workshops, masonry and bamboo construction courses, and partnerships with institutions such as the Federal University of Minas Gerais, the Architecture and Urbanism Institute of São Paulo, and the University of Newcastle, among others. The project's core values and structure have facilitated its successful expansion.

To date, *Arquitetura na Periferia* has facilitated over 650 meetings and workshops, totaling more than 2,800 hours of training classes. It has operated in 18

different locations across five states, impacting over 6,000 people and engaging 670 women in the improvement of over 110 housing units.[49]

Recognizing its success, *Arquitetura na Periferia* has received several awards over the years. The *Prêmio Gentileza Urbana* (Urban Kindness Award) in 2016 acknowledged its contribution to urban life by promoting the preservation of cultural and natural heritage and expanding the concept of citizenship. The *Prêmio Marielle Franco* (Marielle Franco Award) recognized the project's innovative methods and actions in low-income communities and their transformative impact on participants. In 2023, the project was honored with the *Prêmio Amagis Mulheres* (Amagis Women Award) for its efforts in promoting women's rights and combating violence against women. It also received an honorable mention in the *Prêmio Tomie Othake* (Tomie Othake Award) in 2020, among other awards.

Arquitetura na Periferia aligns its goals with the United Nations Sustainable Development Goals.[50] Through technical advisory services provided to women in locations with housing deficits and lacking infrastructure, the project works towards poverty eradication. By making architects available to underprivileged segments of society, *Arquitetura na Periferia* addresses social inequalities. The project aims to empower women by granting them autonomy in all decisions regarding their homes, promoting gender equality through empowerment. Lastly, *Arquitetura na Periferia* is dedicated to fostering critical thinking and ethical professionalism among its participants and is committed to developing transformative and sustainable interventions in society.[51]

COMMUNITY ENGAGEMENT IN THE SEARCH FOR SOCIAL SUSTAINABILITY IN BRAZIL

This chapter has tied together the historical context, critiques of top-down approaches, and the promise of community-driven initiatives in Brazil, all while setting the stage for further discussion on the role of grassroots movements in achieving social sustainability. The historical trajectory of social housing in Brazil has left a legacy of profound challenges. From the abolition of slavery and the Proclamation of the Republic to the more recent *Minha Casa Minha Vida* program, housing policies have often relied on one-size-fits-all approaches that fail to address individual needs and the complex social and economic realities of urban development. Government strategies, while providing some relief, have not been sufficient to resolve the persistent housing deficit and inadequacies faced by low-income populations. The disconnect between policy intentions and outcomes underscores the need for alternative approaches that better integrate the voices and needs of the communities they aim to serve.

Investing in communities through self-directed approaches has emerged as a promising pathway to achieving social sustainability in Brazil. Grassroots initiatives such as *Arquitetura na Periferia* demonstrate the potential for community-driven initiatives to act as agents of social change. By empowering women in low-income communities to actively participate in the design and construction of their homes, *Arquitetura na Periferia* provides a model that not only addresses

immediate housing needs but also fosters long-term social cohesion and empowerment. This initiative exemplifies how localized, participatory practices can complement or even surpass state-led programs in creating sustainable and equitable urban development.

Analyzing these community-driven efforts reveals the limitations of conventional housing policies and highlights the transformative power of inclusive, participatory approaches. By involving residents directly in the decision-making processes, these models promote a deeper sense of ownership, responsibility, and engagement, paving the way for more effective and equitable urban solutions in the future. As Brazil continues to grapple with its housing crisis, such grassroots movements offer valuable insights and alternatives, demonstrating that sustainable change often begins from the ground up.

NOTES

1 Fundação João Pinheiro 2024.
2 Fundação João Pinheiro 2024.
3 Fundação João Pinheiro 2020.
4 Azevedo and Araújo 2007.
5 Fundação João Pinheiro 2024; numbers have been rounded to the nearest percentage.
6 Bonduki 2002; Filho and Malta 1989.
7 Costa 2010.
8 Bonduki 2002; Costa 2010.
9 Telles 2001.
10 Gomes 1979; Telles 2001.
11 Kowarick 2003.
12 Bonduki 2002.
13 Carpintéro 1997; Pereira 1992; Vaz 1994.
14 Blay 1985; Bonduki 2002.
15 Bonduki 2008.
16 Koury, Bonduki, and Manoel 2003.
17 Manoel 2004.
18 Azevedo 1988.
19 Amore, Shimbo, and Rufino 2015.
20 Cunha and Silva 2018.
21 Oliveira 1972; Thane 1998.
22 Bonduki 2018.
23 Bonduki 2018.
24 Turner 1977; Pulhez and Rosa 2016.
25 Pulhez and Rosa 2016.
26 Aun 2017.
27 Mendonça 2014.
28 Grace 2022.
29 Mendonça 2014; Estúdio Guayabo 2018.
30 IBGE 2024, 36.
31 Mendonça 2014.
32 Mendonça 2014.
33 Fundação João Pinheiro 2024.
34 Mendonça 2014.
35 Livingston 2006.
36 Livingston 2006.

37 Livingston 2006.
38 Mendonça 2014.
39 Mendonça 2014.
40 Mendonça 2014.
41 Mendonça 2014.
42 Mendonça 2014.
43 Mendonça 2014.
44 Mendonça 2014.
45 Mendonça 2014.
46 Mendonça 2014.
47 Mendonça 2014.
48 Arquitetas Sem Fronteiras n.d. https://brazilfoundation.org/en/project/associacao-arquitetos-sem-fronteiras/.
49 Arquitetura na Periferia n.d.
50 United Nations 2015.
51 Arquitetura na Periferia n.d.

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2.7 Building Thousands of Communities, Not Millions of Homes

A Participatory Approach Toward Transforming Informal Settlements in India

Sandhya Naidu Janardhan and Sandra Alexander

Today's global cities seldom make space for marginalized groups, instead pushing them to the city's edges and further marginalizing them socially, economically, culturally, and politically. With the absence of adequate state support, spatial isolation forces these groups to carve out places for themselves in urban centers, where they live and self-build in ways that lie outside of the purview of formal planning and urban design. According to the United Nations' World Urbanization Prospects Report,[1] rapid rates of urbanization in developing countries have led to the growth of megacities with populations of over ten million residents. While not all cities have grown at the same pace, metropolitan areas have seen a burgeoning demand for a workforce that gives its all to build the city but for whom the city fails to plan adequately.

The result is often self-constructed makeshift settlements or state-built housing for lower-income groups. Built in areas with poor conditions and without adequate infrastructure to support community health and wellbeing, residents face long commutes to workplaces, a lack of measures to prevent crime and violence, and other problems attributable to poor planning decisions. Residents are more likely to suffer from malnutrition, disease, hunger, increasing levels of infant mortality, lower life expectancy, and a higher incidence of violence. Additionally, they are disproportionately impacted by severe climate events, further impacting their quality of life.[2]

A home is a microcosm where various such issues intersect – climate vulnerability, gender inequality, or problems with work, livelihoods, health, and general wellbeing. Understanding housing in urban cities as "engines of human development"[3] allows us to engage with the aspirations of entire communities along with the systems and drivers that affect their lives in myriad ways. Currently, and especially in the Global South, housing for marginalized groups is constructed without regard for any of these factors. A majority of marginalized residents are seen as "beneficiaries" who do not need to be consulted in decision-making about where and how they live or what physical and social structures will be most conducive to their wellbeing. This understanding of "need" reduces low-income residents to a single dimension and strips down the multifaceted necessities of the ecosystems that run a city.

Housing deprivation has historically been linked to oppression and thus has a disproportionate impact on particular groups and geographies. Reshaping and

DOI: 10.4324/9781003480426-14

redefining these trajectories requires these often marginalized groups to reclaim their narrative and become central voices in redefining their futures.[4]

COMMUNITIES AND THEIR SOCIAL CAPITAL

Communities faced with inadequate conditions are forced to confront everyday challenges head-on. Often, this leads to social resilience, where community members stand up for each other, creating a sense of solidarity with their neighbors and belonging within the community. The community collectively exists as a whole instead of living as individual family units.

The collective unity and social bonds that are formed over years of living together are broken apart when community members are shifted into small, isolated housing, stacked one upon the other, with no spaces nearby to meet, gather, or interact. Large cities in the Global South have seen the rise of the "vertical slum," a shift from horizontally organized communities to vertical structures with fewer amenities and an increased need for maintenance and upkeep investments. Life in these towers has become a health and safety hazard, with residents isolated far from their workplaces, hospitals, schools, and even the rest of their extended families.

Parveen, a 45-year-old woman, is a resident of a slum resettlement neighborhood in Govandi, one of the most marginalized areas in the city of Mumbai. Parveen lives with her husband and two children in Natwar Parekh, where 25,000 people live in close quarters across 61 buildings built on five acres of land. Her home is 225 square feet (21 m^2), built according to guidelines of the Slum Rehabilitation Authority, which constructs affordable housing to "rehabilitate" slum dwellers in the city. Parveen's home barely has any access to sunlight or natural ventilation, and the effects of these planning decisions are becoming evident – 15 years after moving to this neighborhood, Parveen's neighbors are suffering from various health concerns, some of which are severe. Cancer rates are high, and one person in ten suffers from tuberculosis. Govandi is located on the eastern edge of Mumbai, a stone's throw away from Deonar, Asia's largest dumping ground. The area has a Human Development Index (HDI)[5] of 0.05 and an average life expectancy of 39 years, almost half the national average.

Fifteen years ago, Parveen and her neighbors were moved from their slums in another part of Mumbai, where she had been born, grew up, and where she had raised her two children. In our conversations with her, she recounts that although living on the streets was a tough and grueling experience, the solidarity and resilience she found motivated her to fight through all obstacles. Residents felt a sense of belonging towards the place they lived in. During the day, she would travel across the city to other slums, organizing and supporting women-led self-help groups. During this time, she would entrust her two sons to neighbors, who would take care of them while she was gone. The community came together in this way for each other regularly. In standing together, the strong support they felt helped them get through their difficulties.

When we talk about "slum clearance" or "rehabilitating" slum dwellers into vertical housing on the edges of the city, we omit and discard residents' lived

experiences that shape both spaces and their residents' individual and collective histories. Both speak to the quiet resolve and resilience that goes into building community with others who are in the same dire circumstances.

Instances like these necessitate a reimagining of how housing is constructed in our cities today. Could we adopt a more holistic and participatory approach? While working to improve the living conditions of large numbers of families, we must tap into the resilience that they inherently possess as a community so as to create sustainable and equitable neighborhoods where people can flourish.

We, the authors of this chapter, are part of Community Design Agency (CDA), a Mumbai-based social design enterprise that aims to democratize architecture, art, and design for everyone. Our collective aim is to transform the built environments of marginalized communities into safe, vibrant, and healthy neighborhoods. Through a case study of CDA's work, this chapter will depict an alternative way of building for low-income communities in urban spaces.

THE TRAJECTORY OF AFFORDABLE HOUSING IN INDIA

Urban planning and policy currently have a top-down approach in India, and there are no avenues for citizens to participate in policy-making or in planning their cities. In the wake of India's independence in 1947, a series of socialist governments established policies based on the belief that the state should play an active role in providing affordable housing. Such policies have, however, not always benefitted the population to the fullest. After the 1956 "Slum Areas (Clearance and Improvement) Act," for example, large populations were relocated far from the city center and residents' places of work.

Another landmark policy was the "Jawaharlal Nehru National Urban Renewal Mission (JNNURM)," launched in 2005. This policy focused on urban development by integrating the domains of housing, water, sanitation, and other urban infrastructure. JNNURM operated successfully until 2014, facilitating sustainable urban transformation for states and municipal bodies. The policy was criticized for its bias toward large cities and for devoting a lesser proportion of its budget to the urban poor.

The current government's "Housing for All" policy, "*Pradhan Mantri Awas Yojana-Urban* (PMAY-U)," rolled out in 2015 and addresses the need for affordable housing in urban areas through five different schemes. One of these is the Credit Linked Subsidy Scheme (CLSS), which provides subsidies to economically underresourced families to build their own homes. The design of the CLSS scheme prefers households that are considered creditworthy, with secure income streams.[6] Therefore, a large section of India's urban poor, employed in informal work and earning daily wages, is unable to access this scheme. In 2024, the "slum redevelopment vertical" category was removed, paving the way for this type of housing to be categorized with all the others.[7]

Newer developments in cities have been built at the cost of bulldozing slums and removing all traces of communities who have lived there for decades. In India, 169 million citizens, who make up approximately 34 million families, live without access to safe and adequate homes. This has resulted in roughly 135,000

communities that live in slum-like settlements. If, instead of creating 34 million homes, we were to create 135,000 communities, it would pave the way for these communities to stay together, secure themselves from future economic and climate shocks, and have a chance to flourish.

