A **ROUTLEDGE** FREEBOOK

URBAN DESIGN

TOOLS & RESOURCES FOR THE PLANNING PRACTITIONER

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INTRODUCTION

HOW TO USE THIS BOOK

The five chapters featured in *Urban Design: Tools & Resources for the Planning Practitioner*—as well as the titles from which we've excerpted them—share the goal of making urban areas functional, attractive, and sustainable. Our aim in selecting the excerpts included here was to highlight some of our newest practitioner-oriented titles, and illustrate the global scope of the work being done in this field. In reading through this FreeBook, you'll find not only that the authors of these selections are based all over the world, but also that their approach to their work reflects a truly global outlook.

The focus on practicality in *Urban Design* makes this FreeBook an ideal resource for urban design practitioners, but it should also prove useful to professionals across the Built Environment, including those in architecture, planning and even urban geographers and policymakers. Although we conceived *Urban Design* as a cohesive whole, we also encourage you to jump around and take advantage of the chapters that have the most relevance to you. And, of course, keep in mind that all of the titles included here are available in full from our website (www.routledge.com) and other fine booksellers.

CHAPTER 1- THE STREET

This FreeBook opens with a chapter from Robert Mantho's *The Urban Section: An Analytical Tool for Cities and Streets*. Here, Mantho formulates the proposition that structures *The Urban Section*, notably the idea that the street is the city's basic building block, and that an understanding of the role and function of the street is essential to an understanding of the city's design. Following this is a review of some of the literature on the street and street design. The chapter also includes numerous illustrations, drawn to scale, that highlight specific features of street design, providing the reader with clear examples of the concepts Mantho discusses.

Robert Mantho is the Stage 5 Leader at the Mackintosh School of Architecture at the Glasgow School of Art.

CHAPTER 2 – FOOD + BUSINESS: A BIRD IN THE HAND IS WORTH TWO IN THE BUSH

In this second chapter—the opening chapter of *Food City*—innovative architect and urban designer CJ Lim explores the issue of urban transformation and how the creation, storage and distribution of food has been and can again become a construct

for the practice of everyday life. *Food City* investigates the reinstatement of food at the core of national and local governance — how it can be a driver to restructure employment, education, transport, tax, health, culture, communities, and the justice system, re-evaluating how the city functions as a spatial and political entity. CJ Lim takes a look at multiple examples of city- and community-based movements that are fighting the large, multinational corporations that have come to dominate the global food and beverage industry. With examples like the United Kingdom town of Totnes and Japanese Kobe Beef functioning as brief case studies, Lim uses food as a lens to study urban transformation.

CJ Lim is Professor of Architecture and Urbanism at the Bartlett UCL.

CHAPTER 3 – TRANSFORMATIONS: URBANISM AS TRANSFORMATION

Designing Urban Transformation is structured around a central argument, which author Aseem Inam lays out in the book's preface: "How we think about cities absolutely impacts how we design them". With this in mind, Inam uses the philosophy of Pragmatism as a means by which to study and understand urban transformation, suggesting that only looking at transformation through a perspective informed by social science is inadequate. As he states, "Pragmatism encourages us to remember and build into practice the notion that our world is in flux with fluid boundaries between concepts and space, and that creative and experimental interventions can have concrete transformative social and physical effects on reality."

Aseem Inam is Associate Professor of Urbanism at the New School.

CHAPTER 4 – PEOPLE, PLACES, AND WELL-BEING

In the opening pages of this chapter from *Planning Small and Mid-Sized Towns: Designing and Retrofitting for Sustainability*, author Avi Friedman states that his purpose is to examine "general human attributes of small towns and [relate] them to places. The manifestations of the term 'social capital' are explored, the notions of places and place-making are studied, and selected gathering places and their contribution to the communal fabric described. The chapter ends with a case study about a town that went on to restructure its urban makeup by introducing unique meeting spots."

Friedman explores the varied ways that urban spaces contribute to and foster the well-being of their inhabitants. His case study, on the Canadian city of Peace River,

works to demonstrate the variety of ways in which the characteristics and features of a city can enhance and enrich the lives of its population.

Avi Friedman is Professor in the School of Architecture at McGill University.

CHAPTER 5 – EVERYDAY SOCIAL BEHAVIOR AS A BASIS FOR DESIGN

In this final chapter, *Urban Design* comes full circle, having begun in the same way it concludes: with a chapter on the street. In his introduction to *The Street: A Quintessential Public Space*, author Vikas Mehta writes that "streets are powerful tools of urban design and consequently of understanding and making the city legible. Looking at the street, then, is also looking at the city, perhaps in a non-traditional way, but from the viewpoint of the pedestrian." Here, Mehta compares two approaches to street design: that which is dictated by visual-aesthetic thinking and that which is determined by the social behaviors that take place in urban spaces. Arguing in favor of design that takes social behavior into account, Mehta also reviews the theories behind this approach.

Vikas Mehta is the Fruth/Gemini Chair, the Ohio Eminent Scholar of Environment/ Urban Design, and Associate Professor at the School of Planning at the University of Cincinnati.

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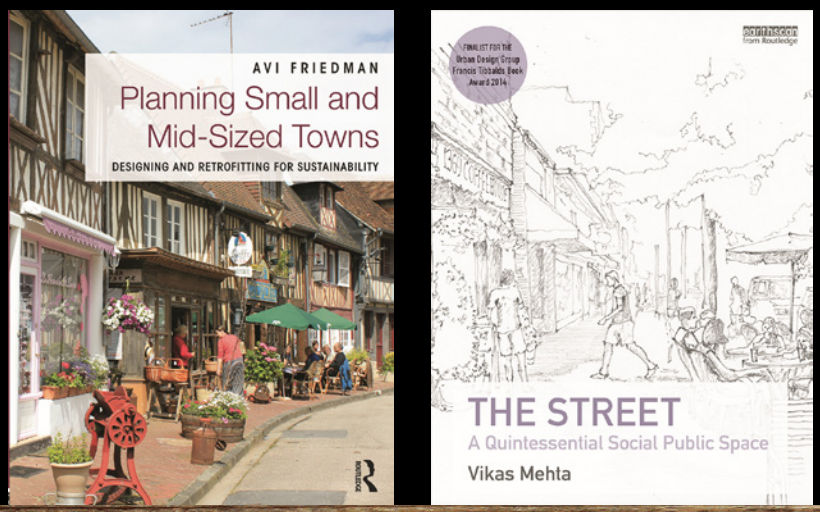

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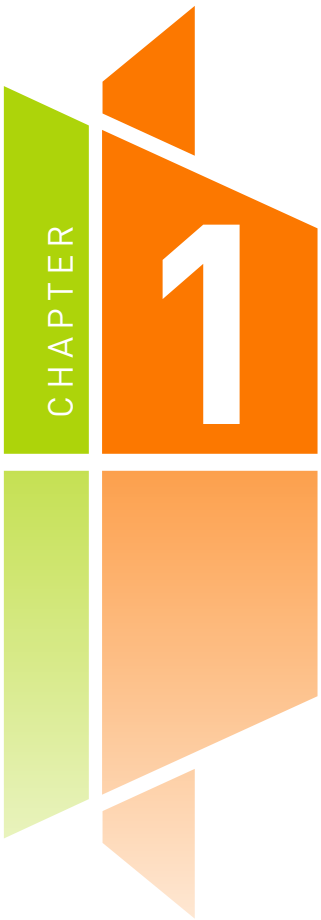

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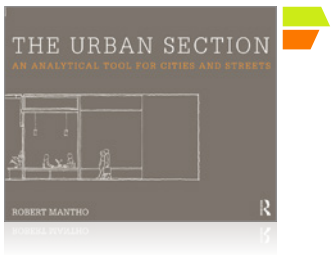

The following is sourced from *The Urban Section: An Analytical Tool for Cities and Streets* by Robert Mantho.

Although human settlement occurs without streets it is possible to suggest that the street is the fundamental "city" element, the building block of cities. The city can be defined as a physical, social, economic and political entity that grows out of the shared civic conception that individual actions must be moderated for the benefit of the community. If cities are the largest manifestation of this civil understanding, then the street is the physical manifestation of this idea. The street is a delineated area for common use, framed by a collection of individual structures, whose purpose is to serve the function of circulation and exchange: social and material. The process through which streets are determined has taken innumerable forms throughout history, from the carefully planned to the seemingly arbitrary; however, they all begin with an agreement that individual privileges are limited for social benefit in a particularly defined concrete space.[1] A cluster of buildings owned by separate individuals without a recognised public space, which everyone can use, is a settlement, but not a town or urban entity. This is not to deny the definition of community to those places without a defined public space; it is to assert that the physical recognition of the shared, communal place is essential to the definition of town or city. Possibly this is fundamentally an issue of scale. When those sharing a territory belong to a single family or are small enough in number that social intimacy is strong enough to regulate behaviour, the formal recognition of the civic may not be necessary. However, when the size and make-up of the group expand beyond this, communal understanding is required and the definition of public space is necessary. Making clear to everyone what space they are allowed to move in and through freely and where individual private space begins.[2] This foundational nature of the street, coupled with the fact that physically without the street cities could not exist, places the street at the centre of all urban discussions.[3] From the earliest examples of urban design in Europe, through the renaissance, the baroque period, the late 19th-century advocacy for medieval patterns and even in the Modernist attempts to refashion the Street, the design of streets has been at the heart of urban design.

In addition to the strictly utilitarian and physical role that streets play, the street is also a social instrument. The street's practical provision also facilitates social engagement at many levels. Streets provide the place to interact; with those we know and those we don't. From commercial exchange, arranged entertainment, accidental meeting, to people watching,[4] the use of streets for social interaction and the importance of streets in creating a vital community has been noted by numerous authors, forming a major branch of urban design theory and research. The following summary illustrates the significance of this aspect of the street for those examining and designing streets.

[1] Spiros Kostof. (1992). *The City Assembled – The Elements of Urban Form Through History*. London: Thames and Hudson. p. 189 and Joseph Rykwert. (1982). *The Necessity of Artifice: Ideas in Architecture*. London: Academy Editions.

[2] Ibid, p. 194.

[3] Ibid, pp. 194, 220 & 243.

[4] Allan B. Jacobs. (1993). *Great Streets*. Cambridge, MA: MIT Press. p. 5.

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Most famously Jane Jacobs made lengthy and persuasive arguments for the place of the street in the communal life of city residents, stating that the street acted as a social glue, with people understanding complex layers of information regarding behaviour and communication, and the street being a critical mechanism of social regulation.[5] In his book, *Streets for People*, Bernard Rudofsky argues that the street is the historical stage for the mundane and the remarkable, the personal and the communal.[6] Donald Appleyard's research for *Livable Streets* pointed to the important role that the space of the street played in the social life of communities, demonstrating how vehicular traffic impacted social interaction on streets and how these impacts affected people's perceptions about the street they lived on and their sense of community.[7] Another important early contribution to the growing understanding of the street's social value was *Public Streets for Public Use*, this collection of essays makes the case that streets are a communal asset, and that quality of life is directly affected by the way streets support social exchange.[8]
Jan Gehl's work in Copenhagen and the resulting publications detail the way public spaces and streets can provide for social interaction. Gehl's analysis of how sight, sound and communication affect social exchange and how the opportunity for social activity creates a place of community, was supported by extensive quantitative research over many years.[9] Gehl's careful analysis of social behavior resulted in the classification of "outdoor activities", a range of social contact types and the importance of social interaction to people and society. Working with this information the research went on to describe how the physical characteristics of a public space helped or inhibited the various types of social exchange and outlined strategies for designing spaces which support social interaction.[10] A major concern for all these books is to highlight the damage vehicular traffic causes to streets and an insistence that focusing on how people use streets for social interaction is critical to improving urban spaces. These books and many more have helped develop a consensus that streets are not solely functional, that the previous focus on vehicular concerns in the design of streets is detrimental to cities and that streets should be designed to accommodate everyone who uses them. This limited discussion of work examining the social aspects of streets is not intended to be comprehensive; but merely meant to outline the development of contemporary urban thinking and the significance given to the street and its examination.

Given the street's importance for urban design, a large body of material has been developed to analyse streets and to provide guidance for their design to both design professionals and to communities. These range from advocacy proposals put forward by urban designers and architects, best practice guidelines from professional bodies,

[5] Jane Jacobs. (1993). *The Death and Life of Great American Cities*. Modern Library edn. New York: Modern Library.

[6] Bernard Rudofsky. (1969). *Streets for People – A Primer for Americans*. Garden City: Doubleday & Company.

[7] Donald Appleyard. (1981). *Livable Streets*. Berkeley: University of California Press.

[8] Anne Vernez Moudon. ed. (1987). *Public Streets for Public Use*. New York: Van Nostrand Reinhold.

[9] Jan Gehl. (2011). *Life Between Buildings: Using Public Space*. Washington: Island Press. pp. 103 & 168.

[10] Ibid, pp. 171–197.

policy documents implemented by government bodies, to research and books produced by academics.

Since the 1960's, the realisation that the life of cities was in large part dependent upon the life of streets has been an important concept in urban theory.[11] A slow process of rethinking the street has been taking place, with an increase in efforts by a variety of urban advocates to influence policy makers and the general public. The list of these groups is extensive, and the following are just a few examples for the purpose of illustrating the role they have played and continue to play in the formulation of street design.

ADVOCACY

One of the leading advocates for changing government policy regarding a wide variety of issues related to the built environment in the U.S. is Smart Growth America. This collection of groups, from specific issue advocates to industry groups, works to protect and improve the physical environment at the national, state and local levels in the U.S. and has been a strong voice for changing the approach to development policy in the United States. The organisation campaigns for development that preserves resources and places social value above economic benefit.[12] One example of the organisation's activities is the National Complete Streets Coalition (NCSC). The goal of Complete Streets is to create streets that provide a comprehensive and integrated transportation network. The coalition argues for such policies at all levels of government and provides resources for those pursuing the implementation of Complete Streets policies. These policies are predicated on the belief that streets which are full of people engaged in a wide variety of activities create a more vibrant community than the monotonous, loud, dirty and frequently dangerous streets dominated by vehicular traffic. Complete Streets' policy establishes planning, design and management guidelines that aim to provide equally efficient and safe transportation resources for everyone: pedestrians, bicyclists, mass transit users, private vehicles and commercial traffic. By placing the focus on an integrated and comprehensive system which gives equal value to all user groups in the community, these policies seek to manage resources efficiently to encourage a broad range of social activities in public space and to maximize social benefits for a community. The model legislation formulated by the NCSC brings together a group of policies and best practices compiled by practitioners and government bodies to formulate a coherent approach to planning and designing a transportation system for the full spectrum of user groups.[13] These advisory documents contain design parameters for

[11] J. Jacobs, op. cit.

[12] http://www.smartgrowthamerica.org/about – accessed 02-08-13.

[13] http://www.smartgrowthamerica.org/complete-streets/changing-policy/model-policy/model-statelegislation/ – accessed 02-08-13.

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the physical make-up of streets with guidance regarding sidewalks, bike paths, roadway width, intersection design and other elements.[14] The success in recent years by advocacy groups like the NCSC in creating changes, in government policy at all levels, new professional standards, revised attitudes from industry groups, and altered expectations from the general public, is remarkable and a positive step forward. This has resulted in a widening acknowledgement that streets are essential to social well being and that they require careful consideration and this has had important consequences for the discussion of street design.

Another important voice for revising street design is the Congress for New Urbanism. This organisation was founded by a group of architects and urban designers to promote alternatives to automobile-based development and has had an immense impact on the field of urban design. The limits of the current discussion preclude an in-depth exposition of the complete New Urbanist programme or the extensive literature surrounding it. What can be said is that this group has been extremely successful, with numerous aspects of their agenda being adopted by government bodies from various countries, significant influence in academic and professional circles, the generation of a large body of research and many real world examples.[15] In publications such as *The Lexicon of New Urbanism and Smart Growth Manual*, New Urbanist principles addressing the full range of planning issues are presented. Central to the New Urbanist position is the belief that development and planning policies that are based on single-use zoning and heavy automobile usage create poor environments for people, which are wasteful and destructive. The basic principles of New Urbanism are that the built environment should include:

- Liveable streets arranged in compact walkable blocks.
- A range of housing choices to serve people of diverse ages and income levels.
- Schools, stores and other nearby destinations reachable by walking, bicycling or transit service.
- An affirming, human-scaled public realm where appropriately designed buildings define and enliven streets and other public spaces.[16]

Much of the design approach is based on the careful examination of precedents, with numerous design principles modelled on historic places. The leading proponent of New Urbanism, Andres Duany, strongly advocates use of the transect as a method for organising design decisions, using the rural to urban transect to establish "a sequence of human habitats of increasing density and complexity, from rural hinterland to urban core".[17] Of most relevance to this discussion is the New Urbanist interest in the street, with detailed proposals for all aspects of street design.

[14] Ibid. One of these documents, the Institute of Transportation Engineers, *Designing Walkable Urban Thoroughfares*, will be discussed in more detail later.

[15] In fact New Urbanist thinking is central to the positions advocated by Smart Growth America.

[16] http://www.cnu.org/who_we_are – accessed 02-08-13.

[17] Elizabeth Plater-Zyberk, Gianni Longo, Peter J. Hetzel, Robert Davis and Andres Duany. (1999). *The Lexicon of New Urbanism*. Miami: Duany Plater-Zyberk & Co. Sect. 1.4.

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The books cover street networks, street configuration, physical parameters, streetscape, street frontage details and parking.[18] While there has been extensive criticism of New Urbanism for a purported historicist viewpoint, these street design proposals contain a great deal of valuable data about the physical components of streets and considerable understanding of how these components work together to form coherent public spaces. These books provide a wealth of useful information for the analysis and design of streets and warrant close study by all those interested in street design. Particularly relevant for *The Urban Section* are the analyses of street frontage and the use of sectional diagrams to classify frontage typology and define terminology. These diagrams are used to illustrate concepts regarding form and do not explicitly discuss spatial issues; however, they do point to the value of the section as a tool for examining and communicating important spatial information about streets.[19]

PROFESSIONAL EXPERTISE

Also contributing to discussions surrounding the design of streets are practitioner associations and organisations made up of government officials. These groups operate at various levels from the national to the local, and contribute both through advocacy and by providing expertise to members and consultation to interested parties, such as individuals or citizen groups. Organisations such as the American Association of State Highway and Transportation Officials or the Local Government Commission, campaign publicly, organise events and provide expertise to government officials involved in planning and development. Practitioner associations such as the Institute of Transport Engineers or the American Society of Landscape Architects play a similar role, providing expertise for their members, government bodies and the wider public, while also engaging in efforts to disseminate their positions as widely as possible. These groups are an important source of knowledge and generate interest in issues regarding the built environment.

As an organisation established to assist government officials involved in community development at the local level, the Local Government Commission (LGC) provides technical assistance, organising help, training, design services, publications and resource materials.[20] One programme established by the LGC is the Center for Livable Communities, whose mission is to help local officials in efforts to carry out "resource efficient local and regional land use planning".[21] The LGC has published a variety of books on the subject of neighbourhood design and sustainable communities. The fundamental principles of the LGC align with the New Urbanist agenda, advocating for dense mixed-use walkable neighbourhoods based on

[18] Ibid.

[19] Ibid. H1.1 & H1.2.

[20] http://www.lgc.org/whatwedo/index.html – accessed 03-08-13.

[21] http://www.lgc.org/center/about/center.html – accessed 03-08-13.

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traditional models. The LGC's position on streets is outlined in *Street Design Guidelines for Healthy Neighbourhoods*.[22] The book is a short guide to the design of streets which can provide adequately for the range of users, and is based on the analysis of traditional neighbourhood streets from around the United States. The book classifies streets into six types and uses sectional diagrams to provide dimensions for roadways, planting strips, bike lanes and sidewalks. The diagrams also define the appropriate purpose and land use for the street types.[23]

An example of a practitioner association with a strong influence on the discussion of street design is the Institute of Transport Engineers (ITE). The ITE is one of the oldest and most established organisations dealing with transportation issues. Founded in 1930, it is a standards development organisation for the U.S. Department of Transportation and leading voice for the technical development of transportation resources.[24] This role and the ITE's dissemination of professional expertise and public awareness programmes place it at the heart of transportation efforts in the U.S. Policies and standards embraced by the ITE have a great deal of influence on professionals, government officials and policymakers. In 2010 the ITE in conjunction with the U.S. Federal Highway Administration, the U.S. Environmental Protection Agency and the Congress for the New Urbanism, produced the report *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach*.[25] The manual is designed for professionals involved in the design of streets, presenting the principles of context sensitive and walkable streets, with design guidelines for achieving these types of streets. The guidelines in the manual give detailed information for the design of a range of street types; from general planning principles, to criteria and recommendations for streetsides, travelled ways and intersections.[26] The report is supported with visual material: photographs, tables, and plan and section diagrams; to clarify and expand the text. One of the goals of the document is to increase awareness of the flexibility in the standards contained in the American Association of State Highway and Transportation Officials' policy handbook, *Geometric Design of Highways and Streets*, known as the "Greenbook".[27] The "Greenbook" is the source of legal standards used in roadway legislation throughout the U.S. and as such influences all levels of road design from national to local. Another major goal of the context sensitive solutions method presented in the report is to establish a multi-disciplinary approach and community involvement in the planning process.[28] The adoption and dissemination of these principles and guidelines by the ITE is a significant development and reflects an increasing acceptance of arguments for street design which supports a full spectrum of users, reversing the previous focus on maximising road and street design for vehicles. This change in approach by the technical designers of streets has important consequences for streets and those who study and design them.

[22] Dan Burden, Michael Wallwork, Dave Davis, Sharon Sprowls and Paul Zykofsky. (1999). *Street Design Guidelines for Healthy Neighbourhoods*. Sacramento: Center for Livable Communities.

[23] Ibid.

[24] http://www.ite.org/aboutite/index.asp – accessed 04-08-13 and http://www.standards.its.dot.gov/About/ProgramPartners – accessed 04-08-13.

[25] Institute of Transportation Engineers. *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, An ITE Recommended Practice*. (2010). Washington: Institute of Transportation Engineers.

[26] Ibid. pp. 114–203.

[27] Ibid. p. 3.

[28] Ibid. p. 3.

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GOVERNMENT GUIDANCE

As government bodies control policies and legislation which regulates the construction and modification of streets, official government guidance documents for the design of streets are incredibly important in the discussion of street design. There are numerous documents and reports produced by agencies at all levels, but for the purposes of this discussion two examples have been selected: the New York City *Street Design Manual* and the United Kingdom Dept. for Transport's *Manual for Streets*. The two documents cover very similar material, with many shared principles and contain comprehensive information regarding the design of streets, the obvious difference being the context. The N.Y.C. *Street Design Manual* references the range of streets specific to New York, while the U.K. *Manual for Streets* is intended primarily for those involved in the planning and design of residential streets.

The N.Y.C. *Street Design Manual* is intended to provide "policies and guidance to city agencies, design professionals, private developers and community groups for the improvement of streets."[29] The manual starts from the premise that the safety of all users is most important and that street design requires that the needs of users be treated equally, also stressing the community benefits that result from high quality street environments, such as economic gains, improvements in public health and increased social engagement.[30] After outlining the policy goals and the planning process,[31] the manual goes on to provide design guidelines for streets, the use of materials, guidance for lighting streets and information regarding the use of street furniture.[32] The document is predominantly text, with text-based tables and photographs of examples to support the descriptions in the text. The value of the manual for this conversation is the information supplied regarding the relationship between the accommodation of pedestrians, bicyclists and social activity and vehicular traffic. The manual allows the full range of design considerations to be reviewed for a range of urban situations, from dense commercial to strictly residential. While the inclusion of sectional diagrams would enhance the spatial analysis, the wide array of streets discussed and the collection of design options provides a useful resource for the analysis of streets and ultimately a valuable design tool.

The U.K. Dept. for Transport report, *Manual for Streets*, like many of the guidance documents discussed, begins with the recognition that streets play an important social role, demonstrating the assimilation of the research and academic thought from the field of urban design. Prior U.K. government research showed that much of the previous policy, regulation and design guidance often resulted in poor quality streets with numerous negative impacts.[33] The manual hopes to address these issues by

[29] New York City Department of Transportation. *Street Design Manual*. (2009). New York: New York City Department of Transportation. p. 17.

[30] Ibid. p. 19.

[31] Ibid. pp. 17–42.

[32] Ibid. pp. 45–198.