PROCESSES OF COLLECTIVE CITY MAKING

In a country like India, how does one build for the marginalized when there are no set parameters, no measurable metrics, and no direct financiers to support low-income housing? Such housing in cities of the Global South must be considered through well-thought-out methods that are inclusive and community-driven.

Social sustainability is sometimes thought of as social and economic equity and inclusion that attempts to right the gender, racial, ethnic, and economic imbalances that characterize much of today's world. Though social sustainability has not become a conventional, globally accepted metric, there is huge value in taking a closer look at how it plays out in a given project. According to urban planning theorists Efrat Eizenberg and Yosef Jabareen, social sustainability incorporates three facets: 1) Recognition of residents and communities who are in need of good quality housing, 2) Redistribution of resources through a social and economic restructuring, and 3) equitable participation, which promotes significant public involvement in the creation of a space.[8]

Through qualitatively measuring the social sustainability of a community initiative, we gain an understanding of the project's impact. These details might not fit neatly into quantitative metrics, but they do tell us more about the increased quality of life that a community starts to build or gets access to. At Community Design Agency, we ensure our interventions and the processes undertaken to reach them shape a community in ways that are socially sustainable.

Three key facets of our process help us reach this goal:

Inclusive Design. Housing, when planned and built in consultation with the future residents, can have transformative effects on communities and can lift entire generations out of poverty. A key ingredient of this consultative process is deep community engagement. This inclusive design approach must also include other stakeholders, such as city authorities and developers, to achieve broad consensus.

Place-based Approach. We use an inclusive place-based approach, in which we stay in a community for many years, unearthing challenges that communities are facing and solving problems through changes in the built environment. Staying in the community for extended periods of time reveals the issues residents grapple with on a daily basis. Empowering residents to make decisions for themselves about their built environment emboldens them to have agency over their spaces and extends this agency to other facets of life, where they feel empowered to mobilize and demand their rights.

Democratizing Design Tools and Mechanisms Used. To successfully engage with a community and carry out a participatory planning process, various art-based interventions can be used. Innovations in building technology and

creating financial models to support the community economically are also a part of democratizing the design and building process. We aim to disseminate the frameworks and tools we develop for others to learn from and recreate.

In Natwar Parekh, Parveen's neighborhood in Mumbai's Govandi, we used these three methods in our journey of working within a community of 25,000 people to co-create safe and vibrant social spaces. While the community's state-built homes are ill-planned, and residents suffer from the area's health impacts, we decided to regenerate the social spaces in this neighborhood to improve the community's wellbeing. From 2016 onwards, we supported the community in bringing together the youth, forming the first-ever youth group in the neighborhood. Together, they have painted murals to revitalize the dull walls of their neighborhood and led a waste management initiative in which they cleared up streets piled with garbage and converted them into spaces of play and leisure.

We co-created a children's library, which now runs successfully as a space for kids to read and explore their artistic abilities. We helped organize the first Govandi Arts Festival to reclaim the cultural identity of a place that is otherwise stigmatized for its poverty, high levels of violence, and drug abuse. The residents decided to host the festival in the only designated open space of their neighborhood, a space that lay inaccessible, encroached by parked cars and garbage piled high. With the help of city authorities, residents cleared this ground and held the five-day arts festival, manifesting the potential of collective placemaking.

After the festival, this open area was transformed into a playground where children and youth meet and the elderly go for walks. This is an example of how creating equitable spaces in our neighborhoods can take many shapes and forms, especially when using art and design as tools of engagement. The city authorities, who were impressed by the community's resilience, are considering a complete overhaul of the entire neighborhood's infrastructure. By using inclusive design, harboring our practice in a community for years, and innovating through art-based methods, the neighborhood has seen transformative change.

SLUM REHABILITATION THROUGH PARTICIPATORY PRACTICE: A CASE STUDY

In India, the state of Maharashtra has the highest number of slums. In its Ahmednagar district, Community Design Agency is piloting an in-situ slum redevelopment project with 298 families, which includes a thousand people. In the Sanjaynagar region of Ahmednagar, residents have had to bear the brunt of new development that has sidelined them while transforming their city through large infrastructure projects.

Forty-five years ago, Sanjaynagar residents were displaced from their homes a few miles away to make way for a new sports complex. Daya, an elderly resident, shares stories of how the displaced families had to make their homes again on marshy land. They had to try to avoid snake bites and wade through knee-deep water to reach the hospital if someone got bitten. They also used the same water to drink, filtering it through the women's *saris*, as there was no other water

Figure 2.7.1
A children's library called Kitaab Mahal, or "Palace of Books," built by CDA in Natwar Parekh, Govandi. Photo courtesy of Community Design Agency.

Figure 2.7.2
The transformed open space where the Govandi Arts Festival was organized. Photo courtesy of Community Design Agency.

available. Despite adversity and with painstaking effort, Daya's neighborhood in Sanjaynagar now houses its fourth generation.

In 2016, when we were introduced to this community through a grassroots organization, Snehalaya, we started by building consensus with the residents to redevelop their homes. Slowly, government officials were brought into this conversation. The community was taken to see examples of other community housing projects in places like Bhuj, where they interacted with the residents and learned how this housing model could work for themselves. Over two years, we engaged with the community to build a strong bond with them, understand the nuances of their daily life, and design their new homes through a participatory process.

Figure 2.7.3
Aerial view of the Sanjaynagar neighborhood. Photo courtesy of Community Design Agency.

Figure 2.7.4
Participatory design process underway with the residents. Photo courtesy of Community Design Agency.

Making residents part of the design process allows for the community and the practitioners to immerse themselves in design questions together and collectively figure out how their homes and other spaces can be built, maintained, and governed. For instance, a challenge that arose during the design phase was that the residents did not want to live in vertically organized (mid- or high-rise) buildings. Given the incredible challenges these families faced in making this swampy land their home, it was only natural that they were very attached to the land – so

much so that they wanted all the housing units in the new development to be on the ground floor. It was simply not possible to fit 298 single-story homes on just two acres of land. Thus, we ran a design exercise where, if the residents succeeded in organizing all the homes on the ground floor, they could build it exactly like that. The residents spent a long time organizing all the housing units within the allotted plot of land and ultimately decided that they would live in eight three-story buildings. Being part of the design process prompted them to consider at length how their homes would be organized and constructed, giving residents more agency over the decision-making process.

Ruttik, a young man from the community who is also a Community Representative, became so familiar with the design that he was able to draw the layout of an entire building on a carpet to scale. Thus, we were able to democratize and demystify design for the community. Each home was also designed to suit each family's unique context. The apartment typology allows for multiple combinations and iterations based on the preferences of the families. In the first building, consisting of 33 homes, there were 20 unique apartment layouts. This flexibility not only allows many of the families to stay together but also assigns a unique identity to each home.

Beyond the design phase, a governance mechanism was set up to maintain the buildings and other infrastructure. Together with the residents, we co-developed a three-tier community engagement model that included a neighborhood-level committee, housing cooperatives for eight buildings within the project, and Community Representatives comprising youth and women from Sanjaynagar. The Community Representatives were trained and involved in day-to-day tasks within the community. This system ensures future care and stewardship of the neighborhood by its members.

Residents' leadership and teamwork were demonstrated effectively during the COVID-19 pandemic when Community Representatives single-handedly managed food distribution for the entire community. Seema and Anjali, two Community Representatives, have emerged as strong leaders in Sanjaynagar: "We are seen as role models. The children want to be like us," says Anjali, who is in her early twenties.

In the process of collaborative city-making, dealing with government and city stakeholders allowed residents to start seeing their community differently. Relations previously strained by the lack of access to proper sanitation, water, and electricity facilities now shifted as residents became co-creators of the project. When community members took the initiative and coordinated with authorities and the Ahmednagar Municipal Corporation to get paperwork submitted, the municipality started believing in this group of people who had shown their capacity to mobilize and make change happen.

We saw this in Natwar Parekh, too; in places where communities come together to shift their narratives and demand their rights, authorities are compelled to work with them. Our process relied on the social capital inherent in the community and worked through mechanisms to strengthen that capital. When the homes were ready, the community was able to maintain their resources collectively, have stronger bonds than ever before, and thrive.

Figure 2.7.5
Sanjaynagar site plan. Photo courtesy of Community Design Agency.

Figure 2.7.6
The first building in the Sanjaynagar project. Photo courtesy of Community Design Agency.

ASSESSING THE PROCESS

The impact of building homes through engaging communities has been tremendous. Swapnapurti, the first building of the Sanjaynagar project, includes 33 units and serves as a benchmark for inclusive community participation as well as circular and regenerative architecture. The project has led to the community becoming closer than ever before, with city authorities and the municipality now viewing public participation as a necessary element of planning. The Sanjaynagar Slum Redevelopment project is the first of its kind in Ahmednagar, and its success has led the municipality to pay more attention to participatory planning mechanisms.

There are other impacts, too. Given the hot and arid climate of Ahmednagar, temperatures in the Swapnapurti complex are, on average, five degrees (in Celsius) lower than in other housing, increasing the residents' thermal comfort.[9] The planning, design, and materials used during construction have allowed for a healthy environment in the community, drastically impacting residents' wellbeing. A resident reported:

> In the slums, it used to be very warm indoors. Now there is good sunlight and air in our homes. We don't have to turn on the light bulbs until late evening, nor do we need to use fans most of the day.

The neighborhood is interspersed with more than 25 common spaces to keep the community's social cohesion intact. Examples include green courtyards, wide corridors and rooftop gardens, community and health centers, and a childhood development center.

"Now that we are in our new homes, there are so many changes! I want to educate my daughters so they can have a good career and be self-sufficient," said a woman on starting life in her new home. Female homeownership is close to 50%. The population spans generations, castes, religions, and livelihoods. Collaborative engagement ensures each resident has an equal voice. Another resident noted,

> Now, the children have enough space to focus on their studies, unlike in the past, where all household activities took place in one small room. In the new building, children have enough space to study, and this will definitely ensure a bright future.

This resident went on to say,

> In our new homes, women and children have indoor toilets and running water. In the past, we had to accompany them to the outdoor area after dark. I don't have to worry about their safety now that they have their own toilets.

But there were challenges as well. The COVID-19 pandemic had a huge impact on the construction process, with laborers being hard to find and construction costs increasing greatly. Despite the hardships, at a time when it was difficult to put food on the table due to the pandemic affecting earning power, families remained resilient and saw the construction of the first building to completion.

FINANCING SOCIAL SUSTAINABILITY FOR LOW-INCOME NEIGHBORHOODS

Families in urban India spend years trying to eke out a living with little to no resources, making their homes in cities that do not want them. Existing provisions for the urban poor to finance their own housing are woefully inadequate. Despite support from the states and central governments, financial inclusion is still mostly

meant for middle and higher-income groups. At Sanjaynagar, Community Design Agency adopted an approach that helps sustain developmental efforts financially, thereby securing the social sustainability of the project for future generations. This came with its own set of learnings, prompting us to rethink and develop new solutions.

The most challenging part of building homes has been the community's lack of access to housing loans from small to medium-sized local banks. The financial institutions we approached had checklists that were not suitable for borrowers from this income level and type of employment, and, therefore, they did not qualify for the loans, even for a government-mandated housing project. We thus explored various financing mechanisms, including a test case for a novel peer-to-peer lending finance product for housing created with Rang De, a housing finance partner. Residents underwent financial literacy training and an assessment to be eligible to borrow from the platform. Loans had low interest rates and enabled residents to build a formal credit history, which could lead to future borrowing from banks and other formal sources of credit. Through a collaborative effort, the housing loan product covers a majority of residents and opens up the project to a larger group of people interested in supporting such an initiative.

Further explorations allowed us to create a mechanism that allows the borrower to choose the amount they wish to borrow (however small), as well as a repayment schedule based on their livelihood. There are street vendors who chose to repay weekly, while salaried residents opted for monthly repayments.

The loans that families received from Rang De were unsecured loans, not needing collateral or security from the borrower. While we initially thought this was a move in the right direction, these loans saw repayment at a slower rate. Though the repayment rates are adequate, we have opted not to go forward with the Rang De financing tool for the next set of buildings. We are further revising financing tools within our blended finance model, which integrates three components: government funding from the "Housing for All" policy, residents' funding (where the families take help from small and medium-sized banks), and concessional philanthropic capital.

By giving the residents access to financial tools and assisting them in becoming homeowners over a short period of time, we can lift generations out of poverty. While working in spaces where architecture is not regarded as a necessity for certain segments of society, architects and planners have learned to play the role of facilitators and to find ways to develop financial mechanisms that can support their work in low-income neighborhoods.

CONCLUSION

Current housing crises are defined through experiences borne by the world's majority. Roughly 2.8 billion people globally experience some form of housing inadequacy, 1.1 billion of whom live in informal settlements.[10] This "crisis" is not the result of exceptional circumstances; rather, it is a constant reality for many

people. As housing experts David Madden and Peter Marcuse have stated, "for the oppressed, housing is always in crisis."[11]

The decision-making processes that shape housing systems need democratic structures that recognize and support collective forms of city-making. This proposition calls for policy and practice to embrace, protect, support, and expand radically democratic forms of housing production, such as participatory upgrading, inclusive design, and inclusive forms of public housing.

Low-income housing in the Global South, especially in cities in India, needs to be reimagined. With large urban areas being overcrowded and production shifting to smaller cities in India, there is a huge opportunity to create good-quality housing for entire communities. The key element outlining this work is residents' resolve to stake claim, to improve the spaces they inhabit, and to build better and more vibrant lives for themselves.

To approach housing in this way, urban practitioners must think holistically and will need to take on multiple roles through their practice, as financiers, researchers, community artists, outreach facilitators, waste warriors, and so much more, to create spaces based on the needs of the communities they serve. Ultimately, working on the built environment means working at the intersection of issues such as health and wellbeing, safety, leisure, livelihoods, air pollution, waste management, and arts and culture. Tackling each of these issues through a deep, place-based approach and establishing successful initiatives co-led by community members also transforms the role of urban practitioners and architects, changing the very nature of their practice.

Manda Adagale, a single parent at the Sanjaynagar site and a resident of Swapnapurti, is looking forward to expanding her family: getting her son married and welcoming her daughter-in-law into the new home. Putting behind her the many challenges she faced in her abusive marriage, Manda says that this new home is the first space where she has felt safe in a long time. In the communities we engage with, more women are taking up the role of grassroots leaders. Women are being trained, and many are now completing their education. In this manner, helping communities build social sustainability through architecture and design helps build thousands of thriving communities, and not just millions of individual homes.

NOTES

1 United Nations 2019.
2 Madden and Marcuse 2016.
3 Cociña and Apsan Frediani 2024.
4 Cociña and Apsan Frediani 2024.
5 The United Nations Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable, and having a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.
6 Khaire 2023.
7 Chitlangia 2024.
8 Eizenberg and Jabareen 2017.

9 Rajput, Padmanabhan, and Thomas 2024.
10 UN-Habitat 2023.
11 Madden and Marcuse 2016, 10.

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2.8 Participatory Design Processes in Architecture

Interview with Susanne Hofmann[1]

Q: How do you define participatory project development in architecture? What role do the participants play?

For me, participation is when people share in the creation of their surroundings, the spaces where they will live and work. Architecture plays a central role in our lives and has great social importance, but only if we, as architects, understand what people need. In the participatory design process, we start each project by determining who might be affected and who should be involved. In school design, which my office specializes in, that would be the learning community as well as administrators, the municipal building department, urban designers, historical preservationists, and those who will ultimately be making the financial decisions, such as local politicians and school boards. It's important to include local decision-makers early on so that they are on board with anything we propose.

Q: It sounds as if you're addressing certain power structures. Some of the stakeholders – let's call them that – have financial power in the architectural process and some do not.

It's important for us to find ways that will allow those who don't have the financial power to contribute to shaping their own environments, to voice their desires and needs. That said, transparency is key. A project's parameters must be clearly articulated from the start. That includes, for example, site configurations, budgets, and how many square meters are possible. This is one of the challenges of the participatory process. A project's future users have to be aware of any limitations in the design process to avoid disappointment. At the same time, future users must feel that they are being truly heard.

Another important aspect of our process is that conversations with users must be at eye level. Our participation methods have been developed to ensure such flat hierarchies. We don't "teach" anyone anything. We also don't talk about "laypeople." For us, users are only architectural laypeople. Users bring in their own expertise, and we have developed methods, such as the *Visioning Game*, that help them communicate this expertise to us. Children, for example, have a view of their world that is very different from how an adult might view the same world. Our task is to also make that child's view visible.

This might sound like it's contradicting what I just said, but we start our process by asking users to imagine things without limitations. That's because architectural laypeople cannot know how much things cost or what is technically

DOI: 10.4324/9781003480426-15

possible. We start by asking people to freely imagine what their "perfect" world would look like.

Q: Many architectural laypeople are surely influenced by what they know already, what buildings are "out there." How do you get users to get past preconceived notions, to go beyond conventions?

The methods we've developed are designed to get the users to develop new visions. The *Planning Game* is designed to circumvent stereotypes that people might come into the process with. We access people's ideas through a series of steps. We ask, "What are activities you can see happening in this building?" and "What are the atmospheric qualities that are important to you?" We lead future users through this process to uncover their own aspirations and visions of the spaces. We don't ask users to draw or read plans – that's our job. We ask them for their visions. As planners, our job is to create the synergy of these visions and to apply our technical knowledge: How can we realize the users' ideals within the parameters of things like budgets, square meters, and building codes? The architect's role is to develop a *Gesamtkonzept*, a general concept, out of all of these different elements.

We also make use of Helga Nowotny's concept of "Mode 2 Knowledge," which speaks of "socially robust knowledge" that is personal and situational [in contrast to "Mode 1 Knowledge," which is positivist and detached from the object of study. – ed.]. Using Mode 2 Knowledge principles, Nowotny has pointed out that some social projects remain unfunded because researchers fail to adequately articulate their importance and don't discuss the hidden consequences of various actions clearly enough.[2]

Q: Was there a specific event that led you to dedicate yourself to participatory design?

I studied in London, and participation was an important concept there. For me, humans were always central to architectural production. Architecture is experienced through movement through spaces. Several texts were extremely important to me in developing my ideas: Heinrich Wölfflin's texts on the psychology of architecture, August Schmarsow's texts on the bodily experience of movement through space, Gernot Böhme's work on architecture and atmosphere, Wolfgang Meisenheimer's work on the human body as a "self in action,"[3] and August Endell's atmospheric descriptions, published around 1908.[4]

A key moment was when we were commissioned to design the Erika-Mann Primary School, and the principal of the school named the children as client representatives. That was an "aha" moment for me. I was teaching at the Technical University in Berlin at the time and was looking for a studio project. The idea of introducing the children as client representatives was original and made so much sense. Negotiating with children is much different from what you'd experience with adults. Children are more direct; they unhesitatingly say what they see and think. They don't think in terms of preconceived ideals or established categories – they are much freer in their thinking than adults.

My students and I met with the children every two weeks, and with the children, we developed a story called "The Silver Dragon World." The Silver Dragon

Figure 2.8.1 Stakeholders play the "Visioning Game" as part of the participatory design process. Photo courtesy of *Baupiloten*.

Figure 2.8.2 Stakeholders engage in a model-building workshop as part of the participatory design process. Photo courtesy of *Baupiloten*.

World became the concept for the design and provided ideas for the atmosphere and the architecture.

For a different project, a daycare center, we worked with the concept of Pippi Longstocking. The daycare was called "Taka Tuka," after the country in Astrid Lindgren's book. The structural engineer told us to use steel for the daycare, but my students immediately pushed back, saying, "Pippi would never have used steel!" So, we switched to wood.

Q: What specific methods do you use in participatory design? How did you develop those methods in your practice?

We developed our methods step by step. In the Erika-Mann School project, for example, we were working with many children who were from working-class backgrounds and whose first language was not German. The children's families were from 26 different countries, so it was a very diverse group. The school itself had developed a focus on theater to help the children find a common means of expression.

Our first approach was to ask the children to draw a picture of where they came from. That was a completely wrong approach, of course, because, from the children's perspective, Berlin was their home. Only one child drew a picture of a lemon orchard that belonged to her grandmother.

We next switched to collaging as a means of expression. My students constructed collages with the children, and that was the breakthrough. The children used the collages to tell all sorts of stories. Realities and fiction were completely mixed in this process.

In the Erika-Mann School project, we used collaging to develop ideas for the school hallways. The strong fire code restrictions limited what we could do. We worked on a concept that we called "The Path Through the Garden of the Future." Through the collaging exercise, we were able to see the children's interests and what kinds of spaces they wanted to enjoy. The "Garden" metaphor provided the atmospheric impetus for the hallway. Calling the hallway a "garden" allowed the children to escape any stereotypes of what a hallway might be.

The next step was to develop models of the hallway with my students. The first models were still fairly conventional and didn't correspond to the stories told in the children's collages. My students then started developing more abstract models that were collaged and better reflected the children's stories. Through this, we were able to develop a strong concept and then build in things like fire code requirements.

We developed the first version of the *Visioning Game* during our work on the Siegmunds Hof project in 2007. We started with interviews and distilled out all of the atmospheric terms as well as those that described activities. We then sorted and categorized the terms, akin to a qualitative coding exercise. The first version of the game was a one-person game, which quickly turned into a multiplayer game where concepts were negotiated within a group. The new version allowed for concepts that were not either/or – concepts could express multiple ideas simultaneously.

Q: You work in a team when you design. How was this team established, and how did the roles of each person develop?

Working in a team began when I was teaching at the Technical University in Berlin. We professionalized this work in our practice under the motto: experimental, innovative, practice-oriented, and engaged. In professional practice, working experimentally is the most difficult, as no one pays for the time spent on experimentation. At the university, experimentation was easier to realize. Design research (design accompanied by research and research by design) has always been an important part of my work. I often worked with students for an entire

year, which might not be possible today since curricular plans have been tightened to have students graduate more quickly.

Today, my practice is about 18 people large, including two or three student interns. We also work with educational specialists and have a second office in Innsbruck, Austria, where one of the partners has a dual specialization in education and architecture. The educational specialists conduct key interviews in the schools and consult on all of our school projects. We also used to have a system designer and graphic artist who contributed extensively to developing and refining our *Visioning Game*.

Q: Could you give us an example of how you work? What is especially important to you? What do you look for? What do you draw or write during the process?

We start with flash workshops, and drawing and writing are the first results of our process. For example, in a project for a vocational school, we started with such a workshop. We asked, "What are your team strengths?" We also asked about challenges and potentials, such as moving to a more central urban site that contained an existing building complex. Our first thought was that it would be a great opportunity to move to a building in the middle of the city. But the school community we were working with expressed uncertainty. The city had only guaranteed use of the building for ten years. There was no outdoor space, so breaks had to take place in public areas around the building. The potentials expressed in the workshop centered around the new facilities and new spaces that would allow for the realization of modern educational concepts.

After this process, we started negotiations through the *Visioning Game*. We had several heterogeneous groups playing the game simultaneously, and they all developed their own visions, which we then combined through a further process of dialectic analysis. It's a coding process. We sort the results according to similarities and then see where the big pictures lie. In the vocational school project, for example, we saw that an important concept was an "inviting market square of exchanges where people can meet" and also something we called a "relaxing resilience clearing." We translated this feeling of a "clearing" as zones of quiet that people could withdraw to, spaces that were light and that felt protected.

The next step is a further workshop, where we delve deeper into the questions generated from the first workshop. We use cards developed from the first workshop and decide on programmatic aspects of the design: what should be combined into the same space and what needs to happen in its own space. We gather the results and discuss them further in a plenum. From this, we can create a program for the school with spaces, room dimensions, and atmospheric qualities of the rooms.

Q: Do you ever shadow people in the schools you study? You work with methods developed from the social sciences, and I imagine the next step would be to use ethnographic methods to observe people using their spaces in real life.

We are able to do that sometimes, but not as extensively as we'd like. It's a budget problem; no one can pay for it.

Q: Did you ever experience a moment where something went terribly wrong? What did you do to correct course?

In the early phases – I was still teaching at the Technical University in Berlin – we had a workshop in Hamburg. It was a small project, and they only had a small budget, so we were limited in what we could do. I felt our partners did not take us seriously. We were continually confronted with different people speaking for the clients, which compounded our work. Because of this, our partners never got into the visioning process, and they were simply not invested in the design.

In another project for a primary school in a small town, we identified a conflict. The after-school program was run by a local church. The new program was to be run by the ministry but spatially integrated into the school. The pastor strongly resisted having the after-school program moved from the church. We quickly realized that this negotiation would not be solved through any "visioning" and would have to be resolved apart from any design process. Such conflicts, especially with administrators not willing to engage with our process, occur every once in a while. It's important to recognize and deal with them so they don't derail the design process.

Q: Do you have a favorite project? Which one, and why?

I do have a favorite project. It's the Pippi Longstocking "Taka Tuka" kindergarten. When we took it on, the building was a utilitarian container with a degraded facade. We reconfigured it on a shoestring budget, using wood. The result was spectacular; out of a shabby container, we were able to create a dynamic yet delicate structure. We developed a "lemonade river," and the children had fabric cupboards instead of the conventional metal lockers. There was a tropical island and spaces to climb. It's also a recycled building – we reused as many elements of the original building as possible, sometimes moving them and giving them a new

Figure 2.8.3
The Taka Tuka Land project. Photo courtesy of Jan Bitter, *Baupiloten*.

use. The technical fire code demands were vexing, yet in the end, we were able to solve them quite simply by moving some of the doorways.