[33] U.K. Department for Transport. *Manual for Streets*. (2007). London: Thomas Telford. p. 6.

providing a common reference resource for the planning and design of streets, which places all users and the social life of streets at the heart of the process.[34] The document is organised in three sections: Section A – Context and Process, Section B – Design Principles and Section C – Detailed Design Issues. Section A begins by setting out the goals and the main changes of approach being recommended. The manual is intended for use on the design of residential streets and discusses the importance of collaboration in the process.[35] Some of the most significant changes advocated are: placing pedestrians first, stressing the need for a collaborative process, recognition of the street as a place for social exchange and the promotion of inclusive environments.[36] In describing the context for the manual's recommendations, a summary of the history of road design is presented, highlighting the deficiencies of vehicle-dominated design thinking and the importance of high quality streets to the community.[37] The manual outlines the planning and design process, detailing the various stages and information typical for each stage, with a discussion of design codes and auditing processes; pointing out improvements to the outcomes if the recommendations are followed.[38]

Section B discusses the design principles underpinning the manual, describing organisational concepts, the connectivity and the permeability of street networks, the characteristics of walkable neighbourhoods and different street types.[39] This is followed by an outline of the value of high quality public space and its benefits.[40] Basic urban design principles are described, with a discussion of street dimensions and how design can affect social interaction.[41]

In Section C more detailed information is provided, beginning with a discussion of the requirements of various users, followed by street geometry recommendations to facilitate the full range of uses.[42] There is also a detailed discussion of the influence of street design factors on vehicle behaviour and the importance of minimising vehicle speeds in creating desirable community streets.[43] Also included is information regarding the requirements for parking bicycles, cars and motorcycles, with design guidance for accommodating parking while maintaining the visual quality and liveability of streets.[44] This is followed by detailed discussions of traffic signs, street furniture, materials and management issues and the impact of these on the perceptions and experiences of users.[45]

Again, as with the documents discussed previously, the *Manual for Streets* is a valuable tool for designers and urbanists. The manual summarises the current consensus of best practice for providing liveable, socially active streets, and, with the included design strategies and solutions, is a useful resource for understanding streets and the role they play in communities. Particularly valuable is the translation

[34] Ibid. p. 6.
[35] Ibid. p. 12.
[36] Ibid. p. 13.
[37] Ibid. pp. 15–16.
[38] Ibid. pp. 23–38.
[39] Ibid. pp. 41–49.
[40] Ibid. p. 51.
[41] Ibid. pp. 52–60.
[42] Ibid. pp. 63–77.
[43] Ibid. pp. 79–97.
[44] Ibid. pp. 99–113.
[45] Ibid. pp. 115–136.

of general principles to the U.K. context, with the discussions specific to U.K. streets revealing the importance of careful adjustments to generic concepts. The manual also contains illustrations that can be helpful in the analysis of existing conditions or design proposals.

ACADEMIC RESOURCES

Another important source of information is academic research, with an increasing body of detailed literature being developed continuously. It is not the intention of *The Urban Section* to provide an exhaustive review of this literature, but to summarise two examples relevant to the specific discussions of the book. Both books contribute valuable insights to the understanding of urban streets and provide analytical methods for examining streets that are very useful.

Vikas Mehta's book, *The Street: A Quintessential Social Public Space*,[46] sets out an argument for the place of the street in the social life of a community and through careful observation and research of specific streets, develops a systematic description of social behaviour and the array of components that foster this behaviour. As well as providing both a thorough exposition of the street's role in social exchange and a summary of the history of the street, the book also examines environmental and ecological psychology and some aspects of human behavior research, paying particular attention to territoriality and proxemics and social distance.[47] From this the book suggests that understanding human needs, both required and supplemental, can provide guidance for the design of sociable streets.[48] Using direct observation, interviews and surveys, a large body of information was gathered about three streets in the Boston metropolitan area. The research was aimed at determining how people socialised, where they socialised and what mix of elements support this social activity.[49] Using the research data the streets were ranked by the amount of social activity taking place.[50] One of the core ideas of the book is a typology of social behaviour, with three classifications: passive sociability, fleeting sociability and enduring sociability. Passive sociability is described as being in a public place among other people without direct engagement. Fleeting sociability is classified as brief chance encounters between people who know each other in a limited way, such as neighbours or regular customers at local shops. Enduring sociability is defined as instances of longer social exchange between people who know each other well on a personal or communal level.[51] Mehta also points out that all these forms of social engagement are very important, playing a role in establishing social understanding in individuals and the social parameters of public places.[52]

[46] Vikas Mehta. (2013). *The Street: A Quintessential Social Public Space*. London: Routledge.

[47] Ibid. pp. 7–65.

[48] Ibid. pp. 64–65.

[49] Ibid. pp. 67-96.

[50] Ibid. pp. 92-93.

[51] Ibid. pp. 97-115.

[52] Ibid. pp. 99-100.

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Mehta continues by describing the various requirements needed to support the mix of these social behaviours, carefully analysing the street research to identify those factors which lead to sociable streets. These factors include a sense of safety, community, environmental comfort, physical comfort, practicality, environmental control, sensory pleasure and opportunity for social interaction.[53] Using the data gathered, each of these factors is examined, the physical characteristics described and the perception of the users explained.[54] Another aspect explored is the role of independently owned businesses in creating an identifiable place.[55] Also discussed in some detail is the influence of territorial behaviour. Outlining that territorial displays by businesses, the way users are able to modify these territories and how particular physical characteristics can influence territorial definition Mehta describes the role that the control of territory plays in creating sociable places and encouraging social interaction.[56]

Careful statistical analysis of eleven characteristics of the three streets allowed the influence of each characteristic to be determined, resulting in the groupings of some and the isolation of two into four factors.[57] This set of factors affecting social behaviour were defined as: factor one, the combination of those characteristics which are impacted by businesses and land use, factor two contains five physical attributes of the street with measured effects, factor three recognizes the influence of seating provided by businesses and factor four counts identified community places.[58] Finally the four factors are described as representing land use qualities (factor one), physical qualities (factors two and three) and social qualities (factor four).[59] The research revealed that the mix of these four factors had a strong influence on the degree of sociability of specific locations on the three streets.[60] When all four factors are present that segment of the street is transformed from a circulation space to a social space.[61] From this analysis an objective means of measuring "place" is constructed, leading to the definition of three distinct qualities which contribute to the establishment of an identifiable place that has social meaning – continuity, adaptability and personalisation.[62] These three qualities are described in detail, accompanied by an argument that the creation of place that these qualities enable is critical to the social well being of city residents.

This is followed by a discussion of street culture, using an investigation into a street in India to illustrate possible changes and presents a set of guidelines for the planning, design and management of streets.[63] The guidelines propose that streets should be: viewed as gathering places, attractive to all users, provide community places, be economically diverse, offer sensory stimulation, allow local control and receive management support from government.[64] Each guideline is supported with detailed suggestions and arguments.

[53] Ibid. p. 120.
[54] Ibid. pp. 117-148.
[55] Ibid. pp. 148-152.
[56] Ibid. pp. 159-164.
[57] Ibid. pp. 165-174.
[58] Ibid. pp. 166-172.
[59] Ibid. p. 171.
[60] Ibid. pp. 171-174.
[61] Ibid. p. 174.
[62] Ibid. p. 177.
[63] Ibid. pp. 181-202.
[64] Ibid. pp. 188-202.

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The book concludes with a discussion of the three aspects of sociable streets identified previously: social, behavioural and physical, arguing that each aspect must be understood and considered in efforts to make successful sociable streets. Finally the particular value of sociable neighbourhood streets is discussed and the assertion that such streets are critical to urban residents, local communities and society at large, especially in light of our increasingly urbanised world.

The book is a valuable resource for the examination of streets, carefully describing the importance of streets, their history, discussing much of the significant literature of public space, examining environmental behaviour research and some applicable psychological theory. The rigorous empirical research provides a wealth of information about the relationship of social behaviour, land use and the physical attributes of streets. Of particular value to the purposes of this book is the analysis of the physical characteristics of streets and the impact these have on behaviour. By showing a correlation between where and how long people occupy specific parts of the street, the importance of physical elements and the identification of a range of these which can encourage social activity and influence perception. The most important physical support of social exchange identified by the research was seating, either public, commercial or the opportunistic use of building elements or street furniture.[65] Sidewalk width was also shown to be a critical characteristic, with wider sidewalks being more heavily used and perceived as more pleasant.[66] The research revealed that the sidewalk could be divided into three zones of activity. Zone one, immediately adjacent to the building edge, was used to move into or out of buildings, read signs, view window displays, use utilities (such as public phones or bank machines) or as a place to sit, lean, talk or watch the street activity. The research showed that these types of activities increased when architectural features such as steps, corners, bay windows, niches, canopies or awnings provided the chance to sit and stand or offered shelter from the rain or sun. This zone also attracted children interested in the shop windows or by opportunities to play. The second zone, in the middle of the sidewalk, was identified as the circulation space of the street, predominantly used for movement, with people occasionally stopping briefly if necessary. Zone three, situated next to the roadway, was used for stationary activities and social interaction: sitting, eating and drinking, talking, group socialising, playing, reading, sleeping and people watching. On the streets studied this zone contained the majority of the fixed and movable seating, street furniture, landscape elements and traffic and utility infrastructure.[67] These observations directly inform discussions regarding the operation and spatial understanding of sidewalks and pavements by demonstrating that architectural facades and the physical objects that populate

[65] Ibid. pp. 129-131.

[66] Ibid. pp. 131-133.

[67] Ibid. pp. 84-89.

sidewalks and pavements have a critical impact on the experience and spatial perception of streets. The influence of these elements on the spatial structure of streets will be discussed later.

Another observation made by Mehta that is relevant to this book regards the influence of visual stimulation created by the architecture and other physical components of the streets examined. With research revealing that architectural articulation, fenestration, shop displays, canopies, awnings, signage, street furniture and landscape elements, influence user perception, attraction and avoidance, social behaviour and place identification.[68]

Mehta's book also discusses the permeability of the facades that contain the street and the impact this has on the character of the street. Pointing out that permeability is more than transparency, but requires strong visual, auditory and olfactory interaction between the interiors and the exterior space of the streets to support the active engagement of street users. Mehta cites research regarding the importance of sensory stimulation in shopping behaviour and pedestrian pleasure, pointing out the role of the architectural features, fenestration and displays in providing this stimulation. Mehta's research showed that permeability increased social activity and pedestrian interest, particularly for children.[69] The concept of permeability and Mehta's research which shows the effect of the level of permeability on social behaviour and interest is significant for a central argument of this book: that interior spaces adjacent to the street form part of the street space and that analysing the permeability of streets is essential to understanding how streets function.

While there is a great deal more to be learned from Vikas Mehta's *The Street: A Quintessential Social Public Space*, those aspects examined indicate the value of his research and the relevance to the current investigation. Although the emphasis of the book is on the impact of programme or land use in creating meaningful social spaces, the book does provide detailed empirical research showing that physical features influence the perception and experience of streets. This research indicates which physical attributes warrant analysis and provides guidance for the processing of the results, suggesting the level of influence of various factors. The focus on social behaviour does limit the exploration of other issues, such as spatial experience or a more structured analysis of the physical elements that do not directly relate to street level activity. Also, although the visual information presented has many strengths, a more extensive diagrammatic exposition would improve communication, making some issues more comprehensible, for example when photographs are used to illustrate the discussion of zones of activity[70] or permeability.[71] The photographs do

[68] Ibid. pp. 134-135.

[69] Ibid. pp. 137-138.

[70] Ibid. p. 90.

[71] Ibid. p. 138.

provide information related to the discussion, but diagrams would be clearer and could extend the analysis. These minor points do not undermine the contributions of the book but highlight a difference in focus. *The Street: A Quintessential Social Public Space* makes critical observations regarding social behaviour, proposes a compelling thesis regarding the influence of land use and business ownership on the creation of socially meaningful places and while the focus is on neighbourhood commercial street, most of the research and concepts are directly relevant to many urban streets. These ideas are supported with thoughtful research that synthesizes material from urban theory, environmental behaviour and psychology, expanding and adding to the knowledge and understanding of streets.

One of the most important resources for the study of streets is the book *Great Streets*[72] by Allan B. Jacobs. In the book Jacobs outlines the place of the street in the city and the importance of the street in urban life. Jacobs argues that the physical aspects of streets are critical to their success. The book provides an invaluable body of comparative data about streets, analysis of urban organization and detailed discussions of several factors in the shaping of streets. The book uses the comparative analysis of existing streets to expand knowledge about how streets work and an insistence that good streets are designed and must be maintained.[73]

Great Streets is divided into four sections. The first section contains detailed analysis and drawings of specific streets organised thematically. Section two contains a collection of streets selected as models of particular street types. Section three is a discussion of street organisation, with a set of partial figure ground drawings of cities from around the world. The final section provides detailed descriptions of the characteristics observed on great streets, forming a proposed set of qualities needed for successful street design.

Section one begins with the examination of a street of personal significance for Jacobs, a residential street he lived on, a meaningful street for him, setting the tone of the book. For while this is a book full of information about streets and cities, there is a strong human quality at the centre of the book. Streets are presented using descriptive analysis, with the facts explained to portray the experience they shape, with everyday events and occurrences used to contextualise this information. The residential street, Roslyn Place, is described as a space with specific physical properties around a narrative framework of the lives and interactions of the residents. This description is accompanied by a scale plan and section and perspective sketches of the street. These drawings illustrate the information in the text, but also allow the reader to analyse the street.[74]

[72] A. Jacobs, op. cit.

[73] Ibid. pp. 2-11.

[74] Ibid. pp. 15-19.

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Following this opening analysis, Jacobs examines in detail selected streets to discuss significant themes, using the model established in the first analysis. He examines organic streets, European boulevards, damaged streets, tree-lined streets, street compositions and three individual instances with particular qualities: a residential boulevard, a promenade and the Grand Canal in Venice as a water street. These thematic discussions establish the terms for the short analysis of individual streets in section two and articulate arguments for the set of principles for good street design detailed in section four.[75]

The second section of the book contains a collection of streets from cities around the world, with brief descriptive notes, scale drawings and sometimes perspective sketches. Again the streets are classified by the type or use and organised to facilitate comparative analysis.[76] The streets presented range from ancient streets, through commercial and residential streets to the special condition of one-sided streets. The street descriptions provide basic information about the street, highlight particular characteristics, describe spatial qualities, social activity, landscaping, street furniture and the impact these have on the experience of the street. This collection has been compiled as a means of learning about streets and is intended as a resource for the design and construction of good streets.[77] The inclusion of analytic drawings at the same scale for each street allows the space of the street and the elements which shape it to be examined and to be easily compared with other street drawings included.

Section three of the book is concerned with street patterns, consisting of partial plans of thirty-nine cities.[78] Jacobs points out that the organisation of streets is influenced by numerous factors and can contribute to understanding important aspects of individual cities and cities in general. He briefly discusses comparing existing street patterns, which have resulted in successful urban form, to design proposals for new streets or districts, suggesting that the strengths of proven models can improve the proposed designs. He also stresses the importance of understanding the context for a specific street and that the analysis of the organisation, block size and scale of the city form in which an individual street is situated, reveals information essential to understanding the street. Using the comparative method, he explains the way in which the context can affect the perception and experience of a street, explaining that the same street form has radically different consequences in different street patterns. Jacobs argues that understanding street patterns and the impact they have on individual streets contained in them can help in the analysis and design of streets.[79] Again, as with the collection of street drawings in section two, the selection of city plans is intended as a resource for comparative analysis. With each

[75] Ibid. pp. 20-131.

[76] Ibid. p. 135.

[77] Ibid. p. 134.

[78] Ibid. pp. 202-268.

[79] Ibid. pp. 202-204.

plan of one square mile drawn at an identical scale, reduced to figure ground, the main features of the street pattern for each city are readily communicated and direct comparisons are possible. Jacobs states that if the goal is to learn more about "the physical, designable characteristics"[80] of streets, then understanding the relationship between the individual street and the street pattern is critical.

Jacobs outlines the forms of information revealed through the comparative analysis of the figure ground drawings, discussing similarities and differences, topography and natural features, organisation and structure, historical factors, density, two-dimensional scale, variation in scale, design concepts and some additional observations about specific cities. Through the discussion of these aspects of the analysis, the details of the methodology emerge and the benefits are articulated. Specific characteristics revealed through the comparisons generate a more developed understanding of specific cities, as well as information and ideas regarding cities in general.[81]

The final part of the book, *Great Streets* is an attempt by Jacobs to make explicit the factors that make great streets. Some of these factors are seen as requirements, others as valuable additions which markedly improve streets, while still others are considered beyond the control of designers. Again, Jacobs argues that streets are the critical component of urban environments and that while their purpose is movement, their role as a stage for social interaction is vital. Accepting that much of what makes a street successful cannot be designed, he still insists that physical attributes are important and that conscious design of these attributes is necessary for successful streets.[82] Jacobs describes a set of required qualities, asserting that not all great streets possess these qualities, but that their presence usually indicates a successful street, if not a guarantee; stating that a great street requires the skilful combination of these qualities through considered design.[83] The essential qualities include: accommodation of people, physically comfortable, spatially defined, visually stimulating, transparent at street level, consistent, maintained and construction with quality and design.[84] In examining the non-essential qualities, Jacobs argues that while a street can be great without these, they significantly improve a street. These attributes are: trees, distinct starts and defined finishes, details, stopping places, accessibility, diversity of uses, limited length, slope, restricted parking, contrast and adaptability.[85] Believing that knowledge about how to create good streets can be developed through the analysis of existing great streets, Jacobs has constructed a reference for designers, providing a body of information, a set of detailed discussions which examine this information in a distilled set of operational proposals for using this information.[86] All of the issues discussed in this section expand the understanding of streets, developing additional layers of attributes and relationships,

[80] Ibid. p. 202.

[81] Ibid. p. 268.

[82] Ibid. pp. 270-271.

[83] Ibid. p. 271.

[84] Ibid. pp. 271-292.

[85] Ibid. pp. 293-308.

[86] Ibid. pp. 271-308.

also providing a disciplined means of examining how these interact. The careful consideration and the analysis of existing examples helps manage the complexity of streets, demonstrates a useful method and reveals valuable principles for the study and design of streets.

In his conclusion Jacobs argues that good streets are critical to healthy, liveable cities. He states that while circulation and access are important functions, streets play an important social role and supply public space for interaction, expression, community and socialisation. To fulfil this role streets must work for people, inviting use and supporting a variety of activities by a wide range of users. Certain characteristics and qualities are required for streets to succeed and the careful consideration of these can improve existing streets and help shape high quality new ones. He also emphasises that comparative analysis and the examination of models can provide invaluable knowledge and lead to an understanding of the intangibles of good streets. Finally Jacobs believes that good streets are designed to be good and that they are taken care of, seen as special and valued over time.[87]

Great Streets is a classic text in the field of urban design, of particular value for the investigations in this book. The careful examination of streets, especially their physical attributes, establishes a basis for discussion, providing a framework and a vocabulary which can be used to analyse streets and to explain key concepts and relationships concerning streets. Beginning with the space of streets and explaining how the components – street wall, pavements, trees, street furniture, etc. – are configured to form and articulate streets, critical ideas such as enclosure, definition, visual stimulation, coherent design, connectivity, management, social activity and inclusivity are discussed.[88] Demonstrating how the physical characteristics of streets contribute to the experience and perception of streets, Jacobs underlines the importance of understanding these aspects of streets and how this knowledge can be used by designers. By outlining the critical principles and requirements for streets to successfully meet functional and social needs, critical concepts regarding streets and urban environments are revealed.[89] In some cases this reinforces core ideas of urban design, such as human scale or the need to support social exchange; however, these ideas are developed through the analysis of examples, such that the concept has more specificity, e.g. the general rule regarding the proportion of street height to width.[90] In other instances concepts frequently discussed, often in qualitative terms, are examined for their experiential consequences, for example the impact of trees on streets, where Jacobs details the physical phenomena of light patterns, colour, shadow, leaf movement, spatial rhythm, shade, light penetration, etc., describing how these improve physical comfort, provide visual stimulation and generate spatial

[87] Ibid. pp. 311-314.

[88] Ibid. pp. 14-131.

[89] Ibid. pp. 270-308.

[90] Ibid. p. 280.

complexity, creating a rich experience.[91] Many of these ideas are referenced in the discussion which follows and are developed and extended through application.

One of the most valuable aspects of the book is the collection of drawings, both of streets and the figure ground drawings of street patterns. These drawings are a valuable resource, providing information about a very wide range of streets and street patterns. These can be used to analyse the characteristics of individual cases, showing the effects of specific configurations and attributes. Examining the plan and section of Regent Street reveals the cubic volume and the sweeping form of the street created by the 1:1 height to width ratio as it bends around the arc in plan, or the layers of space created on Kurfurstendamm by trees, pavement and canopies.[92] A similar resource is provided later in Chapter four of *The Urban Section* and the new methodology presented in Chapter five can be used to study the drawings in *Great Streets* in combination with those in Chapter four, allowing more value to be derived from both sets of drawings.

The value of the drawings in *Great Streets* is enhanced through the use of comparative analysis. The book has been designed to be used this way and throughout the book Jacobs demonstrates the methodology. In some instances this is done in an implicit fashion, such as when he compares the street height to width ratios of the Via Del Corso with the Via Dei Grecci, to discuss the oppressive quality of the Via Del Corso.[93] At other times he uses comparative analysis in an explicit, structured way to explore a particular point or illustrate a principle, e.g. when analysing two wall sections to discuss facade articulation,[94] or in his analysis of Boston maps to explain the changes in urban scale illustrated by the change in block sizes and street patterns.[95] Comparative analysis is shown to be an effective tool and Jacobs argues the careful use of this methodology develops useful knowledge and that it is necessary to improve the design of streets and urban environments.[96] Like *Great Streets* a central argument of *The Urban Section* is that comparing existing streets is essential to understanding and designing streets.

The core position of *Great Streets* is that information and knowledge about physical streets can improve the design of streets. While accepting that much of what leads to successful streets is outside of the realm of design, Jacobs argues that physical attributes play a critical role and that more in-depth knowledge of the physical components and their impacts is essential. Again *The Urban Section* shares this position, being founded on the belief that streets need to be carefully designed to work and that much of what makes an existing street good is often taken for granted or ignored. Physical characteristics are important to street design, more detailed knowledge is beneficial and the disciplined examination of precedents is valuable.

[91] Ibid. pp. 293-295.

[92] Ibid. pp. 14-254.

[93] Ibid. p. 87.

[94] Ibid. p. 285.

[95] Ibid. pp. 261-266.

[96] Ibid. pp. 270-271 & 313-314.

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While *Great Streets* is an essential text, there are some limitations, centred mainly on the specialist nature of the book. Much of the book is reliant on tacit knowledge, making it difficult for readers who have limited experience with urban design theory. For example the core principles presented in section one are embedded in the detailed descriptions of specific streets and could be more explicitly communicated. So while experienced readers will recognise these issues, less knowledgeable readers may focus on the descriptions of individual streets and miss the general principles being articulated.[97] Many aspects of the text are precise, but at other times qualitative description is left unarticulated. For example when Jacobs discusses slope as an attribute that improves a street, he suggests that there is a benefit to changes in elevation along a street, but only generally describes what this might be.[98] The book would also be improved by the inclusion of more analytical diagrams, particularly as those that are included are very useful. Many more complex points would be clarified by diagrams in addition to the textual descriptions, for example in the illustration of human scale, point of view and horizontal spacing the diagrams are effective, but a set of volumetric diagrams comparing streets with different height to width ratios would strengthen the explanation.[99] Although the examination of streets is very wide ranging, some areas could be more fully explored; such as permeability. Jacobs devotes a small section to transparency and does explain the impact on the street, providing some details regarding entryway spacing and fenestration. However, while discussing examples of poor visibility, he passes over their drawbacks rapidly and does not expand on how the loss of visual and physical permeability detracts from streets.[100] The issues raised here are of particular interest as they are relevant to many of the critical concerns of this book, such as making tacit knowledge explicit, presenting an analytical methodology based on diagrammatic analysis and arguing that the ground-floor spaces adjacent to the street are critically linked to the space of the street. The significance of *Great Streets* to *The Urban Section* cannot be overstated, as many of the central positions of *Great Streets* are extended and developed in the following chapters. *Great Streets* is a foundational text, making vital contributions to the field of urban design and to the growing body of knowledge about streets.

A SPATIAL CONTINUITY

If one of the major concerns of urban design and architecture is to develop vibrant inclusive urban environments, with streets being the most common and consequently most important elements, then strategies which increase activity and the enjoyment of streets are crucial. One possible adjustment to the commonly accepted conception of streets is to conceive of the street as a composition of linked spaces, with interior

[97] Ibid. pp. 13-131.

[98] Ibid. p. 305.

[99] Ibid. pp. 277-281.

[100] Ibid. pp. 285-287.

spaces that are accessible from the street viewed as necessarily part of the room of the street. If architecture and urban design are primarily concerned with meaningful relationships between spaces both interior and exterior, certainly the relationship between the exterior space of the street and the interior spaces adjacent to it should be conceived as an essential relationship. The careful consideration and design of this critical interface can radically improve the space of the street, creating more interest, activity and interaction.

Ever since Jane Jacobs challenged modernist design strategies and the 19th-century social welfare conceptions of the street which underpinned them, the idea of the street as a positive urban component has grown. It is now a central tenet of urbanism that vital streets, full of activity, used by a mix of people for as much of the day and night as possible, are essential to healthy cities. Jacobs observed that populated streets, with defined public–private boundaries and a mix of uses created social interaction and performed important social functions, from the basic provision of needs, to safety and a sense of identity and community.[101] Jacobs' identification of the need for the interior spaces to condition and affect the public space of the street, her "eyes on the street",[102] underlines a basic urban relationship; adjacent spaces are related and a considered well-designed relationship supports human activity and social interaction. Most importantly streets that result from this are superior and are necessary for a healthy urban environment. As mentioned above, Allan B. Jacobs emphasises the need for a connection between the interiors along a street and the public way as a critical requirement for a successful street. Using examples from cities around the world, Jacobs points out the contributions that visual connections between the interior and the sidewalk make to the experience and perception of a street. On vibrant streets which attract people and activities, such as the Paseo de Garcia in Barcelona, the shop windows are described as part of the public space,[103] or the example of the Boulevard Saint-Michel, Paris, where shop windows and an area for exterior displays create interest and encourage the imagination.[104] Jacobs also discusses the damage caused by poor visual connections between interior and exterior spaces, describing the reduction in the sense of security and the lack of community identity.[105] A recent book by Stipo, a group of Dutch architects and urban designers, *The City At Eye Level: Lessons for Street Plinths*,[106] also discusses the importance of the street level spaces to the success of streets. The authors argue that the ground level of a building must be designed and managed to provide functional, social and psychological value. The book uses case studies to demonstrate that the design of ground-floor spaces that are human scale, people centred, mixed use, adaptable and visually stimulating can create streets that attract people, activity and social interaction, building community and vital

[101] J. Jacobs, op. cit.