Unfortunately, the Taka Tuka project was later torn down because an investor project was built on the site. That was a very sad moment for us.

Q: Are there projects where you feel participatory design would be out of place?

Not really. Someone once suggested that buildings such as stadia, museums, or theaters might not be appropriate projects for participatory design. I think one could still develop such designs with the clients and the users. For stadia, that would involve the spectators. Museum and theater concepts are currently changing; they now strive to attract people who previously might not have sought out such cultural institutions. Developing new ideas in this context would be an exciting endeavor.

We always want to understand what the users need, but the holistic concept of a building is the job of the architect. We are not just moderators of the planning and building process; we absorb impulses and synthesize them. We create projects out of what we absorb. We are the ones who are trained to do this. We often perform the "Work Phase Zero" of the project to help develop the project's RFP (request for proposals).[5] Sometimes, we submit a proposal and take on the actual design and/or construction of the project as well.

I also want to emphasize that participation in design does not increase the overall project cost. It saves time and money and leads to less stress overall. I don't have exact numbers, but when you get things right the first time and the users are happy, then you have far fewer corrections after the fact. We've had multiple people tell us that. When people are happy with their spaces, there is less vandalism, people are happier to be in the spaces, and people live better. Participation is an investment that is truly socially sustainable.

NOTES

1 The interview was conducted by Alexandra Staub.
2 Nowotny, Scott, and Gibbons 2003.
3 Meisenheimer 2004.
4 Endell [1908] 2018.
5 See Chapter 2.9 for an explanation of Germany's fee structure for architects, based on different work phases.

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2.9 The *Baupiloten*

Creating Participatory and Socially Sustainable Architecture

Susanne Hofmann

ENABLING DEMOCRATIC SPACES

An enlightened and democratic society requires that citizens actively participate in decisions concerning the design and development of their environment. Architecture and urban design play a significant role in this process, not only when considering specific environments but also when grappling with problems caused by climate change. Citizens in a democratic society thus need to be able to experience self-efficacy in the spaces of their everyday life in order to promote their wellbeing. Spaces can only be considered sustainable, moreover, if they can be used well and in a variety of ways, and if resources and building materials are used prudently, wisely, and in a manner that is climate conscious and respects social responsibility. In considering all of these issues, it is also essential to create functional rather than dysfunctional social structures.

How can the diversity of user needs best be determined and negotiated? For architects, users' knowledge about how they engage with and experience spaces is a fundamental resource in the architectural and urban design process. In the following text, I will demonstrate what role the "Work Phase Zero"[1] of the German professional code plays in this; a phase in which basic building functions are determined and the designers and other stakeholders fundamentally think about what the building should achieve, and how it should be designed and constructed. Finally, I will show several examples in which this method has helped us create socially and culturally effective projects and spaces.

EXPERIENCING SPACES

Spatial experiences are fundamental to how we perceive our environment aesthetically. These experiences begin at birth – probably the most profound and intensive learning and spatial experience of every human being – and accompany us consciously or unconsciously throughout our lives.

My job as an architect is to make the spaces in and around buildings as useful and pleasant as possible for the people who live and work there. I do this by having people participate in planning those spaces. An architect's *métier* is to create space. I am convinced that only architecture that people can identify with, that promotes well-being and is aesthetically convincing, is really usable and therefore sustainable. How can we create that kind of architecture?

DOI: 10.4324/9781003480426-16

If we consider architecture in terms of space, we cannot avoid dealing with spatial *atmospheres*. Atmospheres determine our environment not just meteorologically but also metaphorically. If we follow the philosophy of phenomenologist Gernot Böhme, we realize that there is no real difference between the two. The atmospheric impressions of our weather-influenced natural environment and the sensory impressions of our architectural environment, determined by spatial parameters, are similar when considering corporal or rather physically felt experiences.[2] Spatial atmospheres are thus an essential element of architecture. We experience space through atmospheres that are multi-sensory, not just visual. According to Böhme, atmosphere is the presence we feel in space.[3] This perception is subjective, individually shaped, and able to communicate. This communicative ability can be negotiated and experienced intersubjectively.

EXPLORING DESIRES – EXPERIENCING SPATIAL IMAGINATIONS

The architecture firm *Baupiloten* was established in 2002 as a curricular reform project at the Technical University Berlin. A dialog-based, reflective design process has been part of our architectural planning and research practice from the start. In the years since our launch, we have developed an extensive methodological toolbox that enables us to stage intensive yet playful communication processes between designers and a building's future users. The *Baupiloten* team strives to develop a robust architectural concept while enabling a high level of flexibility in the planning and construction process.[4]

Our experience has led to a uniquely structured design approach. First, we familiarize ourselves with the task at hand and explore the site where the construction or reconstruction is to take place. If a commissioning institution already exists, we pay a visit: to the school, library, neighborhood center, kindergarten, music school, or cultural venue such as a theater for children and youths. We follow their operations as observers. If the institution is still in a foundational stage, we contact stakeholders who might have a particular interest in the project and who might affect or be affected by it: interest groups, advisory boards, people from the institution's administration, and local politicians. We call this group the "project family" – stakeholders who sit around a table and negotiate, coordinate, and collect ideas.

After the "project family" is established, we work towards finding out the users' ideas and desires that they associate with their future projects or planned renovations. What do they expect from their new surroundings? What aspects of the existing environment would they like to see retained, and what aspects would best be left behind? In other words: what about their experiences with the existing environment was good or bad, and which of their experiences reflect project strengths and weaknesses? During this process, it is important for us to capture not only functional but also *atmospheric* wishes and ideas.

EXPERIENCING SPATIAL IDEAS ATMOSPHERICALLY

Our process does not stop there. Collaboration has shown that the architect's usual means of communication – drawings, presentation models, and technical

Figure 2.9.1
The "Desire-Mobile" asks, "What would I like to experience in Büchenbach?" Photo courtesy of *Baupiloten*.

Figure 2.9.2
Stakeholders take part in an "atmospheric mosaic" exercise. Photo courtesy of *Baupiloten*.

jargon – do not help share thoughts with the other stakeholders. Similarly, when architects ask stakeholders to detail their wishes directly, the answers are rarely useful, as they often reflect clichéd ideals. The *Baupiloten* thus use participatory methods with the users to jointly explore the nature and quality of a project's desired environment, as well as the hidden wishes users associate with that environment. When we build for children and youths, this environment is one in which users will spend the formative years of their lives.

If the group of users is not clearly defined and the institution in question is a public space with a lot of visitors, we send our "desire-mobile" on its way and ask people on the street a few short, simple questions that are printed on cards we have prepared in several languages. Through these conversations, we clarify a building's strengths and weaknesses before we organize targeted workshops with specific groups.

The next step is a "vision workshop." In designing for children, the younger ones draw ideas for their desired environment or build expressive models. If necessary, trusted adults such as a teacher explain the drawings or models. Ideas might include imaginary objects such as comfortably snoring trees, silver dragons,

or volcano and tree explorers. Children don't express structural elements realistically; instead, they use imagined visions to convey the atmospheric qualities that they want their spatial environment to have. In this way, children might dream of a "nature school" or a "protective school," or they might design cozy corners, common rooms, an "electricity roof terrace," a "juice bar," or an "environmental house" as in our vision workshop at the Neunkirchen primary school in 2019. In our workshops, the children develop content and conceptual ideas for their ideal school. If adults also take part in these workshops, the players create atmospheric mosaics together.

Sometimes, the group is multilingual, and the number of languages exceeds our ability to converse. In this case, we try to keep the communication threshold as low as possible, for example, by working with pictogram stickers. In 2009, we launched a "Glue your neighborhood" campaign in the area surrounding the Kottbusser Tor neighborhood in Berlin. This was part of a participation process called "Kotti 3000," and we used symbols to represent desired spatial and atmospheric qualities.

We also use the smartphone app "Atmosurf," which allows us to create images from atmospheric ideas. Through "Atmosurf," terms generated in the workshops can be weighted through a "word cloud" illustration that measures the frequency with which a term is used.

We call the atmospheric part of our work "researching desires." The results help us build our design work on a solid foundation of users' ideas. For example, workshops that we conducted at two Berlin schools under the title "my ideal learning situation" generated very specific results. In a three-hour event, children were asked to develop their learning ideals using available furniture and a few resources that we provided. We wanted to use the workshop to develop requirements for a "learning island" and to find out what factors we should consider in order to make such an island usable for different types of learning needs.

Students were asked to determine an ideal body posture for learning as well as the best position in the classroom for effective concentration, study, and work. Our question wasn't limited to whether it's better to think, read, write, and discuss while sitting, lying down, or standing. We wanted to know more: whether it is more important to have an overview of surrounding spaces or if a place of retreat is necessary, whether fresh air through a nearby window is important, or whether the space should be cozy and warm. We also established what furniture and other items are needed to create the desired situation.

Participants were able to gain firsthand experience with the learning spaces they developed as well as discover their own requirements for such spaces. In appropriating the spaces, they were able to experience them directly.

Participation offers us important insights for our work as architects. We can discover how educational concepts determine spatial and atmospheric requirements and how to turn those requirements into real-life learning landscapes. We can find ways to turn library spaces into public meeting places. When cultural organizations such as theater companies come to us for advice on how to attract people beyond their usual clientele, we can provide targeted participation procedures for planning new uses and the potential remodeling of their buildings.

Figure 2.9.3
Pupils construct a "learning island" as part of a participatory design exercise. Photo courtesy of *Baupiloten*.

Figure 2.9.4
Before and after images of the "Dreamtree" daycare center. Photo courtesy of *Baupiloten*.

RECAPITULATING IDEAS

Once we have completed our first pre-design steps, we present the resulting concepts and design ideas to the users as part of our participatory design work or as part of the specific planning process. An important presentation tool is the full-scale simulation of the spatial ideas we developed together. When we planned the Montessori School "Huckepack" in Dresden, the school community worked together to recreate the floor plan of the building on the designated site in order

to clarify and understand how big their future school would be and how it would be organized inside. Collages of the workshop ideas, into which participants' portraits were integrated, then brought the potential environment to life. Models of the space with scale figures and photos of the participants integrated into the spaces helped everyone understand them. The whole process turned into a type of building "exchange" where various design variants, materials, and furnishing concepts were negotiated.

We employ the results of our research to design spatial structures, which we then present to participants using communication techniques geared toward their understanding. In this way, we confirm that our designs meet their expectations.

The presentation itself usually turns into a lively discourse, which leads to a "fiction" or a story that might be experienced in the new spaces. This story becomes an architectural concept based on the motto, "Form Follows (Kids') Fiction." The concept, once established, supports the architectural decisions we make regarding the building itself. In the "Dreamtree" daycare center, for example, the children experience a dreamy but invisible tree that they sense without seeing it. The children can snuggle into the tree and hear the tree's strange snoring. The snoring noise is created through a sophisticated mechanical system that remains hidden.

In another example, children experience Pippi Longstocking's "Taka-Tuka Land" up close. They "swim" in the "lemonade river" and tumble into the garden from the "cracked bark" of the "lemonade tree." All of this happens in their imagination, inspired by the architecture they helped plan. The Heinrich Nordhoff Comprehensive School provides a further example. Here, students feel comfortable in the atrium on a "quiet and giant meadow," where they exchange ideas and relax between lessons.

EXPERIENCING SPACES PLAYFULLY

In the course of our participatory work, we asked ourselves: How can we create the perfect school or library that is communicative and easy to use? How can cultural buildings be inviting and appeal to the broadest and most diverse audience possible? How can schools or cultural buildings encourage people to appropriate and use their spaces? The following section shows how pedagogical and spatial concepts go hand in hand when designing such buildings.

Based on our practice of participatory school design, we have developed an award-winning "School Vision Game" that enables schools and communities to carry out their own participatory needs analysis. In just 100 minutes and 17 steps, this game playfully explores the different needs of all stakeholders in a conversation that includes not just students and teachers but also administrators and local policymakers. The game allows stakeholders to negotiate priorities while bringing them together to create a common spatial-pedagogical program for the school.

This process helps everyone involved creatively formulate and hone their ideas about architecture. It helps us adapt our designs to the needs of the users and, in the best-case scenario, to acquire what Helga Nowotny has called "socially

Figure 2.9.5
Two spaces in the Heinrich Nordhoff Comprehensive School designed with the school community. Photo courtesy of *Baupiloten*.

robust knowledge."[5] Ultimately, the users of every school, like those of every building, are experts in defining their own world – the one in which they live, work, and spend their everyday lives.

The "School Vision Game" is played in teams of diverse stakeholders. Each team develops, negotiates, and presents their ideal school vision. Younger students play with an adapted version of the game. With the help of playing cards and within the framework of time constraints and rules that can be adapted, the teams discuss their needs and ideas for their new school.

The richly developed game process uncovers user desires and culminates in an analysis of spatial requirements and functional connections that are important

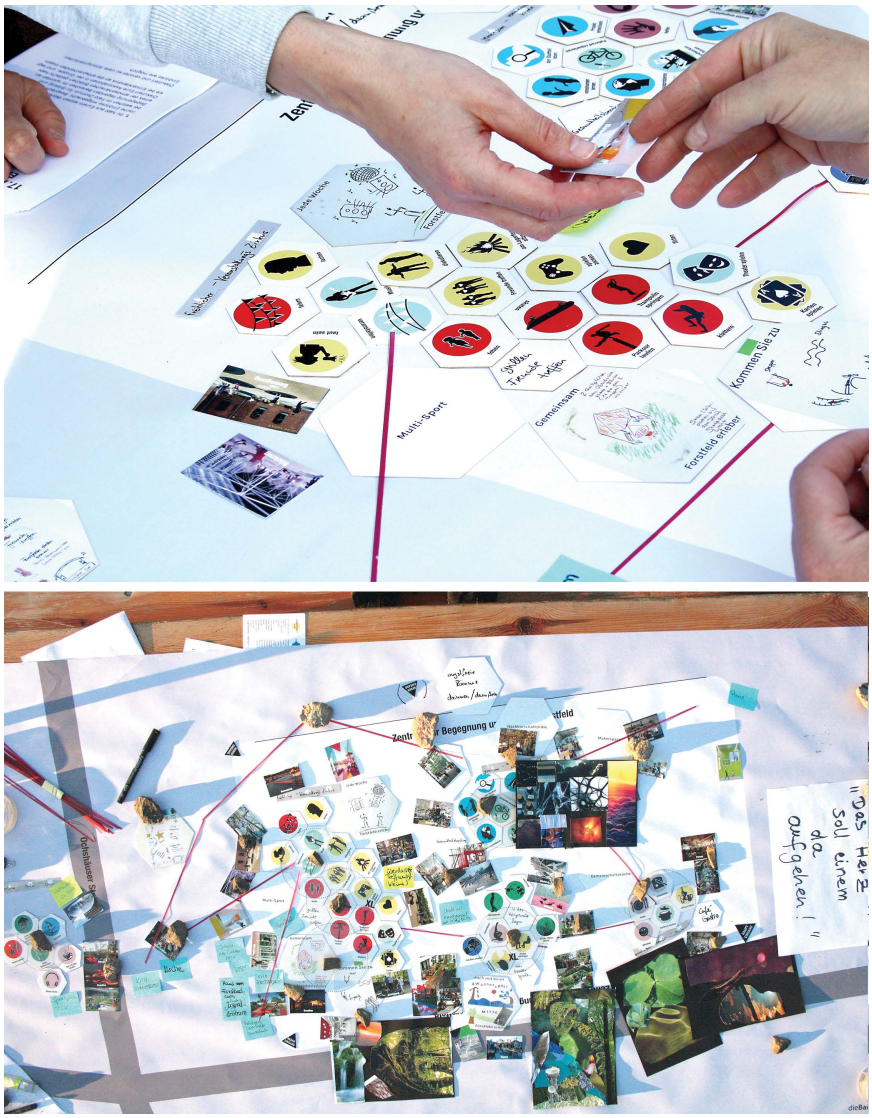

Figure 2.9.6
The "Visioning Game" helps develop spatial requirements and functional connections. Photo courtesy of *Baupiloten*.

for the future school. The results present an abstract architectural concept in the form of an educational-spatial zoning ideal but do not include an architectural design or building plan. The zoning concept is, however, a starting point from which further design and planning can be systematically developed. We now use this game in a modified form for planning libraries, community centers, theaters, and museums. Sometimes, the participants are so excited about the idea of being able to describe an ideal vision for their school or library that they create podcasts that not only present their ideas but also evolve them.

The knowledge gained from participatory processes flows into our architectural concepts and, in turn, becomes the basis for our designs. In cases where we are only commissioned to develop the participatory process, we create function

and usage diagrams and include the respective atmospheric qualities, which then serve as a starting point for our colleagues tasked with the design itself.

BREATHING NEW LIFE INTO THE KARSTADT BUILDING IN LÜBECK

Germany has seen the demise of many centrally located department stores, leaving large gaps in otherwise lively city centers. Some of these buildings have become unwieldy urban relics, hollow shells that once harbored life. In the northern German city of Lübeck, citizens are proud of their well-preserved medieval city center, as well as the diverse and lively activities of the city and its spaces. People live and work in the city, while others come from nearby villages or towns to shop. There are small, independently owned businesses. Lübeck's city center is also attractive for tourists as there are many small museums, cafes, and restaurants.

When the Karstadt group sought a buyer for its central department store, the municipality bought the building in order to create a new educational complex. This complex offers Lübeck the opportunity to complement the otherwise thriving city center with a new type of publicly accessible space. A consortium consisting of the *Baupiloten* (responsible for the participatory project development), FAR frohn & rojas Planungsgesellschaft (responsible for a feasibility study), and the management consultancy Metrum (responsible for the operating model) developed a mixed-use concept for the building in collaboration with a diverse group of stakeholders.

The core idea for the building is to create a combined-use structure incorporating areas as diverse as education, culture, commerce, and science. The building incorporates multifunctional and shared spaces under one roof, bringing together school communities, universities, educational institutions, and established companies, as well as startups and the general public. The planned redesign of the department store enables educational partnerships in the city center that were not previously possible in this form.

Due to the changes in the educational system in the state of Schleswig-Holstein, four high schools in Lübeck's old town found themselves with increased spatial requirements that could not be solved by building additions on existing school properties. At the same time, part of the Karstadt ensemble, which opened in 1996, had been empty since 2020. The city made plans to transform the Karstadt location into a mixed-use educational building that would not only offer schools new and future-oriented learning environments but also enable collaboration with a variety of partners from the higher education sector, all while making educational offerings accessible to the public. A radio station named "Offener Kanal" (open channel), whose programs are produced exclusively by private individuals, became part of the program, as did a cafeteria and a sound studio open to the public.

Baupiloten used participatory methods with a group of approximately 30 youths and 40 adults to determine the needs of potential users. This exercise allowed those involved to negotiate their needs in a playful manner. The first presentation by *Baupiloten* showed the possibilities and methods of the participation process. This was followed by a quick survey among those involved, in

which the strengths and weaknesses of the building were examined. There were "whispering sessions" in which the pros and cons of individual concept elements were discussed in small group settings. In this multi-stage participation process, the various user groups were brought together, their specific characteristics and needs determined, and new forms of cooperation initiated.

In a further step, we used the "Visioning" game to consider the cultural center. In this step, we discussed specific spatial aspects of the future center. Finally, the approaches and concept ideas were all discussed in a feedback plenum. Participants reacted positively in their assessment of the process. As Merle, a participant from the *Oberschule zum Dom* in Lübeck, stated:

> I think it's great to have a say in the building through the participation process. It allows our students' visions of future learning to be implemented. It's an opportunity to break away from old structures and to further develop the school.

Jonathan, a participant from the Ernestinen School in Lübeck said:

> The simulation game is a great tool for getting people involved who don't know anything about architecture. Without knowing any technical terms, I was able to describe my ideas for the rooms and their use.

As part of the participation process, stakeholders described creating a campus as one of their central desires. The campus would provide a performance venue and a creative bridge to other institutions, such as the music college and the radio station, which would also be located in the building. Together with the stakeholders, we developed a program and usage concept and created further recommendations, a feasibility study, and an operating model for the building. These were used by the architectural offices that then planned the building's conversion.

By creating an educational and cultural center out of a former department store, the city of Lübeck is also contributing to a change in building culture by showing foresight in its planning and participation strategy. The city has removed a large private property from the grasp of real estate speculation in order to create a non-commercial venue in the city center. The open floor plans and skeletal construction of the building offer a good framework for a future-oriented educational center that is designed to promote social encounters and adapt to the changing needs of a diverse community.

WEISSENFELS DEVELOPS AN EDUCATIONAL BEACON

Another example of a participatory project by *Baupiloten* is the conversion of a historically important monastery in the city of Weissenfels in Saxony-Anhalt. The project entails a campus to be built in the former St. Claren Monastery as a central location for integrative exchange and lifelong learning. The neighboring Goethe High School, a community education center, the music school of the Burgenland district, and the monastery's citizens' association joined forces to create a vibrant space of learning and cultural life for the entire city.

Before beginning plans for the building, the *Baupiloten* team developed concepts for the building's use and functional connections as well as its spatial-atmospheric potential as part of the preparatory "Planning Phase Zero." This phase included citizens, educators, students, and administrators.

We chose a participation process with a series of different formats. We asked participants to express their hopes and concerns on "wish postcards." A vision workshop defined educational goals and explored the space's spatial-atmospheric potential. We used participation modules such as the smartphone app "Atmosurf," which allows participants to log in and enter terms that are converted into a "word cloud" to assess the prevailing spatial atmospheres, which are then evaluated to reach a quick consensus. Quick surveys revealed participants' desires for the campus atmosphere and identified potential strengths and weaknesses. Here, too, the "vision negotiation game" helped adults and youths form educational goals and identify how they could spatially intersect without falling back on conventional ideas. Younger students from the Goethe High School created their ideal learning landscape as part of "atmospheric research." A forward-thinking workshop helped firm up concepts developed in the games and earlier workshops into spatial programs.

In a final step, the *Baupiloten* team presented the campus ideas they had developed in a citizens' workshop, which generated further ideas and inspiration and ended with a large summer festival.

The result of this process was a finely differentiated usage and spatial program that is tailored to the historical building structure. The main users would like to use the educational campus's space effectively, cooperatively, multifunctionally, and sustainably, and plan to organize this through "spatial sponsorships" and a campus committee. The monastery buildings, into which the new uses will be integrated, will remain a tangible part of the architecture and help define the renovated complex. The monastery's history has thus been recreated and revived.

DEVELOPING SPACES INTO PLACES OF IDENTIFICATION

Awareness of spatial experiences can enable architectural laypeople, including children, to articulate spatial ideas and wishes for spatial qualities. Architectural laypeople can confidently communicate their concerns and ideas to architects, and together, they can ultimately design their living and work environments in such a way that they can make good use of and identify with their built environment. This applies to students as well as teachers, to children and to adults. The spatial-atmospheric effect of architecture can support a building's intended uses and educational concepts but can also act against them.

It is important to determine desired spatial qualities early on, consciously, and above all, participatively. This should happen while planning the building or, better yet, before the actual design stage begins, during "Phase Zero," which in the German system is designed to plan the requirements for a building before the actual construction planning phases begin.

Architectural concepts prove themselves in everyday practice yet may need to be adjusted over time. For this reason, it is advisable to create buildings with

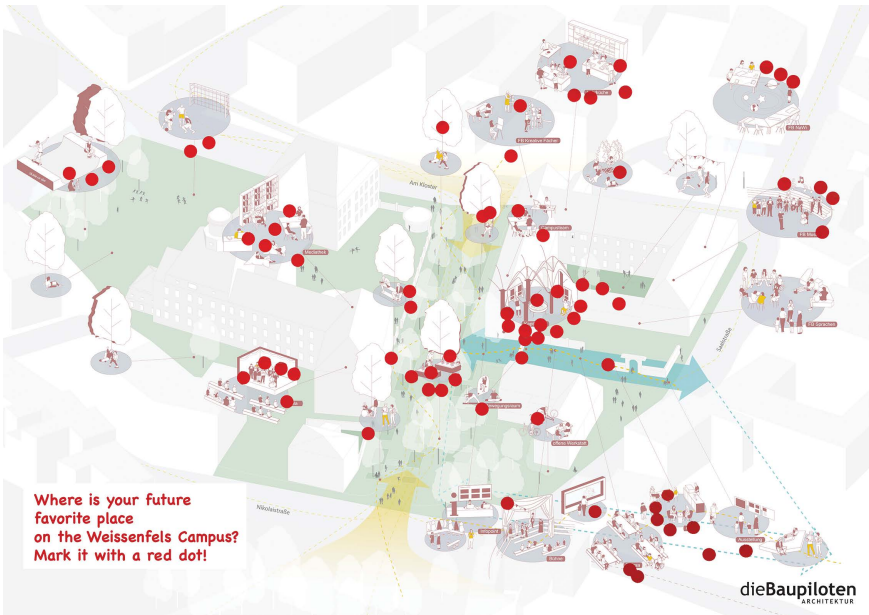

Figure 2.9.7
A "favorite locations" map as part of a visioning process for the Weissenfels campus. Image courtesy of *Baupiloten*.