[102] Ibid. pp. 29-54.

[103] A. Jacobs, op. cit. p. 43.

[104] Ibid. p. 286.

[105] Ibid. pp. 286-287.

[106] Meredith Glaser, Mattijs van't Hoff, Hans Karssenberg, Jeroen Laven and Jan van Teeffelen, eds. (2012). *The City At Eye Level: Lessons for Street Plinths*. Delft: Eburon.

new neighbourhoods and interventions that can rehabilitate damaged or problematic streets.[107] As discussed earlier in the chapter, Vikas Mehta's research documented the impact of transparent and permeable street fronts, with more people using, gathering and staying for longer on the portions of streets which had visually and physically connected street frontage. Mehta found that people identified this attribute of a street as desirable and that people preferred to use these sections of a street. Mehta also documented the increase in social exchange on parts of a street which had stronger interior and exterior connections, with the higher usage rates contributing to more social interaction. These more desirable and active parts of the streets also held people for longer, with the duration of stay measurably increased.[108] This provides empirical support for the intuitive understanding that the greater visual stimulation of transparent and permeable street fronts create more desirable and active streets. Similar findings were reported by Jan Gehl, et al., in "Close Encounters With Buildings", as the observations established that the physical features of ground-floor facades, principally visual connection, had a measurable impact on people's behaviour.[109] Gehl and his colleagues compared the behaviour of pedestrians on sections of streets with blank facades with the behaviour on sections with visually connected and permeable facades. The research showed that people engaged open, visually stimulating frontages at much higher levels than blank, closed facades. People turned to look as they passed and stopped to view shop windows. People used these areas to stop for optional activities, such as resting, eating, smoking or talking. This increase in activity also attracted more people, as Gehl frequently points out in all his work, "people attract people".[110] This pattern of behaviour was even more pronounced at night, with people engaging lighted transparent facades at much higher levels than dark, closed frontages.[111] This is followed by case studies to demonstrate models for regulating ground-floor design in both historic and new urban environments, from which basic principles for ground-floor facade design are derived. These principles stress the need for a mix of public uses, architectural detail, visual transparency, physical permeability, human scale, sensitivity to context and architectural features such as steps, niches and doorways.[112] The article ultimately argues that the design of the ground-floor street frontage has a significant impact on how a street is used and that the careful deployment of simple design strategies can improve streets.

With both intuition and research pointing to the need for interactive and visually compelling ground floors adjacent to streets, it is interesting to reconsider some basic ideas about how buildings and streets interact. Pre-modern conceptions of the boundaries between the street and the interiors of buildings were predicated on the clear definition of interior and exterior. Windows and doorways marked the end of

[107] Ibid. pp. 61-71, 180-191 & 122-133.

[108] Mehta, op. cit. pp. 137-143.

[109] Jan Gehl, Lotte Johansen Kaefer and Solveig Reigstad. (2006). Close Encounters with Buildings. *Urban Design International*. 11 (1), pp. 29-47.

[110] Ibid. p. 37.

[111] Ibid. p. 38.

[112] Ibid. pp. 44-46.

interior space; interior space was discrete and legible, with the space of the street being a separate space with distinct characteristics. Modernist design principles pursued the eradication of this type of discrete boundary, proposing a more continuous vision of space; one where the interior moved out into the exterior and the exterior was drawn into the interior space. However, this fundamental conception of space was disrupted in relation to the street. When it came to streets modernism saw them as contributors to the dirty, dark, overcrowded, chaotic and violent 19th-century industrial city. In agreement with contemporary progressive thinking, modernism identified traditional streets as a major cause of urban problems, proposing an alternative urban environment without streets. Instead of streets which coupled movement, commerce and social interaction, modernism proposed that buildings be located in a landscape, with a direct contact to a natural environment and that movement be through a dedicated network of roads.[113] The moral pursuit of improving living conditions and eliminating perceived ills, coupled with the modernist aesthetic agenda, prevented the examination of a modernist conception of the relationship between urban exterior and interior. What is proposed is an extension of contemporary notions of continuous space to the street. Architects and urban designers should rethink the separation of ground-floor interiors from the room of the street. Those responsible for the configuration, construction and management of urban space must see the ground-floor spaces along a street as contributing to the urban environment, pursuing a public space of the street that is both exterior and interior. Architects must design the ground floor of urban buildings to address the public space of the street, extending the activity of the interior out into the street. Most importantly, owners must understand the public nature of the ground floor and their responsibility to the public space of the city. If streets are to perform their critical role in the life of cities, there must be a joint effort to pursue the active engagement of ground-floor spaces with the streets they form.

The design of ground-floor spaces should utilise the sophisticated tools of architectural practice to generate high-quality and meaningful solutions. The careful modulation of thresholds, boundary conditions and spatial compositions can generate strong physical and visual connections between interior and exterior spaces. Architectural design which pursues urban relationships and considers the impacts of design choices on the street can lead to interesting and desirable streets, which attract use and support a vital urban environment. If architects conceive of the street as a room which the interior space they are designing is connected to, rather than that moment where their design stops, a completely different approach to the design issue opens up. Most of the architectural solutions are self-evident and based on fundamental architectural

[113] Le Corbusier. (1967). *The Radiant City*, translated by Pamela Knight, Eleanor Levieux and Derek Coltman. London: Faber and Faber. pp. 119-126.

principles, such as scale, threshold, composition, tectonics, materiality and spatial definition. The important alteration is the removal of the simplistic distinction between the interior space and the street. Once they are seen as two parts of one whole, the design problem is transformed and the possibility of meaningful, interrelated interiors and exteriors is greatly improved. Streets where the interior and exterior are designed to complement and enhance each other can only result in more vital streets, which will improve urban space.

The most important contributor to a vibrant urban environment is the active street and the integrated design of the street and the ground floor is the best means of achieving this. The street is a civic room; the activity of the ground floor should necessarily overlap with the activity of the street. The blurring of interior and exterior space extends the architectural conception of a spatial continuum in an instrumental manner to urban thinking. The design of the relationship between the interior and the street is the most important task for an architect in an urban context and methodologies for understanding and designing active streets are essential tools for urban designers, architects and those who assess their designs.

ELEMENTS OF THE STREET

The primary elements of the street are: the roadway, the sidewalk/pavement, street furniture and landscape features and the street wall. The roadway provides for the movement of vehicles, the sidewalk accommodates pedestrian activity, the street furniture and landscape features support the use of the street and the street wall forms the edges of the room of the street. Each of these elements is comprised of various components, with the variations of these components distinguishing the individual street.

The roadway is often a dominating feature of a street, consequently requiring examination, focused on the number of circulation channels, their width, the provision for parking, the plan form and the surface. Single-channel roadways are the most common and result in clear spatial structures, whose modulation is influenced by the subtleties of the combined elements. Multiple-channel roadways create spatial layering, with interlacing volumes and more complex relationships. The width of the roadway plays a major role in determining the volume of the street, with narrow roadways creating tight, vertical spaces and wider or multiple channels creating more open, horizontal conditions. The width of the roadway combined with the width of the sidewalk/pavements and the height of the street wall defines the enclosure or the room of the street.[114] Allan B. Jacobs states that widths exceeding four times the height of the street wall provide poor spatial definition and that most good streets have height to width ratios in the range of

[114] Reid Ewing, Susan Handy, Ross C. Brownson, Otto Clemente, and Emily Winston. (2006). Identifying and Measuring Urban Design Qualities Related to Walkability. *Journal of Physical Activity and Health*. 3 (Suppl 1), p. S226.

1:1.1 to 1:1.25.[115] Four examples: **(Fig. 3.1–3.4)** Polk Street, San Francisco, South State Street, Chicago, Rue Talaa Kebria, Fès and Bath Street, Glasgow, demonstrate the variation in the width of roadways and the relationship between this width and the height of the street wall. The height to width ratio for Polk Street is 1:1.78, for South State Street it is 1:1, for Rue Talaa Kebria 1:.48 and for Bath Street it is 1:2.17. These different height to width ratios produce volumes that range from vertical in Fès to horizontal in Glasgow. As the major component of the horizontal dimension, the roadway width is an important consideration in the analysis of the street.

Streets designed to prioritise vehicular movement have geometries with negative impacts on other users, with wider roadways and larger corner radii creating poor spatial definition, higher speeds and less natural pedestrian movement patterns.[116] To design streets which support a full range of users and provide safe attractive places for people, the roadway design must constrain vehicular movement and illicit driving behaviour that is responsive to non-vehicular users.[117] Parking provision also influences roadway width and the pedestrian experience of a street. The portion of the roadway designated for parking can take many forms and have either positive or negative impacts. Carefully configured parking can provide a visual and physical barrier between moving vehicles and pedestrians, supporting a pleasant and active street, while poor parking arrangements can damage streets, limiting pedestrian movement and emphasising the dominance of vehicles, creating a place that is unwelcoming to people.[118] The form of the roadway is critical to the spatial character of a street. Curved streets limit visual depth, bending to close the space of the street. A straight form allows continuous lines of sight and open connected spaces. Straight street forms can have rhythm, proportion and balance, while curved plans can create visual diversity and stimulating spatial composition.[119] The surface of the roadway also influences the perception of the street. Most roadways are paved with asphalt or concrete, which are efficient and cost-effective surfaces, allowing rapid installation and ease of maintenance. These materials are used primarily for their suitability for motor vehicles and cost benefits. While these are important considerations, the materials have serious limitations, particularly in relation to creating distinctive streets. The ordinary character and uniformity have limited visual and tactile qualities. Cobblestones, bricks, or other roadway surfaces can create a range of physical stimulation, adding interest and pleasure to the experience of a street.

The change in priorities for street design that have followed the recognition that populated, active streets are essential to the economic, cultural and social health of cities has led to an expanded understanding of the uses and activities that can take place on sidewalks/pavements. Beginning with Jane Jacobs describing the sidewalk of

[115] A. Jacobs, op. cit. 279-280.

[116] *Designing Walkable Urban Thoroughfares*, op. cit. pp. 45-47 and *Manual for Streets*, op. cit pp. 89-90.

[117] Federal Highway Administration. *The Effects of Environmental Design on the Amount and Type of Bicycling and Walking*. (1992). Washington: National Bicycling and Walking Study, US Federal Highway Administration, p. 13.

[118] Plater-Zyberkm et al., op. cit., *Designing Walkable Urban Thoroughfares*, op. cit. and *Manual for Streets*, op. cit.

[119] Camillo Sitte. (1965). *City Planning According to Artistic Principles*, translated by George R. Collins and Christiane Crasemann Collins. London: Phaidon Press. p. 61.

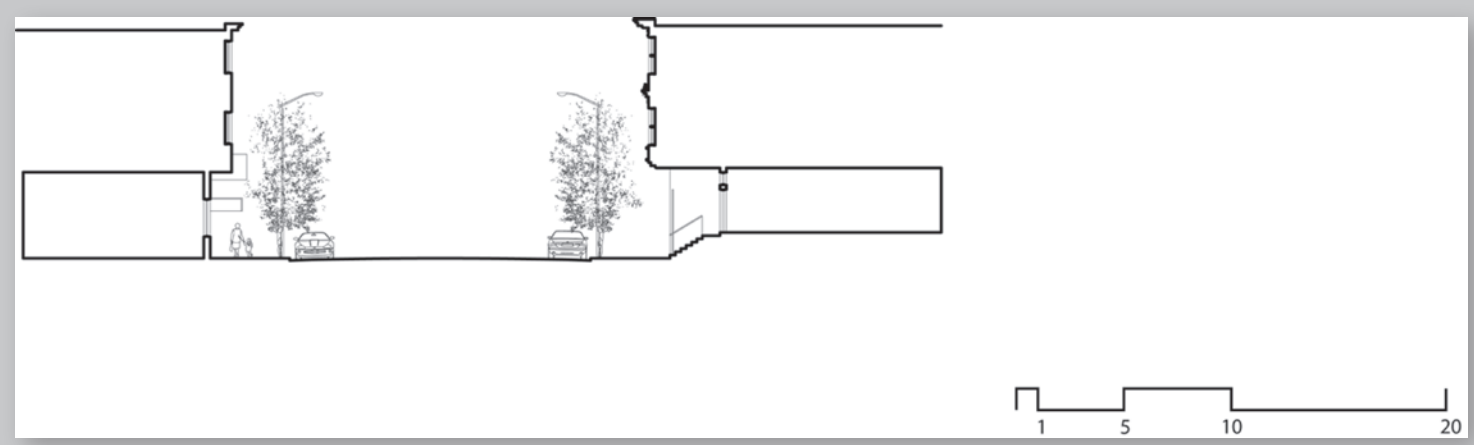

Figure 3.1
Polk St., San Francisco.

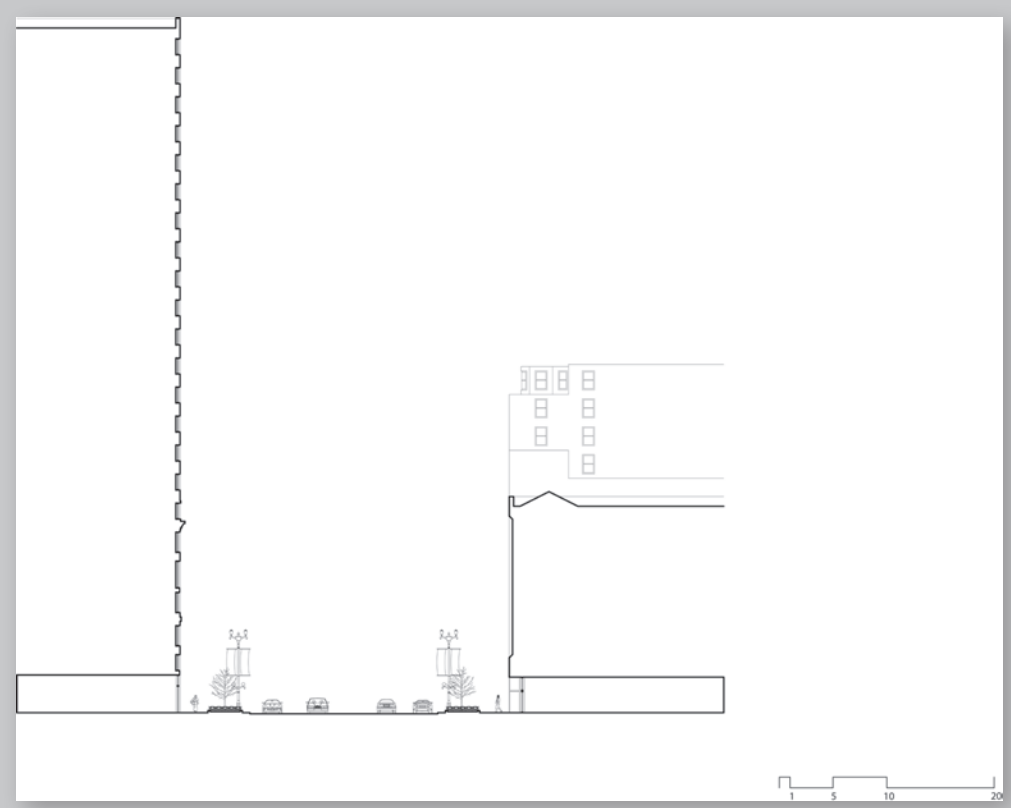

Figure 3.2
South State St., Chicago.

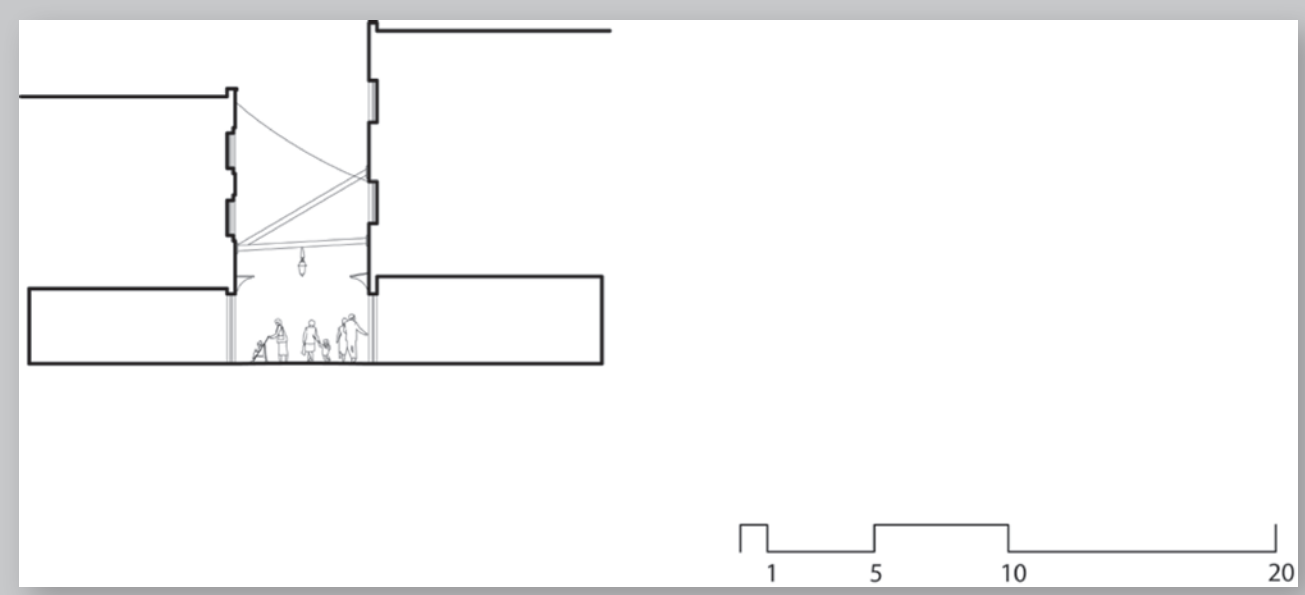

Figure 3.3
Rue Talaa Kebria, Fès.

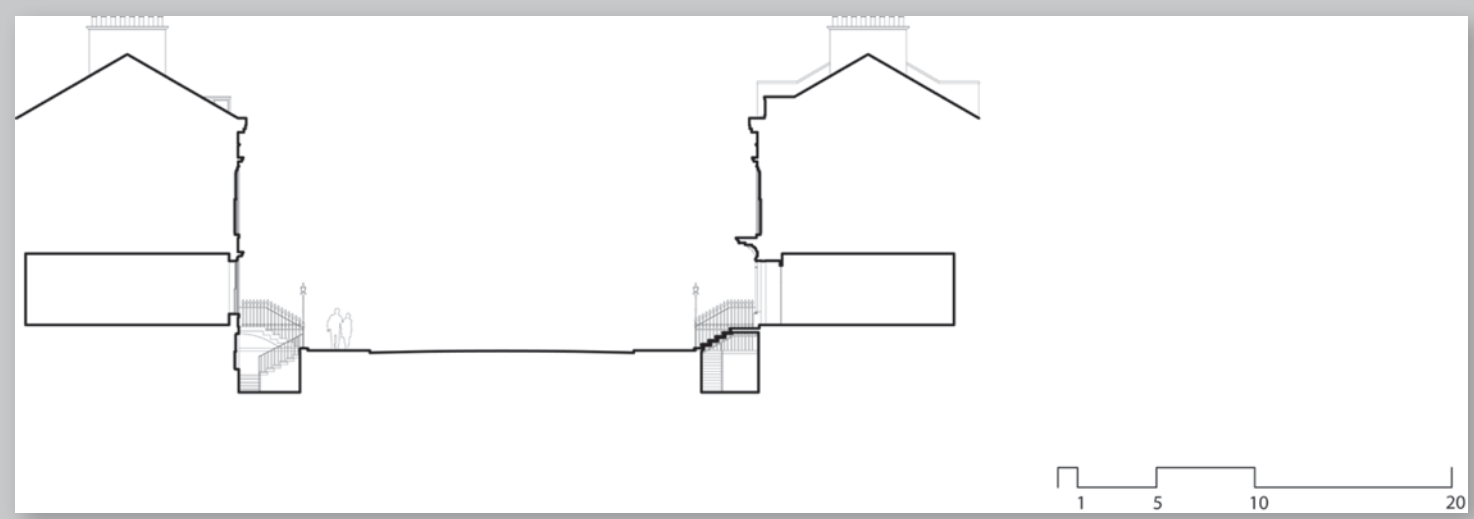

Figure 3.4
Bath St., Glasgow.

her neighbourhood to Jan Gehl's research into use patterns and pedestrian behaviour, or Allan B. Jacobs' evocations of the vitality of life on the pavements of great streets, there has been a steady effort to understand the complexity of this critical urban space. One fundamental concern is the organisation of sidewalk space, from suggested systems in design manuals,[120] to others developed by researchers such as Vikas Mehta.[121] All these share basic characteristics, denoting a zone against the roadway, a zone of movement and a zone at the building's edge. These zones vary in width and layout in relation to the type and configuration of the street, but the main divisions remain. In all of these models, the zone immediately adjacent to the building is identified as the place of interchange and informal social activity; people move in and out of buildings, window shop, stand, lean, sit, talk and smoke.[122] It is also the area which businesses use to expand into, placing displays, temporary signs, tables and chairs or decorative enhancements.[123] The centre zone is typically designated as the zone for pedestrians, allowing people to circulate along the length of the street. The zone against the roadway contains the street furniture and landscape elements. This is the area where light poles, street signs, fire hydrants, telephone poles and other infrastructure items are located, also the zone where many of the public amenities are situated: trees, benches, planters and bus stops. This is the section of the sidewalk/pavement where the models differ, with some models seeing this as a place to accommodate increased activity. The San Francisco city design manual, *SF Better Streets*, divides this into two distinct zones (the furnishing zone and the edge zone) and even suggests an additional zone, termed the extension zone, where sidewalk activities can expand into the roadway space.[124] For the purposes of this book the sidewalk/pavement will be divided into four zones: the transition zone, that area next to the street wall, followed by the circulation zone occupying the centre of the sidewalk/pavement, next to this is the amenities zone and finally the curbside zone, where the sidewalk/pavement meets the roadway **(Fig. 3.5)**. The differentiation in terms is not merely semantic, but essential to accurately portray the functions of these areas.

The transition zone is defined by its physical and visual exchanges, with the movement between the interior and exterior expressed on many levels. It is the place where the change from open public space to enclosed space occurs and the various devices and methods of transition have significant impact on the perception and experience of an individual street. The transition zone can range from the simple tight wall plane of entry thresholds, such as in Fès **(Fig. 3.3)**, to the horizontal and vertical layers in the steps and porches that span light wells on Bath Street in Glasgow **(Fig. 3.4)**. The configuration and use of the transition zone has a major impact on the experience of a street, with an infinite number of arrangements, all of which can be appropriate if carefully designed.

[120] http://www.sfbetterstreets.org/design-guidelines/sidewalk-zones -accessed 09-09-13 and http://www.seattle.gov/transportation/rowmanual/manual/4_11.asp - accessed 09-09-13.

[121] Mehta, op. cit. pp. 84-90.

[122] Gehl, et al., op. cit. p. 30 and Jan Gehl. (2011). *Life Between Buildings: Using Public Space*. Washington: Island Press. pp. 147-151.

[123] Mehta, op. cit. pp. 138-144.

[124] http://www.sfbetterstreets.org/design-guidelines/sidewalk-zones op. cit. p. 98.

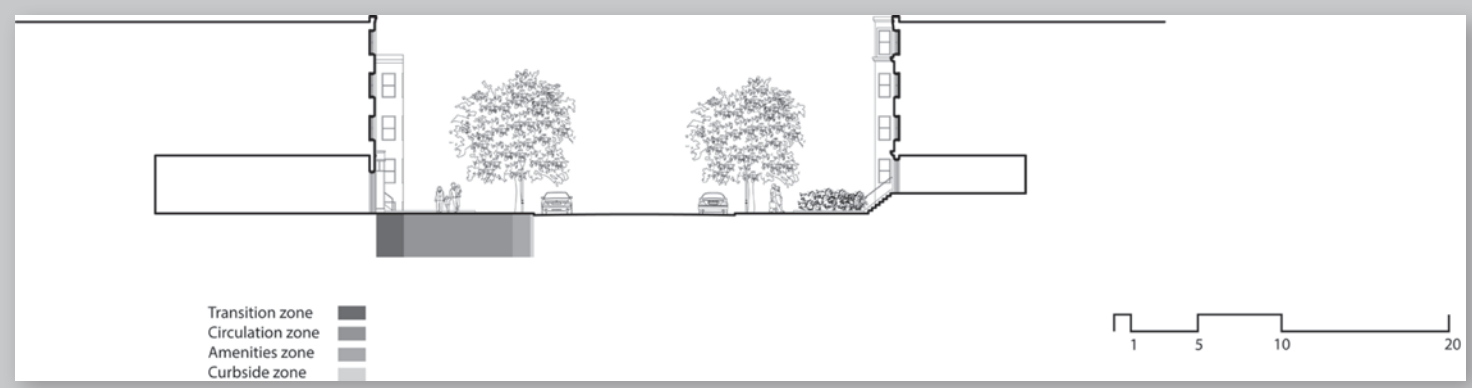

Figure 3.5
Sidewalk Zones.