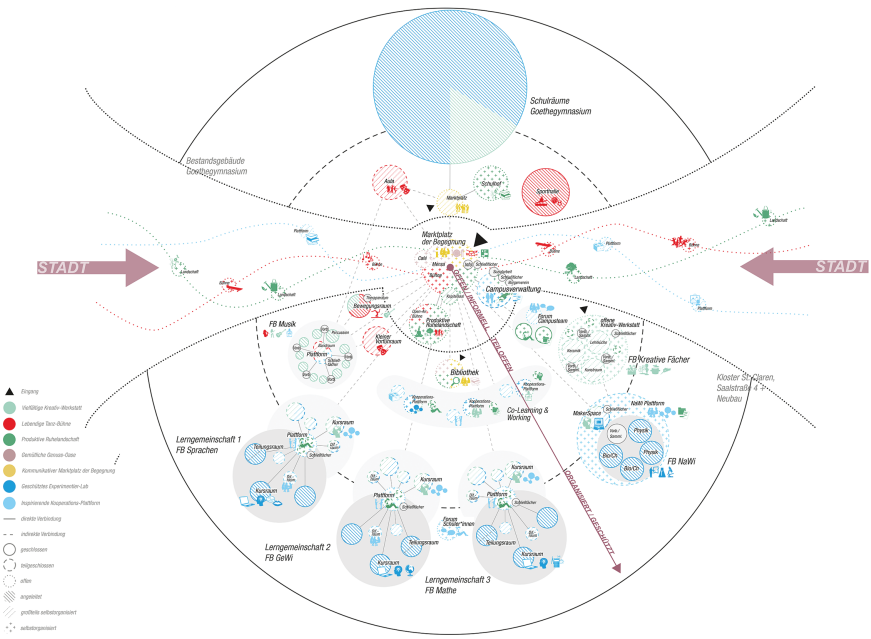

Figure 2.9.8
A function and use diagram developed by the architects based on the "visioning" process. Image courtesy of *Baupiloten*.

a high degree of flexibility. For example, it should be possible to convert open learning spaces into closed spaces and vice versa. Such flexibility is also necessary because usage requirements and, above all, pedagogical approaches have changed over the years. Once the architecture has been completed, it should be evaluated regularly, i.e., examined for its usability and its adaptability to new requirements. Under the German system, that would be "Phase Ten" in

construction planning, which is as much missing from the official range of services recognized for architects and engineers as "Phase Zero." (The German planning system only recognizes nine phases, numbering them 1–9.)

Participation can help with the appropriation of existing spatial structures. It is essential that users know what they need or want, what atmospheric qualities the rooms must have, and what might need to be physically adjusted. Once this is determined, architects can take over the design and construction support again.

Architecture that is truly usable can only be created when users fully participate in planning their built environment. Users can gain trust in architects' planning decisions and identify with the resulting product through a personal commitment to the planning process and through understanding the limits and possibilities of the building process. This process is needed if we are to produce socially sustainable architecture. The resulting connection between people and their built environment reduces the need for frequent structural changes and renovations. This forward-thinking approach is not only socially sustainable but also ecologically sustainable because it is resource-saving and climate-friendly.

For the renovation of existing buildings, precise solutions can be shaped with a clear knowledge of usage requirements. Currently, essential topics such as the reduction of carbon dioxide emissions, the use of environmentally friendly building materials, or the use of intensive greening can also be implemented and conveyed more easily using participatory processes than conventional planning methods.

In order to create spaces for life, it is necessary for architects to listen carefully to the clients and future users – including children – of the buildings we plan. This must happen before the design phase is started. A participatory approach allows us to create buildings with enough flexibility to last far into the future.

NOTES

1 The German fee structure for architects includes several "work phases" that are numbered 1–9. In this text, we emphasize the need for a further "Phase Zero" that would take place before the "basic evaluation" phase (Work Phase 1).
2 Böhme 2008.
3 See, among others, Böhme 2008.
4 Hofmann 2014.
5 Nowotny et al. 2001.

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2.10 "For Space" in Healthcare Co-Design

Relational Thinking, Ontological Design, and Sustainable Futuring

Sara Donetto

In this chapter, I examine the case of participatory design in healthcare to explore the ways in which current practices take into account space and the spatiality of care and co-design itself. I draw upon conceptual tools from human geography and the work of Doreen Massey (1944–2016) in particular, to highlight the potential usefulness of spatial thinking in the case of a specific, established approach to co-design in healthcare known as Experience-based Co-design (EBCD). My aim is to foreground the few recent analyses and commentaries that explore the spatial dimension of co-design and to build on them further, connecting spatiality-sensitive understandings of healthcare co-design to broader arguments in the social sciences as much as in the design literature. In doing so, I examine relational understandings of human and more-than-human practices toward more equitable and just systems and futures.

The design literature of the last 20 years has examined in some depth how design has contributed to the reproduction of unequal social orders and pointed out potential routes for radical shifts in how design practices produce possible and more sustainable worlds. Here, I borrow from different disciplinary traditions and draw upon personal and scholarly examples of co-design in healthcare to make the case for spatial thinking as an important tool for critical reflection in the field of healthcare co-design. In doing so, I also draw attention to theoretical landscapes in which taking seriously the spatiality of healthcare co-design can help bring into existence more equitable and sustainable processes and practices of care.

CO-DESIGN IN HEALTHCARE: HISTORICAL AND THEORETICAL CONTEXT

The involvement of professional designers in health-related projects dates back to the 1960s. Initially, this interaction took place mainly within the existing domains of design practice – product, communication, and architecture – and in projects focusing on the treatment of illness.[1] Over time, the remit of design in health and healthcare has expanded to encompass health prevention and promotion as well as policy.[2] More recently, at the turn of the century and in the context of a shift from an economy based on the manufacturing of goods to one progressively more reliant on services and systems for specific purposes,[3] the discipline of service design has focused on examining how design can bring insights and innovation to services. In particular, it has looked at design's contribution to services in relation

DOI: 10.4324/9781003480426-17

to their four dimensions of intangibility (the features of services that cannot be physically/materially touched), heterogeneity (the variation in the quality of the service produced by local factors and social actors), inseparability (of production and consumption in that services require the presence of "users" or "customers" to exist), and perishability (services' inability to be stocked and the fragile balance between supply and demand that this entails).[4] Service design has thus more aptly been described as design *for* services.[5] The growth of service design as a discipline has broadened the scope of the involvement of design in and for health(care), and enabled a significant stream in the context of this work to focus on participatory design approaches to healthcare quality and innovation.[6]

Within the family of collaborative approaches to design, the term co-design is used to refer to "collective creativity as it is applied across the whole span of a design process," where "collective" refers to the creativity of "designers and people not trained in design working together in the design development process."[7] This understanding of co-design is rooted in the principles and practices of participatory design of Scandinavian tradition and its democratizing aims.[8]

The growth of design involvement in health and healthcare services has been accompanied by an increasing thrust of co-design work in this context. Examples include practices that are led by professional designers[9] and those that are not. Over the last ten years, the term has grown in popularity, and, as a result, it has at times been used to refer to co-creation or co-production more broadly. It has also been used to refer to sophisticated forms of user consultation that do not necessarily entail involvement in decision-making or design-based making/creative practices and tools (see previous chapters in this volume). In this chapter, I refer to co-design as described previously by Elizabeth Sanders and Jan Stappers,[10] but extending to processes that do not involve professional designers, as in Ezio Manzini's "diffuse" design.[11] I focus in particular on one specific form of non-designer-led co-design known as Experience-based Co-design (EBCD),[12] with which I have worked for over ten years as a social scientist and healthcare researcher.

EBCD originated in the mid-2000s as a healthcare service improvement approach grounded in principles of participatory action research. It draws upon tools and theories from anthropology (ethnographic principles) and education (the critical, emancipatory pedagogy of Paulo Freire, in particular).[13] In essence, it is a structured and cyclical approach usually organized around six stages (Figure 2.10.1), which explores the experiences of different service stakeholders (service providers and service users in particular) and then utilizes the insights from this exploration to invite sharing of perspectives and collaboration in priority setting, ideation, prototyping, early testing, and unstructured evaluation. EBCD gained momentum quite rapidly, and by the mid-2010s it had already been used in six countries and 59 completed projects.[14]

The availability of a free online toolkit explaining all the steps of the EBCD process[15] and the lack of need for professional design expertise[16] made the process appealing to clinicians and services focused on local improvement efforts as well as to academics interested in improvement studies.[17] Academics also appreciated the theoretical insights it provided.[18] More specifically, although a lot of EBCD

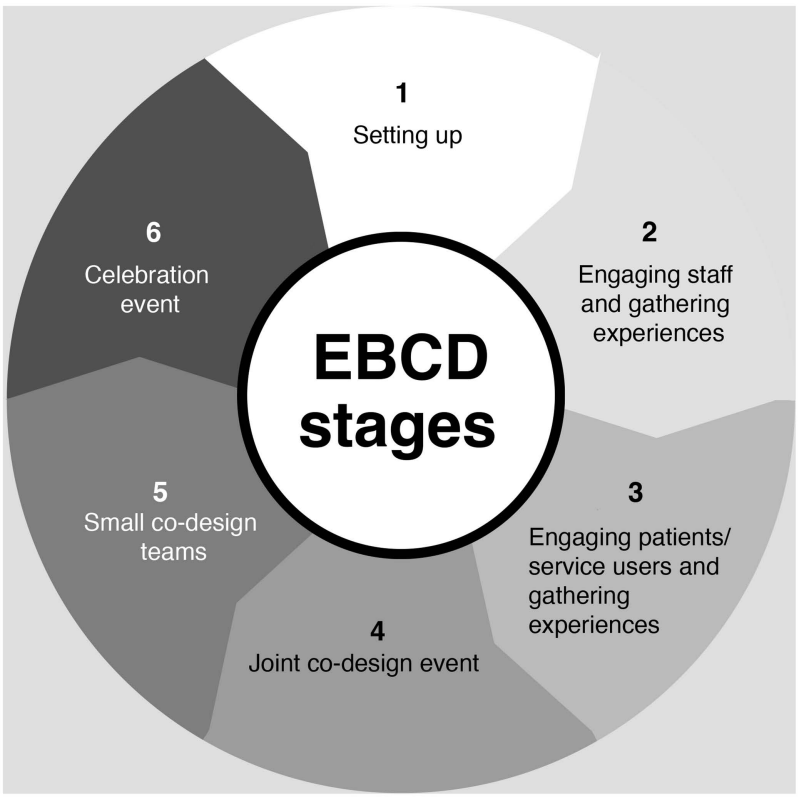

Figure 2.10.1
The cyclical nature of the six stages of Experience-based Co-design (EBCD).

projects focus on what is achieved "on the ground" in terms of changes to the service, a parallel (rather than subordinate, as it too often ends up being) aim is to transform ways of relating and thus initiate operational and organizational shifts that outlast specific local improvements and promote more equitable practices.

SPATIAL CONCERNS IN HEALTHCARE CO-DESIGN

Unlike in the examples of housing and/or school co-design discussed in previous chapters of this volume, healthcare co-design studies rarely foreground considerations around space and spatial change. A quick review of abstracts from a literature search on the Scopus database for "co-design" and "spatial" suggests that spatial considerations have relatively little visibility in co-design work in healthcare. Co-design projects in healthcare tend to focus on changes in practices and care pathways,[19] production of tools and toolkits,[20] change in information pathways and resources,[21] and development of guiding design principles for complex interventions.[22] There are, however, a few notable exceptions I wish to discuss in some detail here.

With colleagues, I have recently examined the spatial changes taken forward by one of the co-design subgroups in an EBCD study for the improvement of physical activity following a stroke.[23] For this analysis, we used the lens of liminality.[24] Approaching space relationally, we suggested that in order to understand

what co-design can do and does, it is useful to consider the liminal state it can engender not for individuals' social roles and identities but for the whole socio-spatial "assemblage of physical space, patients, family members, staff, researchers, sticky notes, journey maps, coffee cups and sketched ideas etc." which is transformed by the process.[25] (Social roles and power differentials may be suspended or altered in the context of the process, but EBCD participants do not usually move to a different social positioning after it.)

Configuring spaces as being "given shape by the practices that are conducted within them" and therefore having "functions, atmosphere and cultures," Zoe Boden, Michael Larkin, and Neil Springham examine the specific challenges of inpatient mental health spaces.[26] In particular, they discuss the extent to which EBCD, by virtue of having a practical focus but one that is addressed via collaborative, inherently relational processes, can itself instantiate, albeit temporarily, a new space and relational landscape where everyday roles and expectations are suspended. This space enables the re-design work to be grounded in relational configurations that are freed, to a varying degree, from habitual constraints and assumptions.

The authors note that when the EBCD process works well, some of the relational reconfiguration experienced in the co-design effort persists when participants return to the inpatient setting, where they can appear more able to move beyond the constraints of their social and professional roles and to understand each other's points of view.[27] Alongside these theoretically oriented accounts, one example by Tanut Waroonkun focuses on the "functionality" characteristics of the built environment, i.e., around access, efficiency, safety, spatial orientation, privacy, and well-being, in the collaborative re-design of a cardiac care unit in a hospital in Taiwan.[28]

Waroonkun adopts an adapted EBCD process, in which the researchers use a bespoke questionnaire rather than individual interviews to explore participants' views and experiences as well as a post-occupancy evaluation to structure the work. The author explains how, thanks especially to the bespoke instrument used, the process helped capture and merge the perspectives of different user groups, such as doctors, nurses, and patients. The process also captured how power dynamics in group sessions evolved towards mutual understanding and trust, for example, when nurses and patients' initial deference to doctors disappeared over the course of a group discussion.

Some EBCD studies include minor spatial modifications among the "improvements" brought about by the project but do not necessarily expand or critically examine these aspects.[29] There are also studies working with co-design more broadly rather than with EBCD specifically. These have focused on the re-development of physical spaces, as in the case of Michele Caixeta and Marcio Fabricio's work involving nurses in the physical design of rooms and building information model digitalization,[30] the insights by Stephen Reay et al. on embedding a physical co-design space within a hospital in New Zealand,[31] and other studies calling for more co-design in the planning and development of healthcare buildings.[32]

The emerging scholarly engagement with space and spatiality in co-design work in healthcare suggests this largely overlooked dimension warrants further

exploration. In the following sections, I undertake one such exploration, drawing upon conceptual tools that I have found illuminating and specifically relevant to this volume's concerns with issues of social sustainability.

WHY SPACE?

The limited focus on space and spatiality in healthcare co-design is not helped by the fact that understandings of space and place can be different in different disciplines, with subsequent room for confusion and misinterpretation. Here, I highlight some useful ways in which it is possible to "think with" space in the context of healthcare co-design work, whether aimed directly at the built environment or not. Before I venture into that, a little detail on the theoretical grounds for my argument will help clarify its context.

Discussing the use of "space" and "place" in healthcare-related scholarly endeavours, Åsa Roxberg et al. argue that, too often, these notions are taken for granted and used with little or no reference to the theoretical framings underpinning them.[33] However, as these authors also mention, whether we conceptualize space and place as backdrops to or containers of human practices and experiences or whether, instead, we see them as actively implicated in producing human relations and practices and being, in turn, produced by them, has significant implications for the kinds of health and care practices, relations, and potential improvements we imagine, document, discuss, and try to implement.

British geographer Doreen Massey (1944–2016) argued for an understanding of space and place as relational, as "denoting something actively involved in human, as well as non-human, becomings."[34] As imbricated in and the product of interrelations, space for Massey does not pre-exist "identities/entities" but is co-constitutive of them and is, in turn, altered by them: "More generally I would argue that identities/entities, the relations 'between' them, and the spatiality which is part of them, are all co-constitutive."[35]

For Massey, thinking of space as "always in process"[36] and thinking of place as "a constellation of processes"[37] has political relevance and value. As "space concerns our relations with each other,"[38] paying attention to space and spatial relationships means paying attention to simultaneous difference (and power relations): "a genuine, thorough, spatialisation of social theory and political thinking can force into the imagination a fuller recognition of the simultaneous coexistence of others with their own trajectories and stories to tell."[39] In this relational perspective, space is a "meeting up of histories" and trajectories, and places are "temporary constellations of trajectories;" they require and instantiate negotiations and contestations and are therefore political.[40] More recent theoretical developments in human geography have taken this relational thinking even further and examined the extent to which particular relational configurations have more or less "performative efficacy."[41]

These insights from human geography have been applied to some degree in scholarly work focusing on health and care, especially in the context of nursing[42] and, more closely to our focus here, in recent analyses of participatory mechanisms in healthcare more broadly understood, such as Patient and Public

Involvement and Engagement (PPIE). For example, Alicia Renedo and Cicely Marston have analyzed "acts of citizenship" in PPIE as spatial practices,[43] and Aris Komporozos-Athanasiou et al. have used a socio-spatial theoretical framework to study accountability in a healthcare research context.[44] However, as I pointed out earlier, these spatiality-oriented analyses have had little thrust in the healthcare co-design literature despite design being well accustomed to relational and ontological ways of thinking. I will come back to this shortly and argue for more cross-pollination between disciplinary takes on healthcare research. First, though, I reflect on the possibility of spatial sensitivity in EBCD practices to offer a practical example of what this type of insight might look like or lead to.

RELATIONAL SPATIALITY IN CO-DESIGN WORK

EBCD is an approach that aims to re-design services via a more inclusive and equitable decision-making process and to refashion relationships within services. I propose here ways in which spatial thinking and tools can be used in this sense, and I reflect on the extent to which this refashioning needs to take more seriously the radical premises of relational approaches to space and design itself.

Physical Spaces

The physical (or virtual) space in which EBCD events happen is often discussed in EBCD projects as needing to be as neutral as possible.[45] This is to suspend and ideally minimize power differentials relative to professional roles. People setting up EBCD projects are therefore advised, for example, to avoid holding group sessions and meetings on hospital premises and arrange instead to come together in community halls or other public spaces. Of course, arrangements for meetings and group events require advance planning and budgeting, and if resources are limited, the only practically feasible route is to use rent-free work-based spaces in hospitals or universities. Or, in some cases, to resort to online solutions, with meetings taking place on online video platforms.[46]

However, there are also other ways in which space could be considered, and these have yet to be explored in EBCD work. I am referring here to the ways in which space arranges bodies, conversations, and participation itself and distributes access in relation to a multiplicity of factors, including gender and/or racialized identity, visible and/or invisible disability, and individual perceptions of positionality in a group context. This is true for physical rooms, tables and chairs, flipcharts, sticky walls, lighting, acoustics, and their interactions with human co-design participants and their personal technologies. It is, however, also true for online virtual rooms: different online platforms feature different functionalities which can enable or hinder participation, sharing of resources, small group interactions (breakout rooms can be prone to technical hiccups), and visibility (camera options depending on quality of connection) to a varying degree.

Affective Spaces

As an approach that aims to be collaborative and democratic/democratizing and to refashion social relationships in healthcare, EBCD could only be strengthened

in its theoretical grounding and practical function by analyses that pay attention to the affective spacing it instantiates and is, in turn, shaped by. Over the last two decades, the affective qualities of space have been examined extensively by scholarly work in geography, sociology, and psychology. In a recent "progress report," Elaine Lynn-Ee Ho offers an overview of the many ways in which social geographers have explored emotions and affect and the many ways "that spatial contexts elicit particular emotions, as well as how the emotions and emotional negotiations constitute the affective qualities of bodies and space through which personal subjectivities and intersubjective relations (re)emerge."[47]

The idea of "affective atmospheres" has been proposed by Ben Anderson as a usefully indeterminate socio-spatial quality that can move us beyond potentially unhelpful distinctions between affect (as impersonal, objective, non-narrative) and emotion (as personal, subjective, narrative). Anderson illustrates how affective atmospheres are simultaneously impersonal in so far as they pertain to collective situations and yet are experienced as personal, how they are "spatially discharged affective qualities that are autonomous from the bodies that they emerge from, enable and perish with."[48] The affective dimension of space and spacing has been the focus of study in nursing and healthcare research[49] as well as, more recently, organization studies.[50] However, aside from very few exceptions,[51] there has so far been no exploration of affective atmospheres in the context of EBCD or other healthcare-specific co-design practices (see Figure 2.10.2).

Spatial Dimensions of Co-Design Tools

The material creative practices of EBCD and co-design are, of course, implicated in the physical as well as affective spacing described earlier. Here, I consider them separately only for ease of presentation. My aim is to draw attention to the fact that many of the tools used to enable groups to share experiences, establish priorities for improvement, and reach consensus are distinctively spatial. For example, journey mapping is commonly used in the patient feedback event of an EBCD cycle (Figure 2.10.3). This means that after key touchpoints in people's experiences have been identified from one-to-one interviews with relevant stakeholders – usually patients/service users and members of staff in a healthcare organization – these are presented to stakeholder groups separately, and participants are invited to place sticky notes to further characterize the positive and negative aspects of their experiences of the service. This activity enables participants to visualize a journey – i.e., a spatiotemporal sequencing of interactions with/within the service – on a physical support such as a wall, board, or flipchart. It also allows them to visualize the emotional connotations of their experiences by placing their sticky notes above or below the touchpoints.

Similarly, priority setting in EBCD is often established via some form of voting (see Figure 2.10.4); this usually involves participants physically attaching some form of sticker to distinct areas of improvement identified through previous activities or stages of the project. These tools are both spatial in themselves in that they involve the creation of a "journey" to make sense of experiences and encounters that may or may not have felt like a journey at the time and in the sense that they are affected by the spatial arrangements of the meeting (i.e., the extent to which

Figure 2.10.2 "Affective atmospheres" are an important aspect of healthcare facility design, as shown in this before-and-after image of a project by architects Axel Buether and Heike Krauss, experts in color psychology. The new color scheme in a patient wing of a clinic in Lübeck, Germany, was developed by the architects using a co-design process and supports the therapeutic efforts of staff and patients. Photos courtesy of Axel Buether and Heike Krauss.

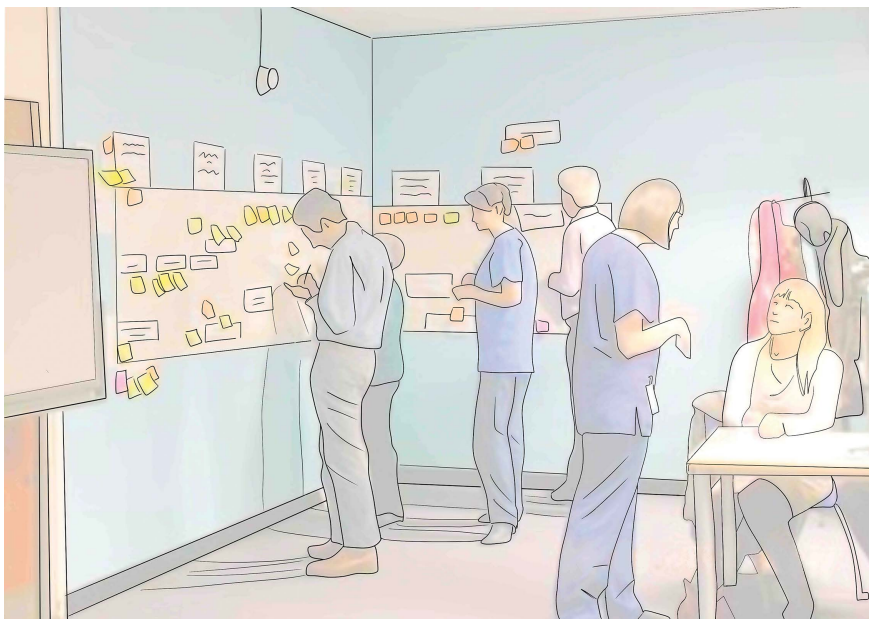

Figure 2.10.3 Collaborative journey mapping in Experience-based Co-design. Image adapted from and reproduced with permission by The Point of Care Foundation, London.

the room enables or hinders participants' movements and active involvement in the activities in the case of in-person meetings, but also in the sense of which identities and power relations are mobilized during these activities, whether in person or online).

Perhaps in a less obvious way, the very sharing of narratives that takes place in the joint event where staff and patients/service users come together to talk about their experiences of care has important spatial dimensions. Here, alongside the physical proximity of in-person meetings, the process of sharing experiences, often mediated by a prompting tool such as a composite film of individual video interviews, also occasions and engenders what Ruth Malone calls "narrative proximity" and, potentially, "moral proximity."[52] Here, "narrative proximity" refers to participants' opportunity to hear each other's stories and understand one another's experiences in more depth.