The circulation zone is much more than a "pedestrian clearway";[125] as both William Whyte and Vikas Mehta's research confirmed, people also use this part of the sidewalk to stop for short conversations and other short duration social interaction. It is primarily a place of movement, but not always in a strictly functional sense.[126] The sidewalk/pavement width is the most prominent aspect of the circulation zone, specifically the relationship of width to the pedestrian load. Narrow pavements can cause overcrowding or be difficult to use for even individual users; conversely they can be part of an intimate human scaled street. Wide pavements can be abandoned and empty or busy and vital with large flows of people. Identifying the characteristics and extent of this zone is essential to building a comprehensive understanding of a street.

The term amenities zone is used to stress the importance of understanding the consequences of street furniture and landscape elements, both functional and spatial. Be they straightforward functional components, beautification efforts or public provision, these objects are placed on the street, in the public right of way, as a benefit for one group of street users. This means they are subject to consideration for all of their impacts and must be evaluated in the context of the complete street composition. The amenities provided influence the space and use of the sidewalk/pavement and the street as whole. On South State Street in Chicago there are large planters, trees, benches, light poles and banners **(Fig. 3.2)**. This gives the street a civic quality, structures the space of the pavement, offers a physical and visual barrier between the vehicular traffic and pedestrians and provides opportunities for social interaction. All this is at a large scale, generating the environment of a grand commercial street; appropriate both to number of people

[125] http://www.toronto.ca/planning/urbandesign/streetscape/index.htm - accessed 10-09-13.

[126] Mehta, op. cit. p. 89 and William H. Whyte. (1980). *The Social Life of Small Urban Spaces*. New York: Project for Public Space. pp. 19-21.

who use the space and the size of the tall buildings which form the room of the street. On Polk Street in San Francisco the street trees and light poles also carry out many of the same spatial, visual physical functions at a more intimate scale, giving the street a more local identity **(Fig. 3.1)**.

The curbside zone has been given this label to acknowledge it as a threshold between the vehicular and pedestrian users. The quality of the curbside zone is almost solely dependent on the configuration and properties of the material used to designate this boundary. Wide granite blocks, which can be occupied by a single person, can serve as a place to stop and review the street or for a moment of private reflection. Narrow concrete curbs are purely functional and rarely go beyond being a simple line dividing the roadway and the pavement. Low small stone curbs make a fine distinction between the roadway and the sidewalk/pavement and can encourage a more casual separation, in which pedestrians move between the sidewalk and the roadway freely. While how this boundary is used can depend on cultural factors or the traffic context, the physical properties heavily influence the behaviour of both pedestrians and vehicle drivers. High, utilitarian curbs designed with standardised features generate a lifeless boundary; curbside zones which are treated as important threshold moments, with quality materials and generous forms, contribute to a more distinctive definition. This is not to insist that a raised curb is required, but to suggest that whatever the nature of this boundary, blurred, ordinary or generous, this division between users is a major issue for all streets.

With recent interest in creating sidewalks/pavements that foster and support a wide range of activities and which possess notable qualities, a variety of new sidewalk treatments have been proposed. These elements are aimed at providing space for desired activities, allowing pavements to move beyond the simply functional and to become places which people enjoy using. These elements are typically alterations to the geometry of the sidewalk to provide more room, either for movement or to allow spaces for stationary activity. Curb extensions are designed to facilitate pedestrian movement, by reducing the radius at intersections to shorten the crossing distance and improve visibility. Curb extensions also reduce vehicle speeds by narrowing the roadway and can be used to visually integrate the parking lane into the pavement. Other innovative sidewalk treatments involve extending the pavement areas to accommodate planting, storm water management and even creating small parks or mini plazas.[127] Many of these strategies are aimed at creating pavements that replicate the successful pavements of existing streets or retrofitting existing streets to prioritise people over vehicles. Their main impacts are to provide more space for

[127] http://www.sfbetterstreets.org/design-guidelines/sidewalk-zones op. cit. p. 6.

people and a coherent design which focuses on improving the visual, physical and social experience of those using the sidewalk/pavement.

Another aspect of sidewalks/pavements to be considered are the material properties: surface, curbs and edge treatments. The materials used to pave and detail sidewalks have a direct effect on the users, in a visual, tactile and qualitative way. At a basic level sidewalk surfaces meet the need for level and smooth surfaces to allow all users access and to move freely and safely. The edge and curb treatments need to mark boundaries, provide access and withstand the impacts of use. As with roadways, the common use of asphalt and concrete provides a cost efficient means of meeting these functional requirements. Special paving and details can also be used, making the sidewalk/pavement more distinctive, providing definition and visual enhancement. Decorative paving and high quality detailing, such as brick, patterned paving, stone slabs, granite curb stones or cobblestone edging signal care and quality and provide visual stimulation, differentiating a street and giving it an identity. Paving treatments can also be used to emphasise pedestrian priority, marking paths and crosswalks, requiring vehicular traffic to adapt to pedestrian users. Paving can be used to demarcate and accent specific areas of the sidewalk, supporting uses and activities contributing to the development of a vital public space. Sidewalks also play a role in various other issues such as drainage or beautification. The treatment of the details required by these functions is very important to creating a coherent streetscape.
The various municipal design manuals provide guidance regarding paving, access crosswalks, stormwater management and planting considerations.[128] A careful survey of these provides a wealth of information in relation to these issues, while intended as design guidance, these manuals are very helpful in the analysis of existing streets as well. Also important is the examination of the appropriateness of materials and design strategies to the particular conditions of a street, as maintenance is critical to the success of a design and higher quality materials and workmanship require a commitment to upkeep, as the neglect of distinctive materials is more apparent and has greater impact.[129] Again the scope of this book does not allow for extensive coverage of sidewalk design; however, a sensitivity to these issues is required during the examination of streets and an awareness of these sidewalk/pavement elements will deepen the analysis. An attention to sidewalk/pavement use, organisation, design, materials and details is critical to a comprehensive reading of a street. Reference to current best practice is a powerful tool for evaluating a found condition; both to see what may be missing and elements that are present that may not be included in current practice.

[128] Street Design Manual. op. cit. pp. 116-131, http://www.sfbetterstreets.org/design-guidelines/sidewalk-zones op. cit. pp. 211-215 & 192-203 and http://wx.toronto.ca/inter/plan/streetscape.nsf/paving?OpenView –accessed 10-09-13.

[129] A. Jacobs, op. cit. p. 300.

Street furniture and landscape elements are significant components of the sidewalk/pavement space and have numerous impacts on streets. These impacts can be negative and positive, with ill-considered and careless placement causing visual confusion and physical problems or disciplined design creating a unified aesthetic, functionally improved and more attractive space. As the emphasis on streets as places for people has grown, attention to the design issues regarding street furniture and landscaping has increased. While it is critical to carefully locate all objects in a streetscape design, there is a hierarchy, with certain elements having higher priority. One of the most significant elements of a streetscape are trees. Not all streets have trees, but if there are trees, they have a dramatic effect. The size, the spacing and canopy coverage of trees influence a range of spatial relationships, such as definition, rhythm, directional emphasis and layering. Trees can create edges and enclosure or permeable boundaries and punctuating moments. Trees also have a major impact on light, providing visual stimulation and shade, with the movement of branches and leaves noted as particularly important in making streets desirable.[130] Although difficult to quantify or define precisely, trees also have an emotional and psychological consequences, with people viewing the natural forms and colours as beautiful and pleasant. Trees also contribute to a sense of place, creating the range of effects discussed, but when in relation to a specific place the result is a unique environmental experience. For these and other reasons trees are important components of the streetscape and require attention in the analysis of streets. Of particular relevance for the discussions in this book are the spatial outcomes and the influence of trees on the spatial relationships of a street.

Lighting is also an important element of the streetscape, with both the design character and the performance being significant in the experience of the street. Well-designed lighting creates a sense of security, an inviting atmosphere and adds visual richness. Like trees, the rhythm of lines created by light poles have a spatial impact, both forming layers and leading the eye along the street.[131] It is also important to note that distinctive lighting fixtures which are visually appealing contribute to the individuality of a street, lending identity and being a strong indicator that the street is a valued public space. Lighting designs should also consider the qualities being created, with light levels, directionality and rendering being designed to create inviting environments.[132] This means lighting for pedestrians as well as vehicles, with pedestrian lighting being scaled and shaped for people. This can result in multiple layers of lighting and more complex spaces on streets. The placement of light poles and fixtures is therefore an important design factor and the analysis of existing streets should be carefully considered, especially in regard to the spatial effects on a street.

[130] Ibid. pp. 282-283.

[131] Ibid. pp. 298-299.

[132] Gehl. (2011). op. cit. p. 165.

Seating is very important to the liveability and vitality of a street, being a major attractor of activity and people. Streets which have purpose-built public seating are much more likely to be used by people and this contributes heavily to the attraction of other people.[133] When designed seating is coupled with casual opportunities, such as planters, bollards, steps or architectural features, a street becomes a place where people collect, stop to rest or to watch the activity going on around them. Streets with seating, both public and private, purpose built or opportunistic, are streets where people stay for longer periods.[134] It has been noted that the duration of the activities taking place is a critical factor in creating a sociable public space.[135] Not every street will have seating, but if seating is present, the location and relationship to trees, roadway, street wall and significant destinations are important. Seating in conjunction with shade is more attractive and it is more desirable if it is buffered from vehicular traffic. Most importantly seating should allow the life of the street to be observed, as this is a major attraction of sitting on a street.[136] Combinations of these three characteristics are even more effective at encouraging people to stop and enjoy a street. Examining a street to determine if there are opportunities for sitting is a critical aspect of analysing a street's spatial character, as seating adds territories, boundaries and spatial events to a street, creating a more complex spatial composition.

These three main elements of street furniture and landscaping are followed by a long list of supplemental components which have less impact but remain important. Planters, bollards, street signs, parking meters, bicycle racks, small retail stalls, utility infrastructure and fire hydrants, must also be considered for the effect they have on the streetscape and the use of the street. These elements support the use of the street in numerous ways, providing utility, safety and information to pedestrians, bicyclists and vehicular traffic. Streets must be designed to include these amenities, with the amount, location and type of amenity being determined by the patterns of use on the particular street. In analysing a street, the presence and location of these various elements and the relationship between them and other components should be noted. As with trees, lighting and seating, these streetscape elements can have spatial and functional impacts, creating distinct places on streets or supplementary layers to the dominant zones of the sidewalk and as such their examination is essential. The critical point regarding the analysis of the streetscape is that every object should be considered in relation to all the others and to the whole street. While there is no doubt many streets studied will have haphazard relationships between streetscape elements, it is also the case that many will have good relationships, whether by design or happy accident.

[133] Ibid. pp. 23 & 155-164.

[134] Mehta, op. cit. pp. 129-131.

[135] Gehl. (2011). op. cit. p. 77.

[136] A. Jacobs. p. 27 and Gelh. (2011). p. 159.

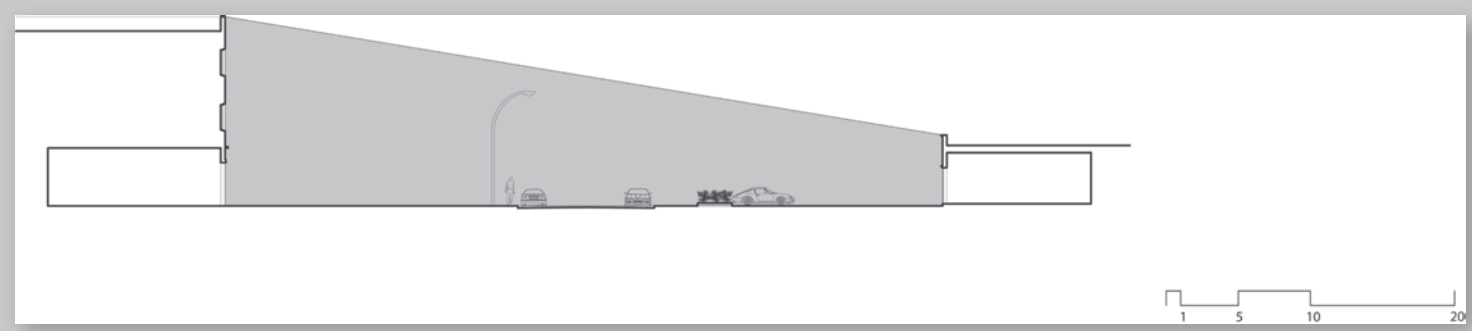

Figure 3.6
Poor Spatial Definition.

The final component of the street is the street wall, which forms the edge of the room of the street. The fundamental aspects of the street wall to consider are: vertical definition, the relationship of the base to the room of the street, the characteristics of the facade above the base and the roofscape created by the top of the street wall. All street walls determine the nature of the street edge, but the variation in the way this happens is the result of how the elements above are configured and combined. How the street edge is formed makes a major contribution to the character of a street. The space of the street, its visual vitality and physical operation are consequently heavily influenced by the qualities of the street wall.

The vertical quality of the street wall in combination with the width of the roadway and sidewalk/pavement form the spatial volume of the street, but the street wall determines the enclosure. The level of enclosure is the result of the height and continuity of the street wall; with high continuous street walls creating greater enclosure than lower street walls or streets whose vertical edge is poorly defined, with large gaps or single-storey buildings placed incoherently within plots. Streets with limited enclosure, created by low or discontinuous vertical edges lack spatial definition, which is critical for a street, as fragmentary or ineffective enclosure leads to weakly formed space, lacking containment and spatial identity[137] **(Fig. 3.6)**. Not all street walls are identical and not all vertical enclosure is formed by a consistent line of facades; many very good streets have buildings recessed from the property line and still others are formed by a series of buildings with spaces between them **(Fig. 3.7)**. The crucial point is the coherence of the space formed by the street wall and the other components of the street. Horizontal spatial definition is not inferior to vertical spatial definition, as Bath Street in Glasgow proves **(Fig. 3.4)**. What is required is legible and consistent spatial definition. This point is made by numerous

[137] Ibid. pp. 277-281 and Ibid. p. 69.

relaxed residential streets, which have single family houses set back from the roadway and spaced irregularly on varied plot sizes[138] (Fig. 3.7). The space of such streets is coherent and contextually suitable. The houses form a legible pattern, the room of the street is defined by the facade, the porches, the lawns and the trees, forming a residential room, appropriate to its use. A similar configuration in a more urban context, with different use patterns and spatial identity would read as incongruous and disconnected from its surroundings.[139] The more common problem is the singular or partial alteration of a prevailing pattern of enclosure, with an individual building that is set back with side yards, or a development inserted into a dense fabric that ignores the scale massing and frontages that surround it. When analysing the space of the street, determining the character of the street wall and the enclosure it creates is a critical aspect of the examination.

The base of the street wall has a variety of important functions; structuring the essential interaction between the interior and the exterior spaces of the street, modulating the edge of the street room, supporting street activity, providing visual stimulation and is central to the identity of the street. How each of these functions is accomplished should be examined, with the specific characteristics identified. This detailed knowledge allows significant relationships between the base of the street wall and the other components of the street to be evaluated.

As argued previously interaction between the interior and the exterior spaces of a street is crucial to vital urban environments. The physical properties of the base of the street wall are obviously key to the way this interaction occurs. Simplistic solutions, such as large glazed surfaces or historically referenced entryways cannot adequately address this function of the base, as they often lack meaningful architectural qualities, resolving into flat surfaces or poorly scaled symbolism. Building rich, effective spatial interaction relies on careful architectural judgement and skill; composition, proportion, materiality, scale, spatial layering and much more are required. Analysing existing street bases to understand how this is accomplished supplies valuable information. The section through Polk Street in San Francisco (Fig. 3.1) illustrates this, as the threshold between the pavement and the interiors are manipulated, creating a rich interplay between the inside and the outside spaces of the street. On one side of the street the entryway is placed under the overhang of the upper building wall in a recess and up a set of stairs, while across the roadway the opposing interior's boundary is a large window, under a projecting bay window, and whose sill allows passersby to view the interior. These seemingly mundane arrangements actually have complex spatial consequences. The exterior presses into the interior, as the recess of the steps pushes through the interior boundary, but the recess and the steps form a place for interior activity to spill out into the space of

[138] A. Jacobs, op. cit. pp. 174-183.

[139] Plater-Zyberk, et al. op. cit. Sect H.

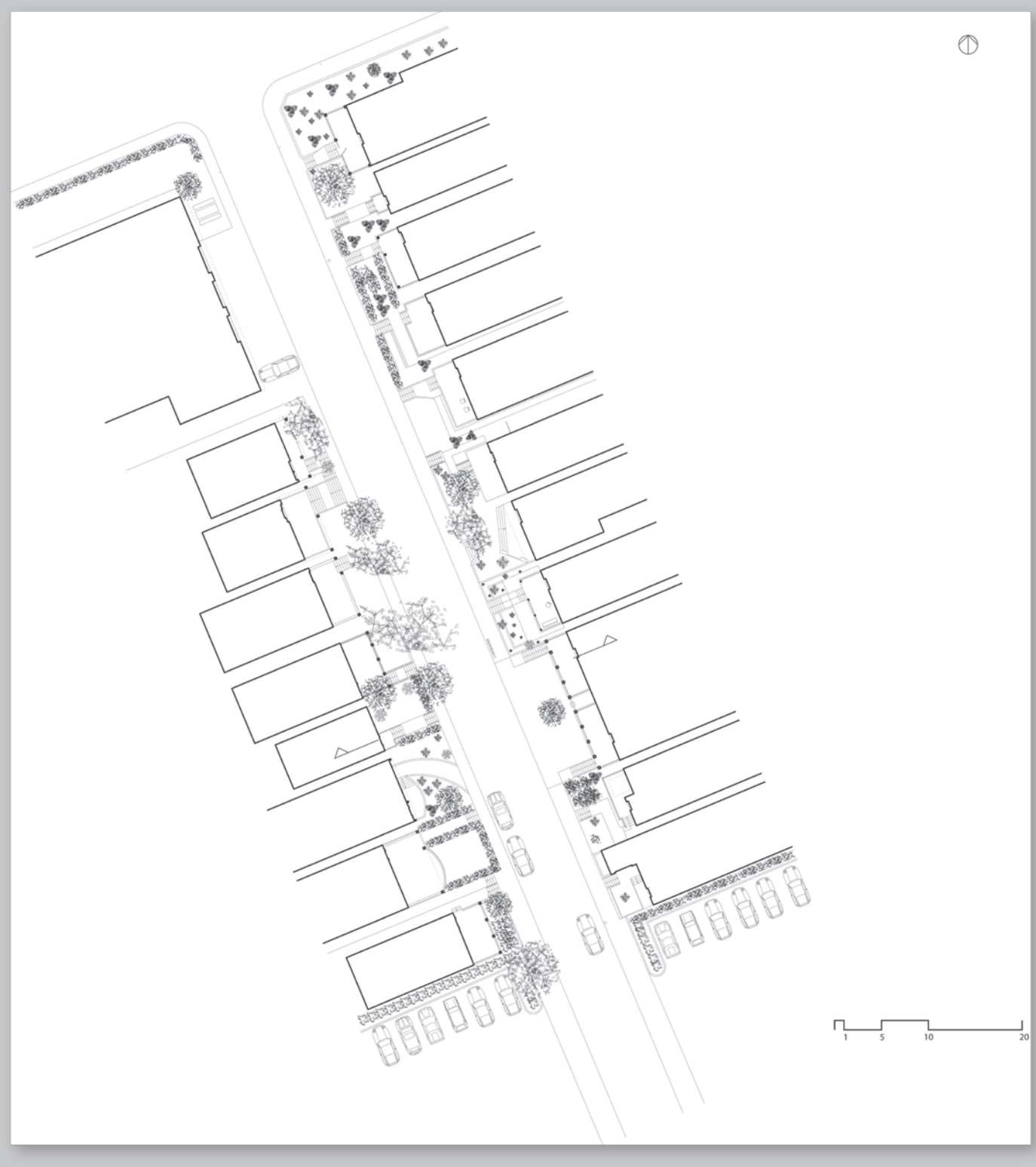

Figure 3.7
Intermittent Street Wall.

the street. The interior overhangs the exterior, with the bay projecting out into the volume of the street, forming a pocket of space for exterior social activity; such as window shopping, talking, sitting or smoking. All of this is accomplished while the necessary distinctions are maintained, with appropriate levels of privacy and control created. This is just one example of the way the careful manipulation of architectural elements (steps, bays, thresholds and windows), allow the base of the street wall to encourage interaction between the interior and exterior so important to vital streets.[140] Existing streets should be analysed to build a catalogue of these strategies and a vocabulary for designing and understanding this crucial aspect of the street wall base and the street as a whole.

Related to the function of structuring the interaction between the interior and the exterior, is the role the base of the street wall plays in modulating the edge of the room of the street. It is the base of the street wall which forms the edge of the exterior habitable space of the street and the manner in which this edge is configured has numerous impacts on the street. Streets which have street wall bases that are articulated, with a varied profile and architectural elements such as steps, window sills, planters, etc., attract social interaction.[141] When this edge is visually and physically permeable it is more stimulating and more pleasurable for those using the street, increasing the activity level and duration of use.[142] The characteristics of the street wall base also contribute to the perceptions of security, as the permeability affects activity levels and the atmosphere of the street. Permeable street fronts attract people and at night project light into the street; these factors increase the sense of security.[143] The base of the street wall is also that part of the street wall which pedestrians have the most direct interaction with, both visually and physically. It is the edge that most relates to the pedestrian's field of vision and also the threshold crossed when entering or leaving the interior spaces of the street.[144] On Bath Street in Glasgow the base of the street wall is a rich interplay of space, circulation, view and light provision **(Fig. 3.4)**. The ground floor is raised such that those inside can observe the street, but from the pavement only light and a sense of interior activity can be perceived. The interior enclosure is also set back from the pavement to allow light to penetrate to the basement level. This light well has a variety of consequences; requiring a set of steps and a small porch for ground-floor access necessitates a railing along the pavement and creates a spatial layer between the facade and the pavement. The architectural sequence which results creates visual interest, spatial complexity, practical provision and experiential richness. Again examining existing streets to understand how this critical portion of the street wall works across a range of situations reveals valuable knowledge for those interested in streets.

As discussed previously the base of the street wall can also support the activity of the street. The physical characteristics of the architecture play a role in how people

[140] Gehl. (2010). op. cit. p. 187.

[141] Mehta, op. cit. pp. 122-124, 128 & 169 and Gehl, et al. op. cit. pp. 30-31.

[142] Mehta, pp. 137-138, Gehl, et al. pp. 37-39 and Jan Gehl. (1986). "Soft Edges" in Residential Streets. *Scandinavian Housing and Planning Research*. 3 (2), p. 92.

[143] Gehl, Kaefer and Reigstad. op. cit. pp. 37-38.

[144] Ibid. pp. 32-34.

perceive and use this portion of the street. Blank walls with little formal variation encourage pedestrians to continue moving and discourage visual interest.[145] When the base of a building has architectural quality, with scale, articulation and spatial variety, it is attractive on numerous levels. This portion of the street is where casual social activity takes place, standing, smoking, window shopping, stopping to talk on the way in or out of the building.[146] Bases with formal, visual and spatial variety attract more of this behaviour.[147] Research has shown that people are attracted by other people, they use spaces with people in them more readily.[148] Consequently a street wall base which supports this crucial social activity potentially attracts more people, increasing the vitality of the street. Analysing a street wall to determine how successfully it supports social interaction is an important part of building a complete picture of a street and existing streets are a valuable resource for this type of investigation.

The base of the street wall is one of the major visual components of the street, particularly in relation to pedestrians, whose field of vision is limited to the ground floor.[149] This is the zone of the facade revealing the interior and with signs and displays aimed at attracting pedestrian attention. This is also where personalization of the street takes place, with businesses using plants, decorations and advertising to distinguish the space they occupy.[150] The architectural resolution of the street wall base can contribute to visual stimulation as well. Openings, doorways, façade articulation, details and materiality help to create a visually attractive street.[151] Visually stimulating streets are more heavily used and recognised as more pleasurable.[152] The base of the street wall is central to the visual character of a street and the identity of a street is heavily influenced by its qualities. This is supported by research which shows that people retain more information about this portion of the street and are able to construct more accurate descriptions of it.[153] The specific combination of colour, form, scale and spatial configuration generates the individuality of a street. Especially as many commercial streets contain a similar set of nationally and internationally branded stores, the physical features of the base help to distinguish the street from others with very similar retail outlets. On urban residential streets the individuality of the base is equally important, specifically in cities with strong typological and stylistic continuity. While no doubt street trees and other streetscape features and spatial character contribute to the identity of a street, it can be argued the base of the street wall has the most significant impact on the identity of the street. The careful assessment of the base of the street wall to determine its visual qualities and properties extends the knowledge of a street and is an important aspect of a street analysis.

Although the facade above the street wall has less direct visual impact on the street, the features and details of this portion of the street wall still influence the perception and

[145] Ibid. pp. 37-39.

[146] Mehta, op. cit. pp. 149-153.

[147] Mehta, p. 128 and Gehl, et al. p. 30.

[148] Whyte, op. cit. p. 19 and Gehl. (2011). op. cit. p. 23.

[149] A. Jacobs, op. cit. p. 279 and Gehl, et al. op. cit. p. 33.

[150] Mehta, op. cit. pp. 138-143.

[151] Mehta, p. 135, A. Jacobs, op. cit. pp. 281-285 and Gehl, et al. op. cit. p. 30.

[152] Mehta, pp. 119-120, 122-125 & 135 and Gehl, et al. pp. 34-35 & 37.

[153] Gehl, et al. p. 34.

experience of the street. The scale and proportion of the facade play a major role in defining the scale of the street space, often signalling the nature of the street: commercial, institutional or residential. The materials and architectural expression generate the backdrop for the life of the street. Even when the majority of the visual information and experience of the street is at ground level, the broad sense of the street is established above the ground floor. A wide commercial street with an active retail environment at its base is set within a 19th-century masonry framework, with large openings in deep articulated architraves, building the overall image of the street in which the specific events of the street take place. The play of light across the surfaces of a facade and the shadows formed by architectural features and details create visual stimulation, contributing to the sensory experience of the street.[154] The relationship between open and closed portions of the facade has an impact on the space of the street. Large opaque street walls, with a regular pattern of medium to large openings, such as a 19th-century perimeter block development, have a contained and balanced street space. The street space created by large expanses of glass, with projections and recesses in the facade and light and reflections activating surfaces, can be dynamic and layered. How much of the facade is open and the arrangement of these openings is an important characteristic of the street wall. The combination and configuration of the facade above the base influences the nature and character of the spatial enclosure of a specific street. There is frequently variation in the facades of individual buildings and the observation of these variations and the examination of the relationships between the different facades can reveal significant information about the space of the street. Analysing the facades along an individual street and across a range of streets offers a wealth of information and forms another aspect of a comprehensive examination of streets.

One final consideration in the analysis of the street wall is the roofscape, the top edge of the street wall that articulates the moment where the street space touches the sky. The nature of this edge and the manner in which it terminates the street wall has significant impact on the spatial perception of the street. While this edge is remote from the activity of the street, this boundary of the street enclosure is an important visual component of the street. Consistent rooflines, either flat or with repetitive forms, create a stable volume and a planar reading of the sky, strengthening a room-like quality of a street. However, the sky is also the outside of the room, the space beyond and the roof edge is the line that marks the end of the street space. When this line is relatively constant, changes are noteworthy, towers, steeples, and domes which push past this line denote significant moments in the city and become landmarks. When this edge is irregular, with buildings of varied height, architecturally articulated roofs and service infrastructure, the space of the street is extended. The

[154] A. Jacobs, op. cit. pp. 283-285.

pushing and pulling of roofscape elements creates a dynamic and changing edge and spatial pockets, layers and openings activate the space of the street, drawing the eye along the edge with this visual activity. The space of the street has a less planar top and instead becomes a more fluctuating volume. The street is an outdoor room and its enclosure is in dialogue with the space outside of this room; the next volume along, the room it joins at an intersection and the wider space it sits within and the visual threshold of the roof edge is one of the elements that establishes the relationship to this wider space. Is the street volume contained, with strong definition, or does it push up into the sky with a variable envelope? Of course there is an infinite range of possibilities between these two conditions. The strength of this visual effect is influenced by the distance of the top edge of the street wall from the ground. A low consistent edge emphasises the sky as the top surface of the street space, higher roof lines reduce this effect, with the sky reading as a line of light. When an irregular roof line is close to the ground the space of the assembled objects is accentuated, when the edge is pushed high above the street the objects are flattened into silhouettes, reducing the depth of this edge. These variations in the roof edge are the result of numerous factors, from economic forces or technical limitations to aesthetic considerations or regulatory guidelines. Whatever the nature of this edge, from consistent deep cornices to the up and down of individual towers, this edge draws the upper perimeter of the street and is a key visual characteristic of all streets.

Another critical concept in the discussion of streets is scale. The scale of a street is to a large degree the consequence of the relationships established by the components discussed above. How these elements come together to form the street and most particularly the size of the space they form determines the perceived scale of the street. Without attempting an exhaustive discussion of this complex topic, it is necessary to have an operable definition of human scale. For the purposes of this discussion human scale is defined as objects and space that are scaled in relation to the human body and perceptual faculties. A human scaled street has physical features and proportions that correspond to the human body and perception.[155] The human scale street has a visual and experiential order that can be related to the human body as a unit of measure; doorways and window openings are close to the size of the human body and building heights allow visual and verbal contact. The street wall is divided both horizontally and vertically, allowing visual and physical engagement.[156] Horizontal divisions include multiple entryways that encourage interaction and choice, window openings that provide visual stimulation and architectural divisions that minimise monotonous expanses of blank wall. Vertical layers are proportioned to the human body, with ground floors that fit into the human cone of vision, floor heights that relate to the enclosure of the body and

[155] Ewing, et al. op. cit. p. 226.

[156] Gehl, et al., op. cit. pp. 34-35.

an articulated surface that generates visual interest.[157] The human scaled street provides enclosure that is proportioned to the human body as spaces that are too wide are perceived as uncomfortable and alienating, while those that are too tall can be oppressive.[158] For example Jacobs states that most great streets have a height to width ratio of 1:1.1 to 1:1.25, with a ratio of 1:4 being the maximum for clear definition and enclosure.[159] While Gehl argues that too much width prevents the visual contact necessary for intimate emotional experience.[160] Human scaled streets have a spatial definition that contains and is coherent, that is not overwhelming or too expansive. Human scale is also expressed in the material qualities and details of the street wall and streetscape, with texture and craftsmanship evidencing human skill and consideration.[161]

The basic components of the street have been examined to provide the terms and context for the analysis of specific streets and the proposed methodology. Each of these elements makes an important contribution to the physical character of the street and consequently to the perception and experience of the street. The careful assessment of each of these components and the consideration of the relationships between them is essential to developing a thorough understanding of a street. While not every street contains all these components, e.g. roadway, sidewalks/pavements, street furniture, etc., and some components examined have less relevance for certain streets, the framework holds for most streets. All streets have a shared space for movement, vertical elements, which have a base, middle and a top edge and these things have spatial consequence. Examining the specific combination of these features reveals critical information about an individual street which can be compared to other combinations to construct broader understandings about streets in general.

This chapter has been concerned with the street and its place in contemporary urban thinking. Through the summary of historic ideas, key debates and current consensus, the significance of the street has been confirmed. A range of resources, from government guidelines to academic research, have been reviewed to establish a broad picture of current concerns and approaches to the topic of streets and their design. This has culminated in the outlining of a terminology to frame the examination of streets. The analytic method being proposed is predicated on the use of scaled plan and section drawings, with a particular emphasis on the diagrammatic evaluation of sectional drawings. The core argument is that the physical elements and their configuration have a fundamental impact on the experience of a street. Many of these physical attributes can be analysed through observation, photography, diagrams, sketches and perspective drawings, including the spatial characteristics. However, disciplined sectional analysis provides precision and a level of detail that is noteworthy. The knowledge revealed through the combination of accurate horizontal and vertical information has significant

[157] A. Jacobs, op. cit. pp. 283-285 and Gehl, et al. p. 34.

[158] Gehl. (2010). op. cit. p. 41 and Gehl. (2011). op. cit. p. 69.

[159] A. Jacobs, op. cit. pp. 279-280.

[160] Gehl. (2010). op. cit. p. 76 and Gehl, et al., op. cit. pp. 30-35.

[161] Gehl, et al. pp. 32-35.

value in evaluating spatial configurations. The focus on very specific information in analytic drawings allows critical relationships to be explored. Fundamental issues such as: scale, proportion, layering, overlapping, penetration, expansion, compression, pattern, composition, repetition and much more can be examined in a rigorous fashion. The use of scaled drawings also allows comparative analysis, through which similarities and differences can be assessed and unique characteristics highlighted. The examples included allow these comparisons to take place across a range of street types from cities around the world. The results of this approach have value for designers and urbanists, contributing to a more comprehensive understanding of streets and will help to develop strategies and techniques for integrating the interior spaces of the street into the exterior room of the street.

FOOD & BUSINESS

A BIRD IN THE HAND IS WORTH TWO IN THE BUSH

2 :: FOOD & BUSINESS

A BIRD IN THE HAND IS WORTH TWO IN THE BUSH

The following is sourced from *Food City* by CJ Lim.

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'There is a serious snag from the foreign visitor's point of view. This is, that you practically don't find good English cooking outside a private house. If you want say, a good, rich slice of Yorkshire pudding you are more likely to get it in the poorest English home than in a restaurant, which is where the visitor necessarily eats most of his meals.'

– George Orwell, 'In Defence of English Cooking', 1945

Power within the food industry is concentrated in the hands of a few. The large multinational corporations, known as 'Big Food', have come to dominate the global trade of food and beverages; in 2005, only 100 retailers controlled 40% of the total global grocery market.[1] Processed food accounts for three-quarters of global food sales and Big Food control a third of this processed market.[2] These monopolies extend beyond the direct trade of food itself; in 2008, the top ten agrochemical corporations were responsible for 90% of the global sale of pesticides and only ten grain corporations controlled 67% of the US$22 billion seed market.[3] On average, people spend 20% of their income on food and the global food market is the domain of a few large companies, gaining increasing control over people's everyday diets and expenses.[4] The influence of these corporations is cited by some as the reason for a visible 'nutrition transition' from simple, traditional, locally sourced meals to highly processed purchased foods.[5]

Often overlooked when analysing the larger systemic inequalities of the global food trade, are the gender inequities inherent in the food system. Women account for 43% of the agricultural workforce, however they are often disenfranchised from the system even at a local level. Despite this, the potential of women is huge and the UN Food and Agriculture Organization (FAO) argues that 'if women had the same access to productive resources as men, they could increase yields on their farms by 20–30%. This could raise total agricultural output in developing countries by 2.5–4%, which could in turn reduce the number of hungry people in the world by 12–17%.'[6]

Around the world, the trade of food has in many cases defined and acted as a catalyst for the traditional roles men and women play in society. In many lower-income countries, women play a larger role than men in the agricultural sector, typically in subsistence production.[7] Trade liberalization, leading to an increase in the production of cash crops, affects men and women differently as a result. Men, predominantly engaged in the farming of cash crops, have seen an increase in income and women, predominantly producing food for local markets and subsistence, have seen a decrease in profits.[8] In India, wages from cultivation are markedly different between the genders; women average 20% of men's wages.[9]

[1, 3] ETC Group, 'Who owns nature? Corporate power and the final frontier in the commodification of life', ETC Group, Winnipeg, MB, 2008

[2] R Patel, 'Stuffed and starved: Markets, power and the hidden battle for the world food system', Portobello Books, London, 2007

[4] A Regmi & M Gehlhar, 'Processed food trade pressured by evolving global supply chains', US Department of Agriculture, Amber Waves Magazine, 2005

[5] B Popkin, 'Part II: What is unique about the experience in lower- and middle-income less-industrialised countries compared with the very-high income countries? The shift in the stages of the nutrition transition differ from past experiences!', Public Health Nutrition Vol. 5, 2005, pp. 205-214

[6, 8] 'The State of Food and Agriculture 2010-2011: Women in agriculture—Closing the gender gap for development', Food and Agriculture Organization of the United Nations, Rome, 2011, p. vi

[7, 9] R Nugent, 'The Impact of Urban Agriculture on the Household and Local Economies', pp. 79-80 [http://wentfishing.net/farmlit/Theme3.pdf], retrieved 16 July 2013

Figure 1 a-d
From top left clockwise: Cairo, Ipoh, Mumbai and Seoul. Low investment food practice can offer women a stable source of income.

Movements opposing the global monopolies of Big Food are gaining strength. To name a few, the ideals of Via Campesina, the Slow Food movement and Occupy actively protest and promote alternative practices. Pertinent to the study of urban space, the Occupy movement saw the invasion of public, urban spaces globally by a movement opposed to the control and distribution of wealth and resources and the global social and economic systems in the world today. The actions of Occupy and similar movements, such as Tahrir Square in Cairo and the Puerta del Sol in Madrid, show how the city has emerged as a portal through which global trends can be analysed; not purely a reflection of the industry of a single place and its immediate surroundings. Further, these urban spaces are emerging as sites of transformation out of the monopoly of the food industry. As sociologist Saskia Sassen argues, 'the city is a space where the powerless can make history.'[10]

TRANSITION TOWN TOTNES

In the British town of Totnes a uniquely powerful movement is taking place. Relative to similar sites in the UK, the town has an independent character. It has a small population of just below 8,000 residents and has become renowned as a place where people can live a 'New Age' bohemian lifestyle.[11] Labelled by Time magazine as the capital of 'New Age chic', the residents of Totnes have actively campaigned against the presence of large corporations in their local food markets.

Totnes has joined the Transition Towns (TT) movement; a community-based response to the pressures of globalization and globally declining fuel stocks. A key area of the movement is creation of a sustainable food industry for their communities. The TT community believe in 'food feet, not food miles!'; that their food should be sourced from their immediate local environment. The town has even introduced a local currency! Accepted by over 70 businesses, the aims of the Totnes pound are to preserve the circulation of income within the community and its local industry.[12]

In Totnes, the greengrocers deliver boxes of produce to the cafés, the bakeries prepare cakes for the delis; everyone knows each other and is interested in each other's business plans. Darren Thorne and Lucy Hornsey, from Seeds2Bakery agreed, 'It's bringing people into town, but what's best is that all the retailers here are working together instead of trying to compete with each other'.[13]

Unsurprisingly, in 2012, faced with the prospect of a Costa Coffee opening in the town, Totnes declared war on the global food giant. The story of the anti-Costa sentiment in Totnes is a pertinent case study of how the notion of localism, a phrase used by the town's politicians, is tried and challenged.

[10] S Sassen, 'The Global Street', The Huffington Post Blog, 2011 [http://www.huffingtonpost.com/saskia-sassen/the-global-street_b_989880.html], retrieved 15 March 2011

[11] J Hodgson & R Hopkins, 'Transition in Action: Totnes and District 2030, an Energy Descent Action Plan, Transition Town Totnes', 1st Edition, 2010

[12] R Sharp, 'They don't just shop local in Totnes- they have their own currency', The Independent, 2008 [http://www.independent.co.uk/news/uk/this-britain/they-dont-just-shop-local-in-totnes-they-have-their-very-own-currency-818586.html], retrieved 18 August 2013

[13] R Wearn, 'Totnes: The way forward for the UK's ailing High Streets?', BBC News, 2013 [http://www.bbc.co.uk/news/business-209471620], retrieved 18 August 2013

The contested site is in a prime location and transport hub where most tourists first arrive in the town, and previously belonged to a local wholefood business. Frances Northrop, the manager of Transition Town Totnes, has voiced the concern: 'they'll come straight in, and they'll see a Costa Coffee. And if people are in a new place, a lot of people think: "I'm not going to try the unknown – I'm going to go somewhere that I recognise".'[14] The Chief Executive of Whitbread, the conglomerate that oversees the coffee outlet in the UK, has also spoken about the extensive reach of the coffee shop. 'People really don't want to walk very far for a coffee,' he has said. 'We can have them a couple of hundred yards apart on a really busy high street, then another at a retail park and another at the station.'[15]

The town has responded to the perceived threat of an impending Costa Coffee by using the communal urban space to celebrate and communicate the independent character of Totnes. Residents held a two week Independent Coffee Festival, the culmination of which was a barista competition on World Fairtrade Day. Baristas from all of the unique coffee shops in Totnes were offered prizes for the quality and credentials of their fairtrade coffee, as well as in the caliber of their 'coffee art' – the ability to draw images in the froth.

The 'No To Costa' campaign was based on the legal obligation of councils to consider a planning application's effect on the 'vibrancy and vitality' of the area; however the planning committee would go on to approve Costa's plans by 17 votes to 6. Of the decision panel, only four of the councillors directly represent Totnes. There has been strong local opposition to the application at local planning meetings; at one, 100 people were ordered to leave a single planning hearing.[16]

The Totnes community are now mobilizing contingency plans for how to respond if, or when, the Costa actually opens in town. Residents are planning various acts of civil disobedience – such as regularly visiting Costa, ordering tap water and drinking it painfully slowly; another proposal is to constantly paste anti-Costa posters on the windows. The activities of the residents of Totnes are evidence of a movement by local communities opposed to a pervasive multinational capitalism encroaching on their food markets. Transition towns are emerging throughout the world, with 380 initiatives listed in the UK alone.[17]

THE GOLDEN EXPORT

Other cities have embraced and capitalized on the global market. Butter exported from Ireland built the city of Cork into a powerful economy that dominated world

[14, 15, 16] J Harris, 'Totnes: the town that declared war on global capitalism', The Guardian, 2012 [http://www.guardian.co.uk/business/2012/aug/15/totnes-war-global-capitalism], retrieved 18 August 2013

[17] 'Transition Initiatives Directory' [http://www.transitionnetwork.org/initiatives], retrieved 18 August 2013

dairy markets during the late eighteenth century. Cork was the great emporium of the butter trade, and its rural economy was largely orientated toward dairy product production. Land became exclusively devoted to maintaining dairy herds as market capacity grew during the Industrial Revolution and beef become a byproduct of milk production in the region.

The geographical location of Cork was vital to its expansion. Located at the head of one of the finest natural harbours in the world, the city became a crossroads of the food trade between northern Europe, the Americas and further afield. The role of the butter merchants was not only central to its commercial development, but also to the civic, social, religious, educational and artistic life of the city.

Trade in the city peaked in the eighteenth century. The butter trade was generating considerable wealth in the city and would shape its use to present day. The centre of the city had become a zone of industry accommodating the production of butter, slaughter houses and tanneries. To avoid the disease and stench of the centre, the wealthier residents moved to the waterside suburbs to live. These distinctions still persist, and nowadays people still prefer to live outside the commercial centre.[18]

To control demand at its peak, 'The Cork Butter Exchange' was established by a voluntary organization to oversee the public inspection, branding and making of butter for export from the city in 1769.[19] Daily price quotations were monitored as closely as the stock exchange is today in a large building located in the centre of the city. Specialist routes to facilitate the butter trade were built through Cork. Dairy farmers would deliver butter in simple wooden containers, colloquially known as 'firkins', on horse-drawn carts to be unloaded at the Butter Exchange, along main routes that became known as 'butter roads'.[20]

The rich grassland in the countryside around Cork city provided an appropriate landscape for grazing cattle. Dairy cows generally fed with high-quality forage, produce more milk with less supplemental concentration than cows generate on lower-quality forage. Natural grasslands provide grazing animals with a richer and more diverse diet than pastures used for more intensive farming.

Cork is now the second largest city in Ireland. The butter market has since declined. This is largely attributed to the Exchange's reluctance to modernize in the face of foreign competition. Amongst other reasons, the introduction of margarine, labelled a 'rogueish compound' by the Exchange, offered a tasty, cheaper butter supplement.[21] The landscape of Cork city continues to be influenced by its predominant trade. Fittingly, for a city which was built on the strength of its ability to capitalize on the

[18] 'Cork Travel Guide' [http://www.insightguides.com/destinations/Europe/Ireland/the-southwest/county-cork/cork-city/overview?leadimage.position=3], retrieved 18 August 2013

[19] 'History of Butter', The National Dairy Council [http://www.ndc.ie/butter/history-butter.asp], retrieved 18 August 2013

[20, 21] C Ryne, 'At the Sign of the Cow: The Cork Butter Market: 1770-1924', The Collins Press, Cork, 1998, p. 54

global market, Cork now is a hub for pharmaceuticals and IT technology with an established global reach.

KOBE BEEF

'Kobe beef' is considered by many to be the best type of beef available in the world. As with Cork's 'golden export', Kobe beef is a highly specialized product. The acclaimed meat refers to cuts of beef from the black Tajima-ushi breed of Wagyu cattle, raised according to strict tradition exclusively in Hyogo Prefecture, Japan.[22] Gourmet chefs worldwide prize Kobe beef for its full flavour, tenderness and the high amount of intramuscular fat, called 'marbling'.

As beef consumption increased in Japanese society, farmers began seeking ways to distinguish their product in the market. Kobe beef farmers hire workers to massage the backs of their cows, claiming that the soothing action relaxes the animals and tenderizes the meat.[23] Some cultures practice forcefeeding of cattle which increases the weight of the animal, and they believe, the quality of the meat. Kobe beef farmers believe these practices stress the animals, encouraging them to drink beer to increase their appetites for the high quality feedstock offered instead.

Kobe beef is prohibitively expensive and importation from Japan is virtually impossible. The one essential rule concerning Kobe beef is that the Wagyu cattle must be slaughtered in the Kobe region of the country. However, due to a severe shortage of available land, Japanese beef growers have recently allowed a select group of international cattlemen to raise the Wagyu cattle in their native countries.[24] The terms of the license, nevertheless, require the cattle to be transported back to Kobe in Japan for final processing.[25]

The culture of the quintessential American burger is discussed in more detail in the chapter of *Food City* on food and culture in the city. However for a time, Burger King offered a special limited edition Kobe beef burger on its menu. The home of the Whopper charged £85 for the delicacy,[26] the proceeds of which went to charity. Only 100 of the burgers were offered, and food critics descended on the fast food chain to critique the reinvention of the everyday burger. The Kobe beef burger was embellished with an array of luxuries; garnished with blue cheese, foie grois, balsamic vinegar and sandwiched between buns made of white truffle flower dusted with Iranian saffron. Instead of the traditional fries, the Kobe beef Whopper was accompanied by a side of banana shallots fried in a tempura batter made using Cristal champagne.

[22, 24, 25] L Augustin-Jean, H Ilbert & N Saavedra-Rivano, 'From Products of Origin to Geographical Indication in Japan: Perspectives on the Construction of Quality for the Emblematic Productions of Kobe and Matsusaka Beef', 'Geographical Indications and International Agricultural Trade: The Challenge for Asia', Palgrave Macmillan, Basingstoke, 2012, pp. 139-163.

[23] JW Longworth, 'Raising Wagyu Cattle in Japan' [http://www.luciesfarm.com/artman/publish/article_39.php], retrieved 20 August 2013

[26] 'Haute Cuisine Rapide', The Economist, 2008

CORNISH PASTY

In February 2011, the 'Cornish pasty' won official preservation under the EU protected food names scheme.[27] The new prestige elevates the humble pasty's status to a culinary pedestal that sits alongside the likes of Camembert cheese, Parma ham, Champagne and Balsamic Vinegar. A far cry from the nineteenth century tin-miners who originally cooked up the 'pasty' as a handy form of packed lunch.

The Cornish Pasty Association, formed in 2002 by 50 pasty makers based in Cornwall, exists to protect the quality and the reputation of the popular snack. They advise that a genuine Cornish pasty should be 'D' shaped, and 'crimped at the side', with a filling of 'chunky' beef (making up at least 12.5% of the pasty), swede, potato, onion and a light seasoning with no artificial ingredients.[28] It is also suggested that the pasty is cooked raw in the oven. As for the pastry itself, they demand that the casing must be 'golden in colour, savory, glazed with milk or egg, and robust enough to retain its shape throughout the cooking and cooling process without splitting or cracking'.[29]

The Cornish pasty joins 47 other British products in receiving protected status.[30] The ruling from the European Commission means that only pasties made in Cornwall, following the traditional recipe, can use the name. However, authentic Cornish pasties can be baked elsewhere in the country so long as they are at least prepared in the West Country. Protected Geographical Status is a legal framework defined in EU law to protect the names of regional foods. The UK's other 47 protected products include Cornish clotted cream, Melton Mowbray pork pies, Arbroath smokies, Kentish ale, Whistable oysters, Gloucestershire cider, West Country farmhouse Cheddar cheese, Welsh beef, Jersey Royal potatoes and Yorkshire forced rhubarb.[31] These commodities all have a close connection to a specific part of the country and are closely bound into the lives and identities of the communities that produce them. As highlighted by David Roda of the Cornish Pasty Association, 'Thousands of people in Cornwall are involved in the pasty industry, from farmers to producers, and it's important that the product's quality is protected for future generations.'[32]

The food protection legislation came into force in 1992, with the purpose of protecting the reputation of the many regional foods and delicacies that exist throughout the country.[33] By promoting rural and agricultural activity, the law helps producers to obtain a premium price for their authentic food products. The enforced status eliminates any unfair competition and prevents consumers being misled by non-genuine products that may be of inferior quality or of a different flavour. Intellectual property is now one of the most valuable assets in commercial transaction. Companies are forging alliances with each other in order to heighten the value of their intellectual property assets and to

[27] 'Protected food names: guidance for producers' [http://www.degra.gov.uk/food-farm/food/protected-names], retrieved 18 June 2010

[28, 29, 32] 'Cornish Pasty—Historical Information' [http://www.cornishpastyassociation.co.uk/pasties.html], retrieved 18 June 2010

[30] K Salter, 'British Food: Protect and Serve', The Guardian, 2012 [http://www.guardian.co.uk/lifeandstyle/wordofmouth/2012/aug/08/british-food-protect-and-serve], retrieved 22 August 2013

[31, 33] Agriculture and Rural Development, European Commission [http://ec.europa.eu/agriculture/quality/door/list.html?locale=en&filter:country=GB&recordSelection=all], retrieved 18 June 2010

obtain mutually beneficial competitive advantages through cross licensing. As in the case of the Champagne region, protecting or controlling a food trade can be profitable. Successful strategies often specialize in a particular segment of the market or method of trading or in developing a holistic system of production, distribution and marketing to prevent external syphoning of profits.

SEASONED MONOPOLY

The Oostindisch Huis, located upon a picturesque canal in the city of Amsterdam, was once the headquarters of the powerful 'Dutch East India Company'. Founded in 1602, it was the first multinational company to hand out shares, thanks to a lucrative food business.[34] For decades the company dominated global trade, transporting spices using large ships on many expeditions to the East to bring back spices, herbs and other riches that fuelled Amsterdam's 'Golden Age'. Ships sailed from the city to the Baltic Sea, North America and Africa, as well as present-day Indonesia, India, Sri Lanka and Brazil, and formed the basis of a worldwide trading network.