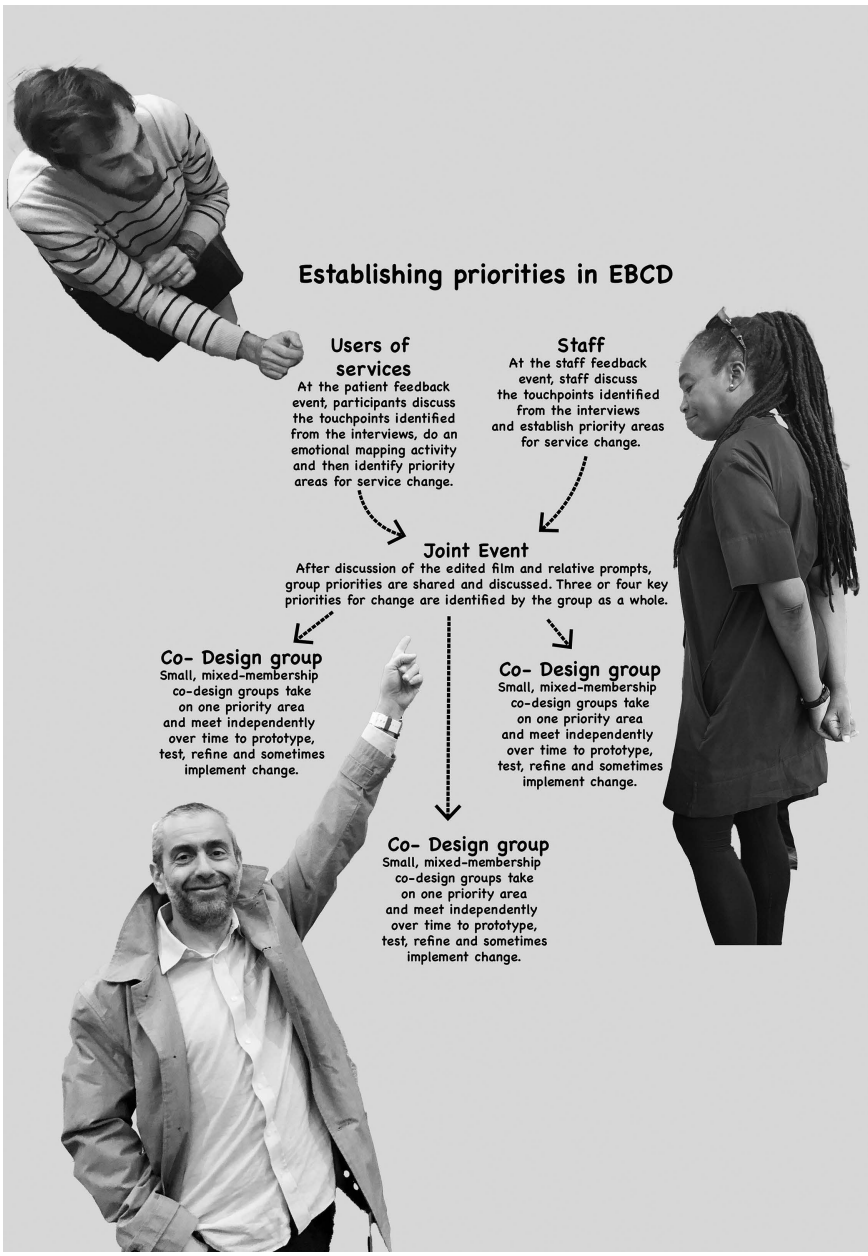

Figure 2.10.4 Establishing priorities for change in Experience-based Co-design.

Malone discusses the insights we can gather by focusing on spatial relations and proximities in nurse-patient relationships in the context of their analysis of nursing work. There, narrative proximity is the premise for moral proximity, for the possibility for nurses and patients to recognize mutual vulnerabilities and, ultimately, for nurses to "be for" their patients and act in the interest of their well-being. Malone's analysis of these nested forms of proximity for nursing work, in which physical proximity is the premise for narrative proximity, upon which moral proximity rests, applies to healthcare co-design work just as fittingly. It offers a

useful lens for the analysis of the co-design process itself, especially when it is moved to online and virtual spaces.

Spatial Representation of Co-Design Processes

The last aspect I would like to draw attention to is the spatial representation of EBCD as a process. Although early diagrams of EBCD focused on the sequence of events in time, clarifying which elements of the process could be run in parallel and which rested on previous steps,[53] authors who have both originated and studied the approach have often highlighted the cyclical nature of the process. The progression of events can be imagined as a spiral, although this is often flattened into a circle for ease of representation, as in Figure 2.10.1.[54]

The celebratory event closing an EBCD cycle creates the opportunity for participants and the broader healthcare organization or context to reflect on the process, the changes it enabled, the challenges it posed, and the learning that took place throughout. This exercise in reflecting and taking stock is meant to inform the ways in which the organization/context functions and suggest future work aimed at sustaining and improving quality, ideally grounded in collaborative practices. In this sense, whether EBCD translates into an iterative revisiting of quality based on further EBCD cycles or on any other collaborative practices, it still aims to enable a spacing of participatory practices that recurs over time. The cyclical, forward-moving spiral configuration and representation of EBCD is inherently spatio-temporal. It is often the case that EBCD is enabled by research and/or quality improvement funds, and, therefore, it becomes limited to one cycle (sometimes less than a full cycle) with little planning for future iterations or for incorporating some of its principles and tools in routine practices.

"FOR SPACE" IN HEALTHCARE CO-DESIGN

Borrowing the title of Massey's influential 2005 book *For Space*, I call for renewed critical reflection in healthcare co-design scholarship on what kinds of spaces co-design aims to realize. How does co-design "do" space in healthcare contexts, and how does this doing affect (or not) power relationships in healthcare improvement practices? I argue that this kind of reflection would contribute in a fundamental way to the sustainability agenda that design scholarship has been engaging with for a number of years now. More specifically, I propose that the application of a critical spatial lens along the lines of what I suggested for EBCD in previous sections can prompt the field of healthcare co-design to engage constructively with and take on board potential critiques related to the ways in which current design practices are imbricated in the reproduction of "deeply unequal, insensitive and destructive social orders"[55] and how they only offer superficial approaches to sustainability.[56]

Like the spatial perspectives from geography I discussed earlier, recent arguments and critiques from anthropologists and design theorists addressing issues of sustainability in design rest on relational ways of thinking about how design is "done" in interaction. Such critiques problematize design practices ontologically as well as epistemically. The ontological nature and orientation of design refer

both to the idea that "in designing tools we are designing ways of being"[57] but also to the idea that "in designing tools, we (humans) design the conditions of our existence and, in turn, the conditions of our designing."[58]

The argument of theorists looking at the ontological or, more accurately, ontoepistemic doing of design – i.e., the bringing about of worlds, ways of knowing, and ways of posing problems and attempting to solve them – is that historically design has, for the most part, been complicit in what British/Australian design theorist Tony Fry calls "defuturing."[59] This is:

> the loss, or at least the erosion ... of the conjunctional relations between things, "material and immaterial", and the world; the loss of the relations that often in all but silent ways, sustain and keep in place the possibility of the conditions of the continuance of living things.[60]

Defuturing is, therefore, the very negation of sustainability. Yet, at the same time, it is also a "means to critical action," a critical tool that enables us to examine it as a predicament of our own making.[61]

For design theorists like Tony Fry, Ezio Manzini, and Arturo Escobar, design has, for too long, served the interest of capitalist, exploitative, and unsustainable modes of existence. Partly because of this, it has, or could have, a central role in reconfiguring itself as a practice oriented towards relationality, social innovation, and sustainability.[62] In a very critical yet constructive analysis of design history and practice, Adam Nocek and Tony Fry argue that design is so embedded in unsustainable and defuturing modes of operating that, for it to be critical of itself, it cannot limit itself to serving decarbonizing and/or "green" agendas while remaining grounded in the same principles, tools, and techniques. Instead, it needs to become something that cannot even be recognized as design.[63] This is because any attempt at designing a way out of the crisis with the same tools and strategies that have led us to it is only "window-dressing."[64] The point would be, instead, for design to unlearn its own ways of operating and reframe itself in a way that contributes to alternative ways of bringing sustainable worlds into being.

Just like the relational understandings of space-making proposed by Doreen Massey that we looked at closely and applied to EBCD earlier, these understandings of design and designing are inherently political: they are concerned with the power relations and negotiations that they bring into being in space and time and with the "kinds" of worlds that they make possible. As Fry puts it in their preface to the 2020 edition of *Defuturing: A New Design Philosophy*:

> That design intellectually and practically becomes inter/post-disciplinary and is understood as a fundamental mode of the political, is vital if it is to be transitioned to a new paradigm and gain real agency against defuturing.[65]

This is one of the ways in which critical, relational readings of space and space-making in the context of healthcare co-design work, like the examples I discussed earlier in relation to EBCD, are intimately linked to trajectories towards (or away from) sustainability.

A closer examination of the spatial dimension of codesign practices in healthcare is, I argue, a practicable avenue to training our relational thinking. We can then use it to problematize how "care," "improvement," and "co-design" itself are "done" in co-design work. It is a device for healthcare co-design to reflect on itself and examine more closely the extent to which the problem-framing, tools, and trajectories it adopts disrupt or reproduce unsustainable (extractivist, exploitative, ultimately unjust) modes of "doing" both healthcare and design.

Finally, the spatial analyses I call for are an invitation to more cross-pollination between, on the one hand, disciplinary fields such as sociology, design, and geography, that have grappled with relational understandings of space and place as well as of care, ethics, and design for some time now, and, on the other, the more recent scholarly currents coalescing under the umbrella of "improvement studies" and "healthcare innovation."

NOTES

1 Tsekleves and Cooper 2017.
2 Tsekleves and Cooper 2017.
3 Manzini 2011.
4 Meroni and Sangiorgi 2011, 16.
5 Meroni and Sangiorgi 2011, 16.
6 Robert et al. 2022.
7 Sanders and Stappers 2008, 6.
8 Robert, Donetto, and Williams 2021.
9 For example, Lab4Living at Sheffield Hallam University, The Helix Centre at Imperial College London, or the Mayo Clinic Centre for Innovation in the US. See Robert et al. 2022 for an overview.
10 Sanders and Stappers 2008.
11 Manzini 2015.
12 Bate and Robert 2007.
13 See Bate and Robert 2007.
14 Donetto, Tsianakas, and Robert 2014.
15 Point of Care Foundation n.d. https://picker.org/learning-develop/ebcd-experience-based-co-design-toolkit/
16 The extent to which the use of design principles and tools without the involvement of professionally trained designers is valid and effective has been the subject of controversy. For a discussion of the pros and cons of "designerly" vs. "design-like" practices in healthcare, see, for example, Macdonald and Robert 2017.
17 For a review, see Green et al. 2020.
18 For example, Farr 2018; McAllister et al. 2021.
19 Kenyon et al. 2016; O'Donnell et al. 2019.
20 Gwilt et al. 2017; Sirimsi et al. 2023.
21 Morris et al. 2021; Santin et al. 2019; Treasure-Jones and Joynes 2018.
22 Macdonald et al. 2023.
23 Donetto et al. 2021.
24 Turner 1969.
25 Donetto et al. 2021, 7.
26 Boden, Larkin, and Springham 2019, 89.
27 Boden, Larkin, and Springham 2019.
28 Waroonkun 2020.
29 For example, Locock et al. 2014; Piper et al. 2012.

30 Caixeta and Fabricio 2021.
31 Reay et al. 2017.
32 For example, Liddicoat 2019, who calls for more co-design in the development of care spaces for people with suicidal ideation.
33 Roxberg et al. 2020.
34 Roxberg et al. 2020, 1.
35 Massey 2005, 33.
36 Massey 2005, 35.
37 Massey 2005, 283.
38 Massey 2013, 4.
39 Massey 2005, 35.
40 Massey 2005, 305.
41 Anderson and Harrison 2010; Andrews 2016.
42 See, for example, Roxberg et al. 2020; Andrews 2016, 2017; Andrews, Rowland, and Peter 2021.
43 Renedo and Marston 2015.
44 Komporozos-Athanasiou et al. 2018.
45 Boden, Larkin, and Springham 2019.
46 For a review of approaches to co-design with or without co-location of participants, see Davis et al. 2021; Langley et al. 2021.
47 Ho 2024, 94.
48 Anderson 2009, 80.
49 See, for example, Andrews, Rowland, and Peter 2021; Duff 2016; Lupton 2017; Sumartojo et al. 2020; Wright 2019.
50 Gherardi 2023; Kuismin et al. 2024; Julmi 2017; Resch and Rozas 2024.
51 See consideration of inpatient ward atmospheres in Boden, Larkin, and Springham 2019.
52 Malone 2003.
53 See Bate and Robert 2007, 120.
54 For example, Donetto et al. 2015; Robert, Donetto, and Williams 2021.
55 Escobar 2018, 47.
56 Nocek and Fry 2020.
57 Winograd and Flores 1986, xi.
58 Escobar 2018, 110; see also Willis 2006.
59 Fry 2020.
60 Dilnot 2020, xi.
61 Dilnot 2020, xii.
62 Escobar 2018; Manzini 2019; Nocek and Fry 2020.
63 Nocek and Fry 2020.
64 Nocek and Fry 2020.
65 Fry 2020, xxv.

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