The demand for spices in Europe continued to increase throughout the sixteenth and early seventeenth centuries. At the start of the 1600s, the Portuguese were the only Europeans who imported spices from the Far East.[35] Before long, the Dutch expelled the Portuguese from the Spice Islands and became the exclusive supplier of spices to Europe. The spice business allowed the city of Amsterdam to prosper. The city became one of the most important ports in the world during the 'Dutch Golden Age', as a result of its innovative business developments in the food trade.

Similarly in London, the rapid expansion of the East India Company in the seventeenth century saw the city embracing ships bringing spices from Java and Sumatra, chests of tea, bales of silk and crates of porcelain from Canton, now modern day Guangzhou.[36] These great ships, known as the 'East Indiamen', were too large for the Pool of London, so they had their aromatic cargoes unloaded onto large flat bottom barges down the River Thames and brought to the Company's warehouses at East India Docks.

SHAD THAMES

At the beginning of the twentieth century, when London was still the world's most prolific port, the Docklands in the East End employed thousands of people, who sent and received goods from all over the world. Today the area has been redeveloped into high-rise apartment blocks, banks and offices and only remnants of the aesthetic of the buildings are reminiscent of the area's industrial past.[37]

[34] M Dunford, 'The Rough Guide to The Netherlands', Rough Guides, London, 2010, p. 69

[35] G Ames, 'The Globe Encompassed: The Age of European Discovery, 1500-1700', Pearson, London, 2007, pp. 102-103

[36] S Mazumdar, 'Sugar and Society in China: Peasants, Technology and the World Market', Harvard University Press, Cambridge, MA, 1998, pp. 104-106

[37] E Walford, 'Bermondsey: Tooley Street', 'Old and New London: Volume 6', 1878, pp. 100-117 [http://www.british-history.ac.uk/report.aspx?compid=45269], retrieved 2 August 2013

The converted warehouses retain their original characteristic features of brickwork, winches and large lettered signage. Most of the signs name the commodities which were originally stored in them. 'Vanilla & Sesame Court', 'Cayenne Court', 'Wheat Wharf', 'Tea Trade Wharf' and further buildings named after cinnamon, cardamom, fennel, caraway, ginger, cumin, tamarind, clove, anise and coriander, adorn the weathered storage buildings, bringing an air of fantasy to the cold industrial environment. A century of spice storage has infused the brickwork of the buildings with pungent odours. Residents of the now converted flats report that they can still detect the scent of spices from the distant countries after which their buildings were named.

Figure 2
At Shad Thames in London, a century of spice storage has infused the brickwork of the buildings with pungent odors.

DEINDUSTRIALIZATION

There are 374 shrinking cities in the world.[38] The countries with the most are the United States with 59, followed by China, Germany, Brazil and Italy. Detroit, the largest city in the US state of Michigan is one of these shrinking cities and currently has 40 square miles of vacant land, as much area as the entire city of San Francisco. Recent US Census results have published that the population of Detroit has decreased by 25% in the past decade, and a further 60% since 1950.[39] In 2010, the city had a population of 713,777 and was ranked as the eighteenth most populous city in the United States.[40] At its peak in 1950, the city was the fifth largest in the US, but it has since seen a major reduction in its population.[41] Once referred to as the 'Paris of the West' for its architecture and elegant boulevards, many of the city's thriving neighbourhoods have become barren wastelands. The slow departure of people from a once prosperous city is the result of a declining auto industry.

After decades of decline, plans are taking root in Detroit to save the vitality of the city by reducing its size. Fields and farmland are slowly replacing entire neighbourhoods of gutted, burned-out houses that will return parts of the city to prairie land, more reminiscent of its nineteenth century appearance.

In 2011, the city's mayor, Dave Bing, pledged to knock down 10,000 structures in his first term as part of a radical plan to reconfigure the city of Detroit to reflect its shrinking population.[42] Bing recognized opportunities to save resources and instead focused development efforts in healthier areas of the city. However, even this ambitious goal has been criticized for only taking care of approximately one-ninth of the city's 90,000 abandoned properties.[43] In support of the new directive, the Bank of America has also pledged to demolish a further 100 abandoned Detroit homes currently in its possession.[44] The costs are estimated by the bank to be in the region of approximately $1 million,[45] with plans to donate the newly gained land plots to the city for green space, urban farming or redevelopment. Until recently, the city did not have adequate funds to tackle its growing list of houses slated for demolition. But $20 million in government funding has helped to kick-start the effort.[46]

Demolition, particularly of historic buildings, is a sensitive issue in Detroit, often leading to battles between developers, residents, city officials and preservationists. Abandoned expanses of land and structure in the city have become a playground for criminals, with many residents pleading with the city to tear down decaying structures that are attracting crime and repelling homebuyers.

[38] 'Recovery Park' [http://recoverypark.org/faq], retrieved 25 August 2011

[39, 42, 43, 45] M Strachan, 'Bank of America Will Help Demolish Detroit's Abandoned Homes', The Huffington Post, 2011 [http://www.huffingtonpost.com/2011/03/23/bank-of-america-detroit-abandoned-homes_n_ 839817.html], retrieved 26 August 2011

[40] 'State & Country QuickFacts: Detroit City, Michigan', United States Census Bureau, U.S. Department of Commerce [http://quickfacts.census.gov/qfd/states/26/2622000.html], retrieved 26 August 2011

[41] J Wisely & T Spangler, 'Motor City Population Declines 25%' [http://usatoday30.usatoday.com/news/nation/census/2011-03-22-michigan-census_N.htm], retrieved 26 August 2011

[44] C Morran, 'Bank of America Donating 10 Homes to Detroit to Attract Cops to Live in the City', Consumerist, 2011 [http://consumerist.com/2011/03/bank-of-america-donating-10-homes-to-detroit-to-attract-cops-to-live-in-the-city.html], retrieved 26 August 2011

[46] AP Kellogg, 'Detroit Shrinks Itself, Historic Homes and All', The Wall Street Journal, 2010 [http://online.wsj.com/article/SB10001424052748703950804575242433435338728.html], retrieved 26 August 2011

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No city has experienced the magnitude of abandonment that the city of Detroit has endured. Preservation is important but in many Detroit neighbourhoods, remaining buildings are too dilapidated or unsafe for rehabilitation. Detroit is at a crossroads to which no city of its size has ever come before. This presents both apprehension and a huge opportunity for the city to adopt a new agenda for rebirth. A re-sizing programme should remain committed to targeting growth opportunities.

Unused land throughout the city is being put to a new productive use. There is a growing urban agriculture movement that community groups are using to reclaim parts of the abandoned city. The practice is creating greater access to fresh produce for the population and is also mobilizing people to work on their own behalf.

With large amounts of new vacant land, Detroit has a realistic potential to become a self-sustaining green city. It is perhaps this green model which can sustain, refocus and revitalize the glory days of Detroit. Urban farms increase food security by growing food locally. They give under-served urban neighbourhoods access to fresh foods, whilst strengthening local economies by keeping dollars circulating within the community. Urban farming can create local jobs and grow community.

Yet to make their business work, urban farmers must contend with two challenges that rural farmers typically do not encounter: access to land for growing produce, and the ability to scale operations large enough to be profitable. Urban land suitable for farming is expensive and, even when land is available it comes in smaller sized patches rather than in large pieces of land. Urban land is at such a premium that farmers must be innovative to grow more densely and make their business viable.

Re-localizing even part of the food system is about much more than providing food. New strategies must recognize the value of creating more jobs, providing more fresh fruits and vegetables to underserved communities and reconnecting people more innovatively with their food. Cities may not need urban farms to survive, but given the social, environmental and economic returns that the urban food system can deliver, we should find ways of developing them.

The social and environmental benefits of urban agriculture are easy to understand. However, as compelling as they are, these benefits are not enough to motivate policy makers to help urban agriculture succeed on any kind of scale. The economic benefits that many proponents have long acknowledged in theory have yet to be demonstrated. The concept still needs to be proven. Communities need a farming model that can be learned and practiced across all economic classes and geographical boundaries. Cities need an engaged rather than an escapist agricultural

system that allows farmers to return to the urban environment and rebuild local food systems that are human in scale.

Figure 3
De-industrialization has presented Detroit with the potential to become a self-sustaining food city.

LOCAL LEGISLATION

In Michigan, Governor Jennifer Granholm signed two cottage food licensing laws in 2011. The new legislation, aimed at local farmers, allows anyone who makes less than US$15,000 annually to prepare items in a home kitchen and sell them at roadside stands and farmers' markets without having to abide by excessive state regulations.[47]

The bill makes small-scale homemade food operations exempt from the licensing and inspection provisions of food safety laws. This means that a 'commercial kitchen' is no longer required for people who want to sell their own cookies, jams, and so on. However, labels must be applied to the packaging containing the same information as on most commercially available food products, such as ingredients, allergy information and weight. These labels must also carry a disclaimer, stating that the product was made in a home kitchen and has not been licensed by the Michigan Department of Agriculture.[48]

[47, 48] T Perkins, 'Gov. Jennifer Granholm signs bill into law allowing residents to make food at home, sell it', AnnArbor.com, 2010 [http://www.annarbor.com/news/state-eases-cottage-food-industry-regulations-1/], retrieved 12 August 2011

THE NEW DOT COM

In general, sustainable agriculture has shunned technology and treated profitability as an afterthought, which gives it limited appeal to commercial investors. To infuse the sustainable agriculture industry with much-needed capital and authority it is crucial that it can be demonstrated to be profitable. Waves of innovators are developing profitable models for sustainable alternatives to industrial agriculture. These new entrepreneurs are developing breakthrough technologies, approaches and business ideas that are helping to create a post-industrial food system that is less resource intensive, more locally based, and easier to monitor and control.

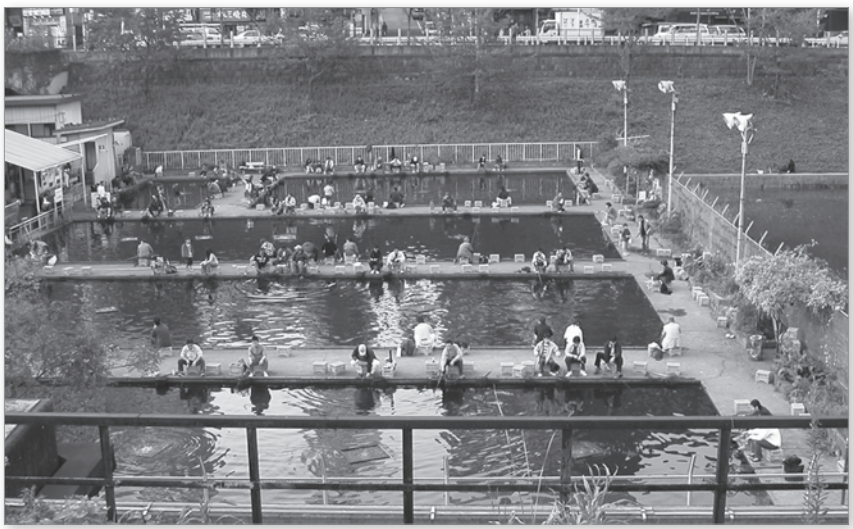

Figure 4 a-b
Constructed environments of a theatrical and awe-inspiring scale generated in the pursuit of transporting urbanites to foreign places. In Las Vegas (top), a restaurant absorbs unsuspecting punters into a chamber constructed to recreate the resplendent Piazza San Marco in Venice, complete with a perfect painted sky and idyllic cotton wool clouds. In Tokyo (bottom), an altogether utilitarian approach sees the manufacture of an urban fishery - the ideals of the rural transplanted into the city.

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'SPIN Farming' (SF) is a franchise-ready sustainable farming system that can be deployed quickly on a large scale. SF is a non-technical, easy-to-learn and inexpensive-to-implement vegetable farming system that makes it possible to earn significant income from land bases that are under an acre (4,000m2) in size.[49] The system is open to people who are new to farming, or want to farm in a new way. 'SPIN', which stands for 'Small Plot INtensive', is a relay system of agriculture that downsizes traditional organic farming methods. Invented by Canadian farmers Wally Satzewich and Gail Vandersteen in the 1990s, it is based on sequentially raising a variety of rapidly growing, highly marketable crops in multiple small growing patches.[50] The idea is to generate maximum edible output using minimal space, simple tools and a nearby municipal water supply. Planting, weeding, pest management and crop harvesting are all done by hand. The system allows small teams to raise large amounts of produce on limited amounts of land. The hand grown food is then sold directly to the community it serves.

Revenue targeting formulas, strategic crop-selection and organic-based techniques make it possible to realistically generate an income. A feasibility study funded by Pennsylvania's Department of Community and Economic Development estimated that with 200 growing patches in a half acre plot (2,000m2) with up to four rotations per plot, it would be theoretically possible to generate up to $120,000 per year.[51] Land does not need to be owned, as it is possible to comfortably afford a rent or barter a small piece of land adequate in size for SF production. Start up costs range from $10,000 to $25,000 and farmers typically work 30 to 60 hours a week.[52]

SF fits into many lifestyles. It is a modern concept that is being practised by a new generation of farmers, hobby farmers, as well as by established farmers who want to diversify or downsize. The ease of establishing a SF is possible because it removes the two barriers to entering the agriculture sector: land and capital.

SPIN's growing techniques are nothing new. The key aspect is the way a SPIN Farm business is operated. In regulating a food production system and creating a reproducible process, the approach of SF is unlike that of a hamburger restaurant chain. Restricted planning laws, competition for land from developers, insecure water supplies, pollution management and the many working parts of even a simple food system can be a daunting prospect for many. Urban agriculture is a sector that is usually viewed as marginal. It has never had its full potential released to the mainstream financial community. It can be demonstrated to investors that there are real economic and commercial prospects inherent in sustainable agricultural food production methods.

[49, 50] W Satzewich & R Christensen, 'Spin-Farming Basics: Thinking of Farming? Think Again. There is a New Way to Farm', Spin Farming LLC, 2011

[51, 52] R Christensen, 'SPIN-Farming: Advancing urban agriculture from pipe dream to populist movement', Sustainability: Science, Practice, & Policy, http://ejournal.nbii.org [http://www.spinfarming.com/common/pdfs/SPIN%20Article-SSPP%20essay.pdf], retrieved 12 August 2011

Modern consumers increasingly want a direct connection to the food they eat. The reasons have become personal, not selfish. Diet-related diseases, food-safety concerns, pollution created by transporting food great distances, water shortages and extreme weather events are encroaching directly on people's lives. Even when events do not have direct impacts, media coverage still brings the problems close to home, promoting a widespread awareness that the most pressing problems we face in our modern society are directly linked to the health of our food system. As a result, urban consumers expect greater transparency in the creation, storage and distribution of their food.

City planners and policy makers are acknowledging that the value of broadening quality of life issues will attract residents back to cities. Urban agriculture could be part of a response to the growing pressures on urban communities, who are concerned about the impacts of urbanization and the effects of this on the well being of residents. Sustainability has gone beyond a buzzword and is now spurring specific plans for significant change in how cities function. Producing food for residents within municipal borders could be a cornerstone of these plans. More cities are considering and actually implementing initiatives that require meeting a quota of their needs through local food producers. This has very positive implications for commercial urban farming. In July 2011 the unemployment rate in the US was approaching 10%.[53] With 13.9 million people out of work,[54] could urban farming be this generation's way to handle unemployment?

JAMAICA COTTAGE INDUSTRY

Family food production systems in backyards provide a low-cost, sustainable strategy for increasing household food security by providing direct access to a reliable food supply. They may be the oldest production system known and their continued existence is proof of their intrinsic economic and nutritional merit. The strategy is not limited to rural areas and can also assist the poorest members of the urban population.

A project implemented on the Caribbean island of Jamaica by the Rural Agricultural Development Authority (RADA), as part of the Food and Agriculture Organization (FAO) 'Improve Household Food Security' policy, aimed to implement and promote the practice of home-based food production in urban Jamaica.[55]

Having successfully completed a series of rural programme implementations in backyard gardens throughout Jamaica, a new policy to expand the concept of the home garden to the urban areas of the island was proposed. Approximately 40% of

[53, 54] M Fleury, 'US Unemployment Rate Down', BBC News, 2011 [http://www.bbc.co.uk/news/business-14420702], retrieved 12 August 2011

[55, 56, 57] A Valstar, 'Home-based Food Production in Urban Jamaica', FAO Corporate Document Repository: Agriculture and Consumer Protection' [http://www.fao.org/docrep/X2650T/x2650t08.htm], retrieved 12 August 2011

the population lives below the poverty line in urban Jamaica, which also suffers from pockets of malnutrition.[56]

The main objective of the project was to improve food security through increased food production and income generation within the community. The project assisted 30 participants in each neighbourhood to produce their own food, and, by selling the excess, to purchase other goods or services. An advantage of this home-based income generation was that people were able to work within their communities and have more time to take care of their families.

The project sought to work with one urban community, and one peri-urban community. The inner city community, categorized as one of the most deprived areas in Jamaica, was based in Bowerbank in the east side of the capital, Kingston. The peri-urban area chosen was Watson Grove. The two city areas allowed for direct comparison and the identification of constraints and progress. In each community, the project sought to involve 20 women in vegetable production and 10 in poultry production. The participants deemed suitable for the latter were chosen according to the space that they had available for the chicken coops in their backyards, alongside their willingness and ability. Feeders, waterers, vitamin and mineral mix, lanterns, feed and chicks were provided free of charge under the project. Women in Watson Grove each received 55 chicks, while in Bowerbank they received 30 due to lack of space.

The total costs of the inputs provided for poultry production were US$140 and $125 per participant.[57] This enabled the first batch of chickens to be reared in approximately six weeks without any additional costs. It was expected that at least five batches of chickens could be raised per year. Any surpluses of eggs and meat from the participants' personal needs could be sold. The additional income provided by the scheme helped to financially support families and develop a sense of positive self-esteem.

THE '5-TO-9ERS'

Dubbed the '5-to-9ers', many people are getting out their mixing bowls after a day at the office. They are part of the new baking mania that has generated an entire cottage industry, and provided retailers with the sales equivalent of an instant sugar high, in an industry that is now worth millions in the UK.[58] The mix of childhood nostalgia with solid business brains has become the key to modern cupcake marketing. Cupcakes are a decadent, affordable, small piece of luxury, offering instant gratification in times of austerity.

[58] M Thomas, 'Cupcake Business', EDP, 2010 [http://www.edp24.co.uk/what-s-on/food_and_drink_2_5148/creative_greenwich_cupcake_business_mixes_it_up_1_657100], retrieved 8 September 2011

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Due to tough economic climates and the onslaught of unemployment, many people are reverting to practising something that they love, such as baking. The production of cupcakes has become a cottage industry that is attracting many people who have typically either packed in their jobs to start their own cupcakeries, or are running cake Internet businesses and looking to scale them up to full-time. Vogue magazine proclaims that, 'Owning a cupcake bakery is the career fantasy of our times'.[59]

In an age when discretionary feel-good spending is at its lowest point, cupcakeries are trying to persuade people to upgrade from cheaper sugar-delivery vehicles such as doughnuts. Yet, the most exclusive cakes can cost £10 each for just a couple of sticky mouthfuls. The sugar rush that a typical cupcake contributes lasts only as long as it takes to walk back to the office. The small cottage industries are a stark contrast to the large-scale food conglomerates and the systems whereby food can be prepared, processed and packaged on a different continent to the end consumer. People respond to the homemade history behind the cupcake, making it a lucrative local industry.

Many from outside the farming world are starting to grow and make food to generate money, whilst others opt for a more leisurely approach. There is much global effort to reconnect with the source and the practice of cultivating, selling and cooking the food we eat, taking on political dimensions as urban areas become sites of convergence between 'Big' and 'Small' food practice. What unites them all is the ability to view and practise food production in a new, sustainable way.

No other economic development activity has had as much appeal to those concerned with sustainability as urban agriculture. Urban agriculture has many beneficial social and environmental impacts alongside its value as a community-building tool. It is the viability that the practice offers as a mode of economic development that is often put under question. However, the answers usually depend on how one defines economic development. Many projects are driven by non-profits and are far from being financially self-sufficient. They are dependent on grants, donations and government programmes. Although they experiment with entrepreneurial activities, their main mission is to be of social service, and because of this they are less likely to be economically successful as measured in revenues and profits. Yet, for some, economic self-sufficiency is not even a goal. The good citizens of cities who take up a business in urban farming have a sense of idealism and romanticism, embrace independence and have a pioneering spirit that is tempered by a pragmatic capacity for consistent effort.

[59] S Richman, 'Being Modern: Cupcakes', The Independent, 2011 [http://www.independent.co.uk/life-style/food-and-drink/features/being-modern-cupcakes-2267863.html], retrieved 8 September 2011

TRANSFORMATIONS

URBANISM AS TRANSFORMATION

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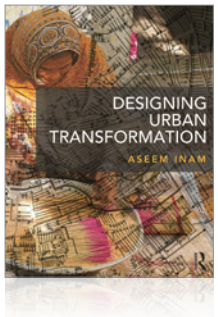
URBANISM AS TRANSFORMATION



As I have argued throughout *Designing Urban Transformation*, designing urban transformation involves both fundamental conceptual shifts and radically innovative forms of practice. To fulfill the potential of the question, "What can urbanism be?" requires that the synthesizing propositive thinking of the creative fields be integrated with the critical inquiry of the social sciences as well as the long-term historical understanding of cities. In this manner, urbanism can be transformative when it is a both/and proposition rather than an either/or division, whether it is with different disciplines and fields or with theory and practice. Pragmatists like Richard Rorty understand that:

> there is no sharp break between natural science and social science, nor between social science and politics, philosophy and literature. All areas of culture are part of the same endeavor to make life better. There is no deep split between theory and practice, because from a Pragmatist view all so-called "theory" which is not wordplay is always already practice.[1]

Similarly, for John Dewey,

> knowing and doing are indivisible aspects of the same process, which is the business of adaptation. We learn in the progressivist phases by doing: we take a piece of acquired knowledge into a concrete situation, and the results we get constitute a new piece of knowledge which we carry over into our next encounter with our environment.[2]

Furthermore, these discussions of Pragmatism and the accompanying case studies illustrate how we can learn to judge existing urbanist projects in ways that more accurately capture the multifaceted complexity of cities. For example, to judge the true quality of an urban initiative, one has to observe its performance over time as part of a changing city. Projects such as Frank Gehry's renowned Guggenheim Museum in Bilbao or the eco-cities of China tend to be presented as iconic images rather than as a multidimensional perspective of living projects that have to grapple with hard-core social and economic realities. At the other end of this spectrum, we can understand informal settlements as possessing significant problems but also as sources of great innovation, resourcefulness, and low-impact living. We can learn to judge excellence in urbanism through the nature of encounters between projects and their publics over several decades, and by more critically examining the values we uphold in our conceptions of what a city is and what a city should be. Such shifts in

[1] Richard Rorty, *Philosophy and Social Hope* (New York: Penguin Books, 1999), page xxv.

[2] Louis Menand, An Introduction to Pragmatism, in *Pragmatism: A Reader*, edited by Louis Menand (New York: Vintage Books, 1997), pp. xiii-xiv.

judgments about existing urbanisms contribute significantly towards designing urban transformation.

We can cultivate a transformative approach to urbanism by developing design strategies that are more provisional and open-ended, including the teaching of design studios without predetermined outcomes. For example, an urbanism studio focusing on revitalizing a depressed neighborhood may decide that the best solution is not a master plan; rather the solution may be to design a job training and community empowerment program. A studio that I conducted in the city of Detroit led to an actual event celebrating hip-hop culture, including the painting of graffiti art as murals, the reappropriation of public space, and the social construction of collective identity through multiple events. The real legacy of this design studio was a group of teenage youth who took responsibility for the future of their neighborhood (e.g., by organizing the festival, raising funds, mobilizing residents, painting murals, working with the police) and community groups that subsequently integrated the formerly overlooked youth into their projects. Such open-ended design strategies have led to extraordinary impacts of several case studies in this book, such as the Rural Habitat Development Programme, Al-Azhar Park, and the Orangi Pilot Project.

We can develop research methodologies of urbanism that are both spatial and temporal. For example, the sociologist Camilo Vergara has painstakingly photographed American cities for the past few decades. His photographs of neighborhoods in cities like Camden, New Jersey demonstrate how cities decline, building-by-building, block-by-block, and neighborhood-by-neighborhood. His photographs also document the ways in which urbanism offers signs of hope through micro-surgical interventions such as a small community garden, a renovated house, or a reopened corner store. This is often urbanism at its finest and prompts us to analyze different types of transformation at different scales.

Ultimately, rather than being satisfied with the status quo, obsessing primarily with spatial form, harking back to a nostalgic past, seeing technology as the savior of the future, or pursuing well-meaning yet overly singular objectives such as sustainability, the fundamental goal of urbanism should be transformation. Urban transformation is a positive, drastic, and fundamental change in the structure of a place. Urban transformation is also a measure of doing good, of making progress. Pragmatism defines progress in terms of moral progress, which consists of increased human equality and increased imaginative power. Design, with all its creative possibilities, is one powerful enactment of increased imaginative power.

UNDERSTANDING TRANSFORMATION

There are many conventional ways of evaluating urbanism: examining the amount of private profit and/or public revenue generated by a project, noting the prestige and number of awards received, a project's appeal seen in the number of visitors and residents it attracts, popular acclaim received in newspapers, magazines, on the internet and television, and in the originality of a design idea or strategy. When measuring transformation we do need to consider these qualities, but there is also more, including the notion that the ultimate value of urbanism is the long-term impact it has on a city, whether it is creating a vibrant environment, repairing past damage, generating economic activity, mobilizing the community, connecting disparate areas, creating truly public space, or fostering a sense of identity in a community. The key is to avoid overly simplistic and formulaic thinking in favor of a deeper and more multifaceted approach. Since transformation is a commonly used – and misused – term, it is useful to place its understanding within the larger context of its most common use in public and scholarly discourse.

One common understanding of urban transformation is observed through major shifts in patterns of the material city, in which significant changes over scales of time and space are crucial. While historians have examined such changes in the past, more recent research utilizes historic maps along with new technologies such as aerial photography and geographic information systems software to more accurately track the spatial growth of metropolitan regions. For example, a recent study examined the patterns of growth for six American cities – Albuquerque, Atlanta, Boston, Las Vegas, Minneapolis, and Portland – over a twenty-five-year period from 1980 to 2005.[3] The study revealed a number of critical findings: that there were a wide range of spatial forms to be found in the material city, that while the expanse of the city was increasing, its overall densities were reducing, that there were regional variations in growth patterns, that there was a fragmentation of regional spatial development, and that design strategies such as urban growth control boundaries do seem to work, at least in the case of Portland. There are exceptions to these overall trends, for example, in Las Vegas, which was the fastest growing American city in the 1990s and 2000s. Unlike the enormous outward spread of most American cities, however, Las Vegas's growth has been within well-defined single-family housing subdivisions due to the limits imposed by its hot desert basin as well as federal government-owned and protected land around the city. These types of specificities belie the overly general descriptions of spatial growth such as "sprawl."

[3] Stephen Wheller, The Evolution of Built Landscapes of Metropolitan Regions, *Journal of Planning Education and Research*, vol. 27, no. 4, 2008, pp. 400-416.

A second common understanding of urban transformation is in terms of rapid and large-scale population growth. Rapid urbanization – whether due to industrialization in the 19th century or migration within developing regions in the 20th century – represents economic and social trends, but also reflects the human textures of cities. In the 19th century, it was the rise of the modern industrial city as the

> industrial revolution of the 18th and 19th centuries ushered in the modern world, a world where manufacturing production was the driving force of societies [and the] rise of industry required the harnessing of new resources and new forms of energy to drive machinery in the growing number of factories … Labour was required for the factories and housing developed for workers close to the new sources of employment. Industrial cities grew rapidly providing sharply differentiated residential locations for the new workers and new bosses.[4]

In the 20th century,

> the last phase of this profound human [urban] transformation is playing itself out in the less developed [sic] countries of Asia, Oceania, Africa, Latin America, and the Caribbean: we are witnessing the urbanization of the globe. At this time, nearly two-thirds of the world's urban population, more than one and a half billion people, live in the cities of the South. Within little more than a generation their number will triple.[5]

The transformation referred to here is that of an unprecedented growth rate of the urban population in the so-called developing or less developed regions of the world, a trend that is going to continue well into the 21st century.

A third type is measured through quality-of-life indicators such as health, pollution, education, and infrastructure. These indicators are meant to represent relative rankings of cities around the world, with improvements indicators supposedly reflecting significant improvements in the quality of life for its citizens. There is a burgeoning literature on what is now known as the quality-of-urban-life indicators, which are usually time-derived from aggregated spatial data using official sources such as the census and include level of household income, crime rates, pollution levels, housing costs, and so forth.[6] A related approach involves modeling relationships between characteristics of the urban environment and measures of people's subjective assessments based on data collected through survey research

[4] David Thorns, *The Transformation of Cities: Urban Theory and Urban Life* (New York: Palgrave Macmillan, 2002), pp. 3-4.

[5] Josef Gugler, *The Urban Transformation of the Developing World* (London: Oxford University Press, 1996), p. xvii.

[6] Robert Marans, Quality of Life Studies: An Overview and Implications for Environment-Behaviour Research, *Procedia: Social and Behavioral Sciences*, vol. 35, 2012: pp. 9-22.

methods and analyzed using techniques such as regression analysis or structural equation models. A more popular approach is the city livability ranking by consulting firms and magazines such as *The Economist*. For example, in *The Economist*'s 2011 rankings, Vancouver, Canada was considered the most livable city in the world, while Harare, Zimbabwe was considered the least livable based on ratings of stability (e.g., prevalence of conflict and crime), health care (e.g., availability and quality), culture and environment (e.g., level of climatic comfort, degree of restrictions, consumer goods availability), education (e.g., availability and quality of private education), and infrastructure (e.g., quality of roads, transportation networks, energy).[7] Such types of quality-of-urban-life indicators contain biases such as those values that tend to be most cherished by the US- and Europe-based researchers as well as a reliance on the most available data. Still, urban policy-makers and private investors in particular pay increasing attention to such indicators, not only as measures of livability but also as policy goals to achieve.

A fourth type is a nuanced qualitative judgment of cities that may be achieved through what the urbanist Kevin Lynch calls performance dimensions of the material city, such as vitality, sense, fit, access, control, efficiency, and justice: "Performance dimensions are certain identifiable characteristics of the performance of cities which are due primarily to their spatial qualities and which are measurable scales, along which different groups will prefer to achieve different positions."[8] For Lynch, in keeping with the spirit of this book, physical form must interrelate with issues of economic and social justice, or political power and local control. He makes a critical point that the design, building, and modification of cities is "a human act, however complex, accomplished for human motives. Uncovering those motives gives us some first clues to the connections between values and environmental form."[9] This is an excellent example of where the greatest potential for urban transformation lies at the nexus of the material (e.g., the everyday visceral experience of the four-dimensional city, including time) and the immaterial (e.g., challenging underlying values and changing existing processes).

Overall, urban transformation continues to be discussed in terms of spatial change. For example, in a recent book entitled *Urban Transformation*, urbanist and scholar Peter Bosselman writes:

> A lesson learned from urban renewal was to avoid the clearance of neighborhoods but to encourage the filling of vacant land within the existing parcel structure of city blocks. The process starts with identifying the remnants of existing vitality in inner-city neighborhoods and carefully adding new development to

[7] Economist Intelligence Unit, *A Summary of the Liveability Ranking and Overview: August 2011*, report (London: Economist Intelligence Unit, 2011).

[8] Kevin Lynch, *Good City Form* (Cambridge, MA: MIT Press, 1981), p. 111.

[9] Ibid., p. 5.

> strengthen the qualities that have survived. Such a model of urban transformation is rooted in an understanding of a city's morphology, the geometry of its streets and blocks, and a division of land that is relatively small but used by many overlapping activities, all in need of access to public streets and entrances along sidewalks. With the insertion of new development the opportunity exists to improve and reform elements of the public realm, such as streets, squares, or a waterfront.[10]

While there are indeed fundamental improvements to be made to the public realm, the risk in such modes of thought is that an over-emphasis on physical changes in the material city can lead to a relatively superficial understanding of urban transformation.[11]

Designing Urban Transformation points to major shifts in our understanding of urban transformation. These shifts propose that the form of the material city is only a means or an accessory to deeper structural change, and that transformation must have a direct impact on people's lives. Ultimately, urban transformation must be experienced as a process, an outcome, or a possibility – even if, sometimes, it can only be recognized in hindsight. For example, a fundamental change in power structures would go far beyond commonplace notions of community participation; rather, it is about enabling community voices, responsibility, and empowerment all at once. In this regard, Pragmatism is exceptionally insightful for understanding the potential of urbanism and useful in assisting with more effective modes of practice.

PRAGMATISM AS CATALYTIC LENS

As we have seen, Pragmatism is a powerful lens with which to understand the transformative potential of urbanism. Pragmatism encourages us to remember and build into practice the notion that our world is in flux with fluid boundaries between concepts and space, and that creative and experimental interventions can have concrete transformative social and physical effects on reality.[12] Given the direct and accessible language of Pragmatism, it is possible to overlook the fact that it is a radical and innovative philosophy. Pragmatists such as Rorty argue that the transformation from philosophy with a capital "P" to philosophy with a small "p" is a transformation from a discipline to an activity that aids individuals and societies to break free from outworn vocabularies and attitudes.[13] The field of urbanism requires nothing less.

Pragmatism helps us to approach our work in the city by encouraging us to consider how we can make large-scale, systemic changes that are inclusive and democratic.

[10] Peter Bosselmann, *Urban Transformation: Understanding City Form, and Design* (Washington, DC: Island Press, 2008), pp. 195-196.

[11] There are many urban scholars, especially those who emerge out of architectural traditions, who persist with such superficial forms of analysis. For example, see Pier Vittorio Aureli, City as Political Form: Four Archetypes of Urban Transformation, *Architectural Design*, vol. 81, no. 1, January-February 2011, pp. 32-37.

[12] Raymond Pfeiffer, An Introduction to Classic American Pragmatism, *Philosophy Now*, July 2012, accessed September 14, 2012: http://philosophynow.org/issues/43/An_Introduction_to_Classic_American_Pragmatism.

[13] Richard Rorty cited by Kai Nielsen, in *A Companion to Pragmatism*, edited by John Shook and Joseph Margolis (Chichester: Wiley-Blackwell, 2009), pp. 127-138.

3 :: TRANSFORMATIONS
URBANISM AS TRANSFORMATION

This book argues for urbanism itself to be a design strategy for such large-scale, systemic transformations of cities, whether it takes the form of smaller incremental projects or larger citywide initiatives. Of course, sweeping urban transformations often fail or have a dark side that leads to further exploitation of the under-privileged and reinforce the prevailing power structures. A critical reading of the histories of urbanism can reveal many such pitfalls to avoid and lessons to learn. With this caveat in mind, what are some design strategies for urban transformation that emerge out of *Designing Urban Transformation* so far? One strategy is to generate collective inquiry by posing powerful questions such as: What can urbanism be? How do we know when urbanism is transformative? How can we design projects that could lead to moral progress? Provocative questions that get to the heart of critical issues can lead to radically imaginative solutions.

A second strategy is to view profound philosophies such as Pragmatism as sources of metacognition and inspiration (e.g., how the ways we theorize about cities impact their materiality). Pragmatism sheds light on two vital aspects of society that must be part of any future project of urbanism: moral progress and democracy. Moral progress is not, in the Pragmatist view, a matter of getting clearer and clearer about something that was there all the time. Rather, we make ourselves into new kinds of people by inventing new forms of human life. We make progress by having more alternatives to consider. The source of these new alternatives is the human imagination. It is the ability to come up with new ideas rather than the ability to get in touch with unchanging essences that is the engine of moral progress.[14] Urbanism is about the constant re-invention of the city in which moral ideals are realized in the everyday realm of practical endeavor.

Urbanists can harness the imaginative power necessary for moral progress to engage in a dialectical relationship with the ongoing project of democracy. Democratic procedures can result in improved design outcomes and more importantly the very process of design can strengthen democracy. For example, urbanists may conceive of projects in ways that contribute to the constant building and rebuilding of participatory and pluralist communities. Dewey was an important advocate of participatory democracy as an ethical ideal that calls upon men and women to build communities in which the necessary opportunities and resources are available for every individual to fully realize his or her particular capacities and powers through participation in political, social, and cultural life.[15] For Dewey, democracy is the most desirable form of government because it provides the kinds of freedom necessary for both individual growth and citizen cooperation: "Democracy and the one, ultimate, ethical ideal of humanity are to my mind synonymous."[16]

[14] Richard Rorty, Is Philosophy Relevant to Applied Ethics? *Business Ethics Quarterly*, vol. 16, no. 3, 2006, pp. 369-380.

[15] Robert Westbrook, *John Dewey and American Democracy* (New York: Cornell University Press, 1991), page xv.

[16] John Dewey, *The Ethics of Democracy* (Ann Arbor: University of Michigan Philosophical Papers, 1888), p. 247.

Moreover, Pragmatists are interested in formulating theory and practice that enhance the human condition, expand human imagination, and make the world more just by promoting moral progress through democracy. A central tenet of these ideas is that the political institutions of any democracy should be constantly subject to dialogue and improvement. In this spirit, processes of urbanism can be not only more inclusive and participatory but also designed to strengthen these ideals of democracy by being more empowering.

Pragmatism can serve as a useful guide for knowing and judging when transformation has occurred:

> Those things are true which are verified through transaction with nature; that is, through experience. Verification, in turn, is defined in terms of usefulness. A proposition may be said to be verified if it serves as a useful guide to future conduct. Thus, Pragmatism aims to overcome the old philosophical puzzle of how we come to have knowledge about the world.[17]

Knowing when transformation has occurred is based on collective agreement by an engaged community that investigates and verifies, often through everyday actions and reflections. A critical aspect of knowing and judging is to theorize about urbanism and transformation. For the Pragmatists, theories are ways of making sense of our needs, as when "we wake up one morning and find ourselves in a new place and then we build a ladder to explain how we got here ... The [non-Pragmatist] is the person who admires the ladder."[18] The Pragmatist, on the other hand, would not only ask whether this is a good place to be but would also realize that while theory offers us great insights and inspirations, it can never tell us what to do; only we can tell us what to do.

A third design strategy for urban transformation is to gain rich and complex insights (e.g., learning from accidental urbanism, technical projects as means of community empowerment) from actual case studies, however flawed they may be. The case studies in *Designing Urban Transformation* are vivid illustrations of design as a much broader process than is conventionally understood. New political-economic structures and design processes may be inclusive and democratic; that is, they involve not only the broadest possible range of stakeholders, but equally importantly, include those who are the least privileged (e.g., partnering with the poor in the Orangi Pilot Project). Design does not occur outside the political realm; rather, it is integral to the political process as the city is integral to the spatial political economy (e.g., participatory budgeting and the Parque da Terceira Agua). Design of cities does not begin and end with the conventionally limited

[17] Eric MacGilvray, Experience as Experiment: Some Consequences of Pragmatism for Democratic Theory, *American Journal of Political Science*, vol. 43, no. 2, April 1999, p. 545.

[18] Louis Menand, An Introduction to Pragmatism, in *Pragmatism: A Reader*, edited by Louis Menand (New York: Vintage Books, 1997), p. xxxiv.

creative process that centers on urbanists, architects, landscape architects, or city planners; rather, it is part and parcel of the larger city-building process, including political decision-making, legal regulations, and the allocation of financial resources (e.g., transparent policy-making in the Uptown Whittier Specific Plan).

One way in which urbanists can harness the power of design for inclusive city building is to emphasize the significance of public investment in and public stewardship of streets, sidewalks, plazas, civic buildings, and parks. The public realm is critical because it is by far the most significant amenity that a city offers its residents, and it is where urbanity – the best a city has to offer – occurs (e.g., the active green space of Al-Azhar Park). In addition, the outcomes of transformative processes of urbanism may assume other guises, such as providing greater choices in types of urban form to better meet people's needs and preferences (e.g., different types of housing and public spaces in the Olympic Village), while urbanists should play a prominent role in ongoing public conversations about defining and redefining what is a desirable city (e.g., developing future scenarios in the MIT Experimental Design Studio). Some manifestations of urban transformation are more apparent than others such as the fundamental change in the character of a place (e.g., reconnecting neighborhoods through the Big Dig), or drastic change within a relatively short period, including an impact on people's lives (e.g., creating social and economic vibrancy as a result of the Centre Pompidou). Transformation can also be a measure of being effective in urbanism (e.g., redesigning institutional relationships in the India Habitat Centre).

The challenge for urbanists is how to practice on a day-to-day basis with such goals and strategies in mind. In many instances the single most formidable weapon that urbanists can wield is long-term commitment to the people and places that make up cities. Within this long-term commitment there can be multiple modes of practice: grassroots or utopian movements that involve the intervention of new ideas, rekindling of dormant circumstances, implementation of physical projects, or even discovery of accidental successes. We practice by

> being well versed. By being modest. By being open to a constant feedback loop that allows these multifaceted engagements to become concomitant, so that they may understand and acknowledge their interdependence, learn from one another, and mature together through a constant nurturing process, embracing the idea of collective and collaborative engagement as superior to the limitations of a single mind. If urbanists are to truly engage with and transform cities, there must be a

> commitment to the processes as much as, or even more so, than the products. The complexity of the contemporary city deserves this kind of expansive, multidimensional engagement. To struggle with, to propose, to fall short, to learn, to try again, in a never-ending quest for transforming the city. By challenging themselves, urbanists continually grow to be better and stronger.[19]

As the world becomes increasingly urbanized and cities become larger and more complex, project ecologies of urbanists, associated activists and professionals, and larger social and political movements can collaborate in highly effective ways through communities of practice. Communities of practice are networks of individuals whose lives are bound together through multiple day-to-day relationships, based on the same sets of expertise, a common set of technological knowledge, and similar experience with a particular set of problem-solving techniques. Even more critical than shared professional expertise for creating collaborative communities of interdisciplinary practice are sets of common and deeply felt values and commitments, such as adopting activist and advocacy approaches towards city-design-and-building processes. Creating collaborative communities of multidisciplinary practice that share similar values and commitments will be essential to transforming cities.

HIGHER ASPIRATIONS

The conceptual shifts and case studies presented in *Designing Urban Transformation* are examples of effective design strategies for urban transformation. Using this extremely robust foundation as a springboard, we can do even better by aspiring to greater heights. To do this we can harness a fourth and perhaps even more creative and potent design strategy, which draws its inspiration from exemplary transformations in history. The Indian independence movement remains one of the largest mobilizations of mass energy when 390 million people gained independence from one of the largest and most oppressive colonial powers in history: the British Empire. This movement exercised a form of power which was dramatically different from that of governments, or armies, or violent revolutions. This was because its leadership, especially Mahatma Gandhi, conceived of how to convert the power of nonviolence into effective political action:

> Transforming leadership ultimately becomes moral in that it raises the level of human conduct and ethical aspiration of both leader and led, and thus it has a transforming effect on both. Perhaps the best modern example is Gandhi, who aroused and

[19] Vinayak Bharne and Aseem Inam, Engaging the Asian City, in *The Emerging Asian City: Concomitant Urbanities and Urbanisms*, edited by Vinayak Bharne (Abingdon: Routledge, 2013), p. 266.

> elevated the hopes and demands of millions of Indians and whose life and personality were enhanced in the process.[20]

A crucial aspect of Gandhi's originality as a thinker and leader was the way he forged connections in theory and practice among ideas of freedom, nonviolent power, and civic responsibility. The scale of the challenge – of overthrowing an oppressive power – called for a large-scale movement that combined visionary ideas with equally visionary actions:

> Gandhi succeeded in a remarkably short period, from 1919 to 1922, in forging a mass movement "for real freedom or power" that was entirely unprecedented in India. This may be attributed to the way that he fulfilled the movement's needs of organization, leadership, and ideology. His most dramatic political achievement at this time was the transformation of the Indian National Congress into a political organization with a mass base. "I do not rely merely on the lawyer class," Gandhi said, "or highly educated men to carry out all the stages of non-co-operation. My hope is more with the masses. My faith in the people is boundless. Theirs is an amazingly responsive nature. Let not their leaders distrust them."[21]

Urbanists would be wise to consider how large-scale systemic transformation in our cities can be enabled through similar movements, albeit with different goals and at different scales.

In 1955, Martin Luther King Jr. helped lead the first great African-American nonviolent demonstration of contemporary times in the United States: the Montgomery bus boycott. Soon thereafter, the Supreme Court of the United States declared unconstitutional the laws requiring segregation on buses. Between 1957 and 1968, King traveled six million miles and spoke over 2,500 times, appearing wherever there was injustice, protest, and action; meanwhile he wrote many books as well as numerous articles. He led a massive protest in Birmingham; he planned the drives in Alabama for the registration of African-Americans as voters; and he directed a peaceful march on Washington, DC of 250,000 people. In 1968, while standing on the balcony of his motel room in Memphis, Tennessee, where he was to lead a protest march seeking economic and social justice for the striking sanitation workers of that city, he was assassinated. For King, like Gandhi, these ideas and actions worked towards the kind of structural change that is the hallmark of genuine transformation:

[20] James MacGregor Burns, *Leadership* (New York: Harper, 1978), p. 4.

[21] Dennis Dalton, *Mahatma Gandhi: Nonviolent Power in Action* (New York: Columbia University Press, 1993), p. 31.

"True compassion is more than flinging a coin to a beggar; it comes to see that an edifice which produces beggars needs restructuring."[22]

King believed in large-scale movements to produce systemic transformation and his legacy lived on, starting soon after his assassination:

> On 8 April [1968], an estimated 42,000 people led by Coretta Scott King, [the Southern Christian Leaderships Conference], and union leaders silently marched through Memphis in honor of King, demanding that [Mayor Henry] Loeb give in to the union's requests. In front of the City Hall, [the American Federation of State, County, and Municipal Employees] pledged to support the workers until "we have justice." Negotiators finally reached a deal on 16 April, allowing the City Council to recognize the union and guaranteeing a better wage. While the deal brought the strike to an end, the union had to threaten another strike several months later to press the city to follow through with its commitment.[23]

King's work lived on because he was able to generate mass mobilizations and long-term commitments; in urbanism, one could envision mass mobilizations of ideas and strategies as well as of people.

What might these historic examples of breathtaking transformation suggest to us about design strategies for transforming cities? Gandhi's and King's strategies worked at multiple levels. They worked at a material level because the political acts of nonviolence occurred spatially in cities and in the public realm. The strategies worked with and often through existing political and institutional frameworks, while simultaneously challenging and shifting them. The strategies were also personal and even spiritual, since they touched upon people's most cherished values such as liberation and self-fulfillment. Gandhi and King were able to accomplish so much in large part because they helped create communities of practice that lasted decades and that worked collectively towards fundamental change. Finally – and this may be the most valuable lesson for designers and urbanists – their constructions of radical imaginaries involved an enormous amount of struggle and a great deal of sacrifice over long periods of time.

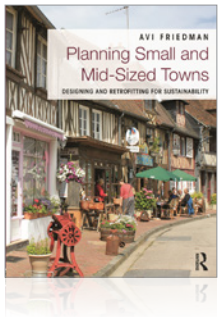
[22] Martin Luther King, Jr., Speech, New York, Riverside Churchm April 4, 1967.

[23] King Research and Education Institute, "Martin Luther King Jr. and the Global Freedom Struggle: Memphis Sanitation Worker's Strike (1968)" (Palo Alto, CA: Stanford University), accessed April 9, 2013: http://mlk-kpp01.stanford.edu/index.php/encyclopedia/encyclopedia/enc_memphis_sanitation_workers_strike_1968.

CHAPTER 4

PEOPLE, PLACES, AND WELL-BEING

4 :: PEOPLE, PLACES, AND WELL-BEING



I arrived in Courseulles-sur-Mer, population 4,000, on a market day. The coastal town in the Basse-Normandie region of northern France was the landing site of the Canadian troops who stormed Juno Beach on World War II's D-Day.

The place, it felt, marched to a slower rhythm. Stalls full of fresh produce and household goods, some under tents, lined Rue de la Mer. Merchants recognized their patrons and greeted them in a joyful voice. A meat vendor asked an old woman: "même chose [same thing]?" and went on to slice for her what he had probably served her for a long time (Figure 8.1).

Figure 8.1
Market day at Courseulles-sur-Mer, France

Walking further I arrived at the port where small fishing trawlers were tied to the quay. Their owners were tending to their gear, stopping from time to time to exchange a word with one another.

It was lunchtime when I headed back to the main square. Merchants locked their front doors for the afternoon break, and went home or to local eateries. Looking around, I noticed a restaurant called Brasserie du Marche. When I entered, a man gestured to a corner table. The place had few formalities. There were no tablecloths and the walls were made bright by three large windows that faced the square. Bottles of house wine and bread were brought to each table. It was obvious that the patrons knew each other. There were conversations across tables, exchanges of anecdotes and laughter. Four men wearing blue overalls occupied an adjacent table. It sounded

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as if they debated the performance of their favorite sports team while the meal was served and eaten. An old man noticed me, a foreigner, and brought me into the conversation. His eyes lit up when he found out that I was Canadian, claiming that our army saved his town.

You could not help but be part of the moment and the place. It felt more like a social hangout than a dining place. I kept wondering if the physical and social attributes of small towns such as Courseulles-sur-Mer had something to do with it. I also questioned whether such spots can be choreographed to become what they are or if good places are a result of local cultural traditions that have matured over many years.

This chapter examines general human attributes of small towns and relates them to places. The manifestations of the term "social capital" are explored, the notions of places and place-making are studied, and selected gathering places and their contribution to the communal fabric described. The chapter ends with a case study about a town that went on to restructure its urban makeup by introducing unique meeting spots.

SOCIAL CAPITAL

It can be argued that their reduced population size can also affect social attributes in small towns and potentially lead to greater familiarity with and closeness between residents. Having fewer places to meet will result in more frequent chance encounters, for example. Close-knit relations can be of great value in times of need. For example, in farming communities, farmers are known to extend a helping hand to one another in busy seasons. There might also be resentment of the closeness by some who may dislike the lack of privacy or anonymity.

Communal behavioral attributes are referred to by scientists as *social capital* or *human capital*. Putnam (in Svendsen 2010) described social capital as outward-looking open networks that encompass people across diverse "social cleavages." In contrast, Putnam defines "bonding" social capital as consisting of inward-looking networks that tend to reinforce exclusive identities and homogeneous groups. Svendsen (2010) suggests that social capital is about people who meet, get to know one another, and help each other in various ways. The *Slow Cities* movement, for example, attempted to put a name and draw some social characteristics of these unique places **(Figure 8.2)**. Another all-encompassing term, which includes economic, social, spiritual, and health-related aspects by a group, is *well-being*. It is a holistic term that looks at how well groups are doing using various scales and criteria.

Figure 8.2
The Slow Cities movement includes communities with populations smaller than 50,000 inhabitants that accept certain principles that enhance their sense of well-being

Known as *socio-spatial* attributes, meeting places provide the spots in which human interaction takes place. Without them, there would be fewer opportunities for communal encounters vital for societal proper functioning. American sociologist James Coleman (1988) argues that human capital presupposes social capital much like among family members. If people do not spend time together, there would be fewer opportunities for transfer of knowledge, material, learning, cooperation, and trust **(Figure 8.3)**.

Figure 8.3
Restaurant as a social meeting place in Deauville, France

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Some researchers also draw a link between well-developed social capital and a place's creativity, urban growth, and economic performance. In their article "Rethinking Human Capital, Creativity and Urban Growth," Storper and Scott (2009) asked "Do jobs follow people or do people follow jobs?" They suggest that current approaches to urbanization, most notably Florida's (2002) "Creative Class" notion, privilege the role of individual locations as engines of urban growth. The mark of successful small towns is that their leaders saw community development as economic development by encouraging leadership and youth entrepreneurial activity for example. They balanced short-term economic gain with longer term community goals and as a result people learned from each other (*Small Towns Big Ideas* n.d.; Feldman 1994).

What draws people to a place will be, among other factors, the amenities it has to offer. These include cultural attractions such as museums, orchestras, attractive architecture, and innovative urban planning, to name a few **(Figure 8.4)**. Therefore, creating a suitable place for information exchange has been regarded as a direct contributor to a place's economic prosperity **(Figure 8.5)**. Svendsen (2010) argues that regular face-to-face meetings also involve increased formation of human capital and ultimately contribute to economic and social sustainability.

Figure 8.4
A beach library in Saint-Aubin-sur-Mer, France

Figure 8.5
Street theaters are used to educate citizens about the dangers of unsafe sex in Langa, South Africa

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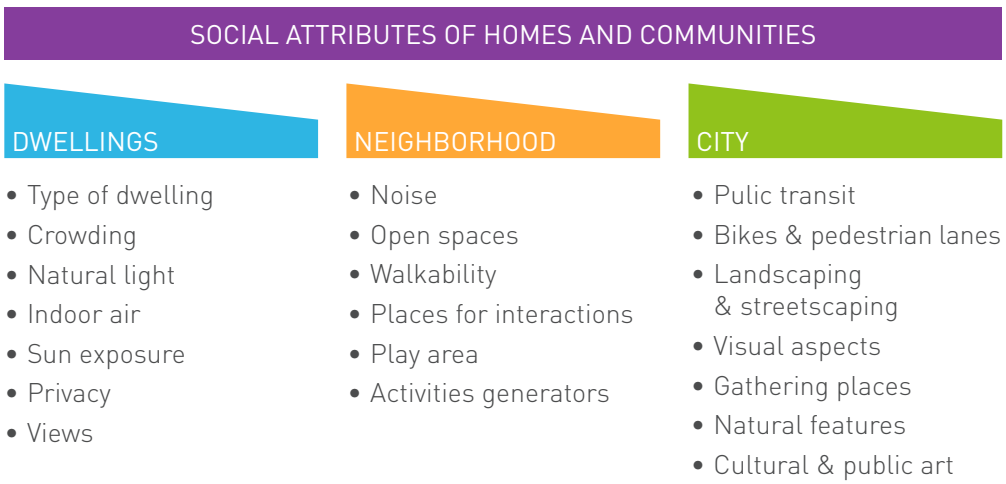
Williams (2006) suggests that opportunities for meetings between people diminished with the invention of information and communication tools and rise of social media. Indeed, the power of the Internet and "Skype conversations" cannot be discounted. On the other hand, the digital age has offered people and communities effective tools to connect across a wide range of geographical spectrums. For example, a visit to a local café demonstrates that those places are often the sites where digital devices are used. Patrons enjoy the company of others while attending to their information appliances.

Public health is another aspect of a town's well-being. It includes physical and mental health, which are affected by, among other factors, the way a place was planned. Gidlow et al. (2010) and Baum et al. (2009) argue that people's mental health would be better when they are socially active, feel supported, safe, and trust their neighbors. These studies often regard key indicators of social capital, such as trust and participation, as predictors of physical health as well. For example, residing in a walkable neighborhood will improve people's chances of being active.

Evans (2003) suggests that characteristics such as type of housing, crowding, noise, indoor air quality, and natural light will have a direct effect on mental health **(Figure 8.6)**. For example, crowdedness and higher density will diminish supportive relations within a household. Among the positive social attributes that are associated with the built environment, Evans (2003) includes natural areas, visual prospects, and inclusion of activity generators such as markets and streetscaping.

Figure 8.6
Aspects affecting social attributes of homes and communities



Two cohorts to which researchers pay special attention are younger and older populations. Abbott-Chapman and Robertson (2009) found that adolescent preferences for having their own bedroom and a secluded place in the natural environment express a way to define personal sought-after privacy. It is part of a young person's self-discovery and socialization that leads to their emerging identity. Having access to congregation and open spaces is highly valued as an aspect that fosters a sense of freedom through playing and experimenting. Towns that lack such places or those that locate them away from residences deprive these populations of various opportunities.

Children hold different perceptions of spaces. Generally, small towns offer more natural outdoor play areas that are liked by children and are not common in big cities. Several researchers have found that younger people value locations where they can engage in sports or physical activities, due to objects or meeting spots that the place has. On the other hand, they dislike places with features that they perceive to pose social or physical threats to their safety (Castonguay and Jutras 2009).

Figure 8.7
Seniors occupying a small neighborhood square in Salerno, Italy

On the other end of the age spectrum, studies have been conducted on the relationships between older people and their social space. Andrews and Phillips (2005) suggested that attachment to a place enables seniors to draw meaning, security, and a sense of identity that facilitates lifecycle adjustment. Therefore, residences that were designed for Aging in Place can be seen not only as cost-effective for individuals and governments, but beneficial from a communal point of view. Wiles et al. (2009) coined the term *social space* when studying places preferred by seniors **(Figure 8.7)**. The authors suggest that these places are multilayered, connected, imaginative, emotional, and symbolic. As people age and their mobility becomes reduced, their ability to reach some destinations will also be diminished. Seniors who do not drive will not endeavor to reach places that are not served by public transit for example.

The prevalence of overweight and obese populations among all ages, particularly children, has become a global concern of public health officials. Joens-Matre et al. (2008) found that the rate of overweight people was higher among rural children at 25 percent compared to urban areas at 19 percent and small cities at 17 percent.

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A 2010 *New York Times* article suggests that in the US, despite attempts by some states and cities to tax and limit the size of soda pop servings, promote farm stands, require healthier school lunches, or mandate calorie information in chain restaurants, obesity rates are still growing. The article goes on to report that, according to recent data published by the United States Center for Disease Control and Prevention, an estimated 72.5 million adults are obese (Singer 2010).

Only recently has attention been given to the fact that the built environment has over time been altered to curtail physical activity. Low residential density, the mark of many small, suburban edge towns, implies that basic services and amenities, which can potentially get people active, are not economically viable. For example, there are not sufficient riders to justify the introduction of a public transit service and not enough shoppers to support a corner grocery store to which people can walk. In fact, things have gone from bad to worse when it comes to public health implications of town planning decisions.

In the name of efficiency, schools have been relocated from their traditional spots in the heart of neighborhoods to the outskirts where they can easily be accessed from major roads by car. That has meant that a pupil's short walk or easy bike ride to school has been rendered impossible. Another feature that found its way into the municipal wastebasket was small play areas near homes which have been replaced by a huge play field, to which children have to be driven. The play itself has been morphed into regimented leagues and strict schedules. Spontaneity, unfortunately, has been taken out of kids' play. It is no wonder that TV watching and computer games have replaced outdoor play. Studies suggest that TV viewing is North American youth's primary activity, with 1.5 to 2.5 hours on average per day. Some of this time includes watching advertising for high-caloric foods (Larson 2001).

Another casualty of contemporary suburban planning in many small towns was the sidewalk. Since no one walks, some argued, why are they needed at all? Seniors, parents pushing a stroller, and children had to share the road with motorists, often putting their lives at risk. When the sidewalk vanished, benches followed, leaving no places to sit on, or trees to stand under and talk with a neighbor on a sunny day.

How should active lifestyle be introduced in small towns? Recasting the features of the built environment that, over the past half-century, have been taken out would be a good beginning **(Figure 8.8)**. Homes and cities must be regarded as exercise machines for all ages **(Figure 8.9)**. Along with the reintroduction of physical changes, public health officials need to continue to warn citizens about the grim consequences of inactive lifestyles.

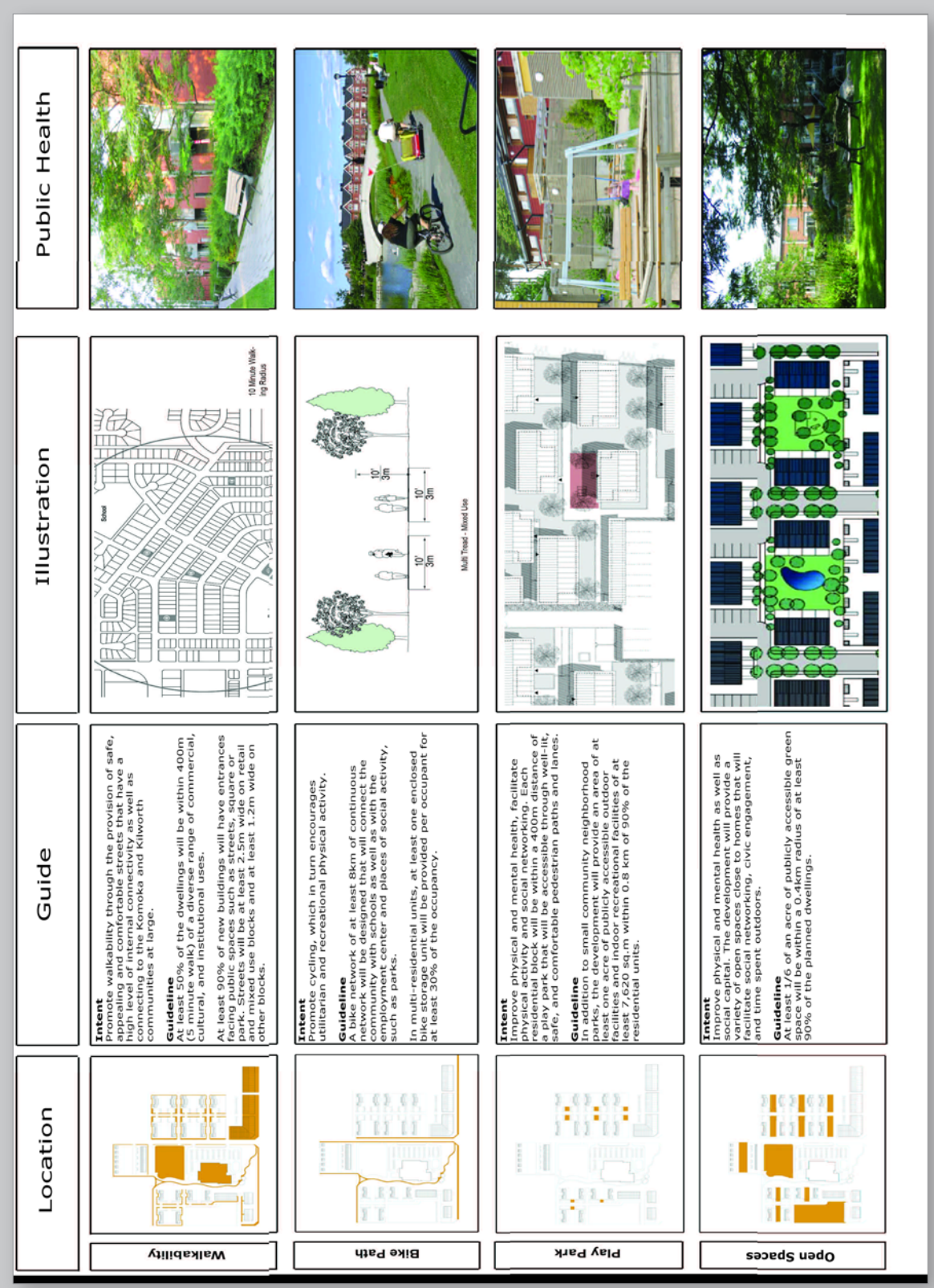


Figure 8.8
Public health guidelines that were prepared by the author for a housing development in Komoka, Ontario, Canada

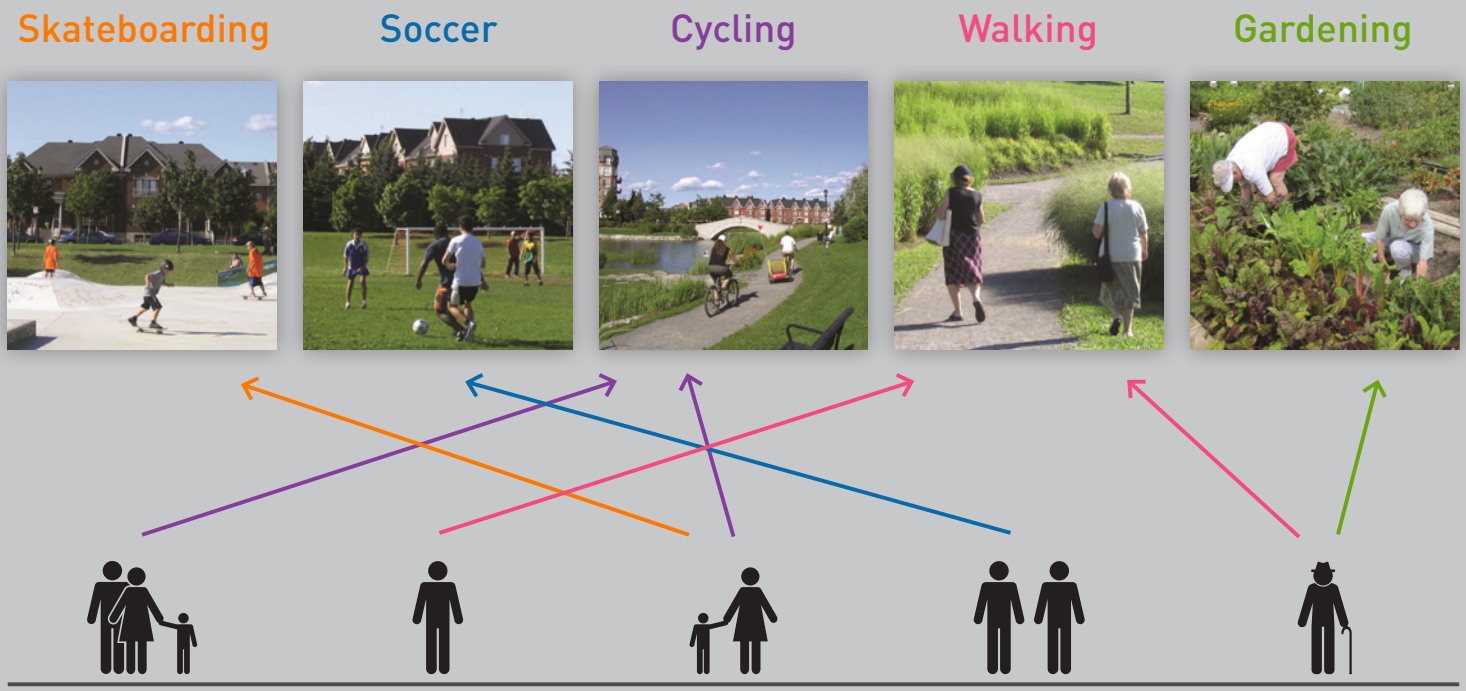


Figure 8.9
Well-designed towns offer a wide range of recreational opportunities to citizens of all ages

The importance of some unique spots to a community's social capital and their proper planning will be outlined below.

PLACES AND PLACE-MAKING

This section focuses on places. In particular, attention has been paid to spots that draw large numbers of people and are vital to communal life. Here, too, what sets towns apart from cities are size and opportunities; there are often few locations, such as civic squares and main streets, to congregate. When they are introduced or retooled, they have to be designed properly to become a functional draw and, according to Clark et al. (2002), also contribute to local economic development.

In recent years, some communities saw the disappearance of good social spots. The newly introduced places are part of what Zukin (1998) calls a "landscape of consumption." Small towns have become dependent on property developers to create "destination retail" which unfortunately has replaced good old-fashioned meeting places.

4 :: PEOPLE, PLACES, AND WELL-BEING

What are the general characteristics of good places? Engaging spots do not function as containers of social activities but often generate them. For example, a treed square streetscaped with benches will offer people a place to be in, initiate a conversation, and watch others. The Project for Public Spaces (PPS) (2011) identified four elements to help communities evaluate places: sociability, uses and activities, access and linkages, as well as comfort and images. Among the principles that describe a proper approach to place-making, adaptability, inclusiveness, inspiring, and community-driven are listed. Processes that are imposed from above, reactive, use one-size-fits-all methods, and offer a quick fix are all likely to end up poor-looking. Gehl (2010) suggests that cities need to be regarded as "meeting places" and designed to the human scale and senses. According to Gehl successful public spaces offer protection, comfort, and enjoyment. A good scale to begin articulating good spots is the large one—the public square.

Open spaces devoted to public gatherings have formed an integral part of the urban and cultural heritage of many societies and towns throughout history and played a critical role in the genesis of commerce, the emergence of democracy, and the vitality of civic life. Bearing different names, the square is known as *agora* in ancient Greek towns, the *plaza* in cities of Spanish origins, *piazza* in Italy, *village green* in settlements with feudal pasts, and *market squares* in others **(Figure 8.10)**. The names all mean a physical clearance in the heart of a city which can be of any shape—including square.

Figure 8.10
The agora was a public gathering urban space as seen here in Kamiros, Greece

In the *Wisdom of Cities*, Crowhurst and Lennard (2002) argue that squares have provided a school for social learning, exercise of responsibility, development of a sense of community, and democracy (Figure 8.11). Creating an outdoor "living room" for citizens to meet was instrumental in fostering a strong web of relationships and communal security.

Figure 8.11
Public squares in Mexican towns are often used by seniors for weekend dancing

The advantages of traditional squares were not possible to achieve in contemporary small town settings. Their planning rarely called for such places, as the low population density could not support much commerce under apartments, and a configuration of detached low-rise dwellings was inadequate to lend suitable urban scale to begin with. Golf courses, public parks, and shopping malls were meant to be the new village green. Unfortunately, none of these amenities could replace face-to-face encounters, the mixing of age groups, and the symbolic value of squares.

What are the physical attributes of a good public square? Several features have been noted by some designers. The Renaissance architect Alberti Batista looked at scale and suggested a proportion of one to six, since the viewing distance from the center easily permits enjoyment of all the surrounding buildings (Moughtin 1992). Using this ratio, he suggested that each side of a square surrounded by three-story buildings would be 180–230 feet (54–68 meters) long, and each side of a place with four-story buildings would measure 240–300 feet (72–90 meters). Such proportions foster a

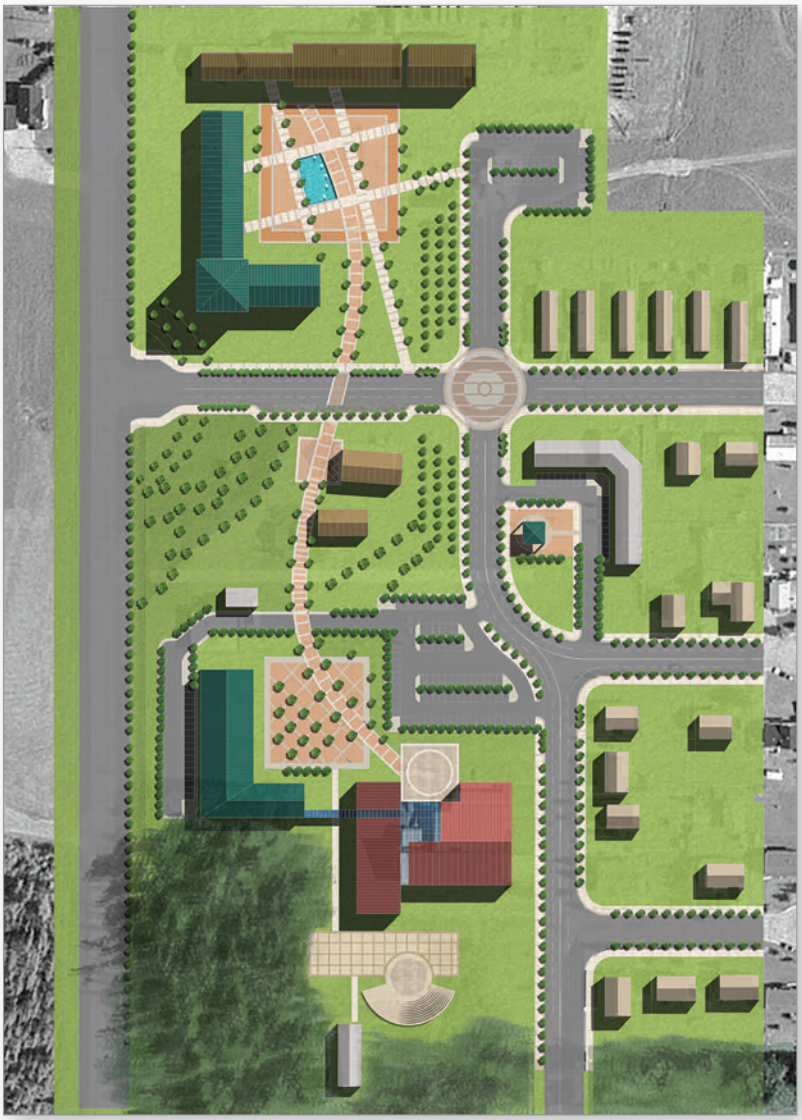


Figure 8.12
Small gatherings in public spaces were designed by the author in the village of St. Isidore, Alberta, Canada

proper human scale which contributes to "sense of place" and comfort. They are sufficient to house large crowds, yet create intimacy. A valuable contributor to a square's good design is the type of surrounding buildings. The preferred choice would see properly scaled buildings with commerce on ground floors and residences above. Patrons of the lower floor stores, cafés with outdoor seating, and upper floor dwellers will animate the place. If a choice of location is given in the early planning stage, a square should have a central location accessible by foot or bike from the town's edges (Figure 8.12). The roads leading to it should also be pleasantly articulated to walk in with less vehicular traffic.

Well thought-out streetscaping is also necessary for a successful square design. Having a central feature such as a statue or a fountain will give the place a focal point. When a square is designed with pedestrians in mind and car traffic is minimized or prohibited altogether, it will make the place people-friendly. Parking spots can be provided on side streets and alleys. In small towns, however, one needs to bear in mind that proper scale has to guide all planning decisions since there are fewer people.

Public art is another valued feature of squares and other civic places (Figure 8.13). Florida (in Riddle 2008) suggests that public art that is tied to a place can "highlight a community's soul, history and uniqueness." Also, in a talk about his work, German public artist Bonifatius Stirnberg expressed his conviction that public art can stimulate play, creativity, and imagination among children. It promotes contact, communication, and, at times, debate and dialogue among citizens. It accommodates people by incorporating steps, ledges, and benches on which people can sit or lean to appreciate, admire, and reflect. It can also bring the various factions of a society together by stimulating curiosity and interest in heritage (Stirnberg 1985).

Figure 8.13
Public art can play a role in promoting creativity and dialogue among citizens

Figure 8.14
Market day in Lancaster, UK

Markets, be they in closed public structures or open air, can also be regarded as "social magnets" (Figure 8.14). Recently, the gradual disappearance of formal markets from small towns has occurred. For the most part, they have become parts of large food stores where produce is arranged to create a market-like setting.

Yet, it seems that the natural instincts of the buying public have served it well when it has come to saving vital commercial and social institutions, such as old-style markets, from complete extinction. The quest for freshness, lower prices, and direct exchange with the grower have led to a resurgence of farmers' markets in small towns, which generally recur at fixed locations where products are sold by the farmers themselves (Brown 2001).

Studies show that growers are inclined to sell in farmers' markets of small towns because they often see them as the best, or the most profitable, venue for selling their produce. Consumers visit them because they provide high quality produce at a reasonable price (Summer and Wing 1980). Market gardeners and other small-scale farmers, many of whom farm part-time, drive, on average, 19 miles (30 kilometers) to their place of trade. Their customers come primarily from adjacent neighborhoods to create a social meeting point. The contribution of these markets to local economies is also of high value, as they lead to spending in nearby shops, which generates further tax revenue. Some analysts suggest that farmers' markets create jobs, build

new businesses, strengthen and diversify regional agriculture, and elevate farm profitability (Curry and Oland 1998).

On the other scale of places that contribute to the creation of human capital and reinforcement of social bonds among citizens, one can find small gathering places. In his book *The Great Good Place*, Ray Oldenburg (1989) calls such spots *third places*. Whereas our homes and work—first and second places—are sites of routine events and, at times, regimented schedules, third places are spots where we can shed our usual being and relax. A third place can be a pub, coffee shop, diner, or a bookstore (Figure 8.15). People who patronize a third place are not tied to a particular schedule and they are welcome to come and leave as they please. Third places are levelers. Patrons' wealth, social status, or even educational backgrounds are of secondary importance. Oldenburg states that the charm and flavor of the patrons' personality, irrespective of their station in life, is what counts.

Figure 8.15
A local diner and gathering place in Montpelier, Vermont, US

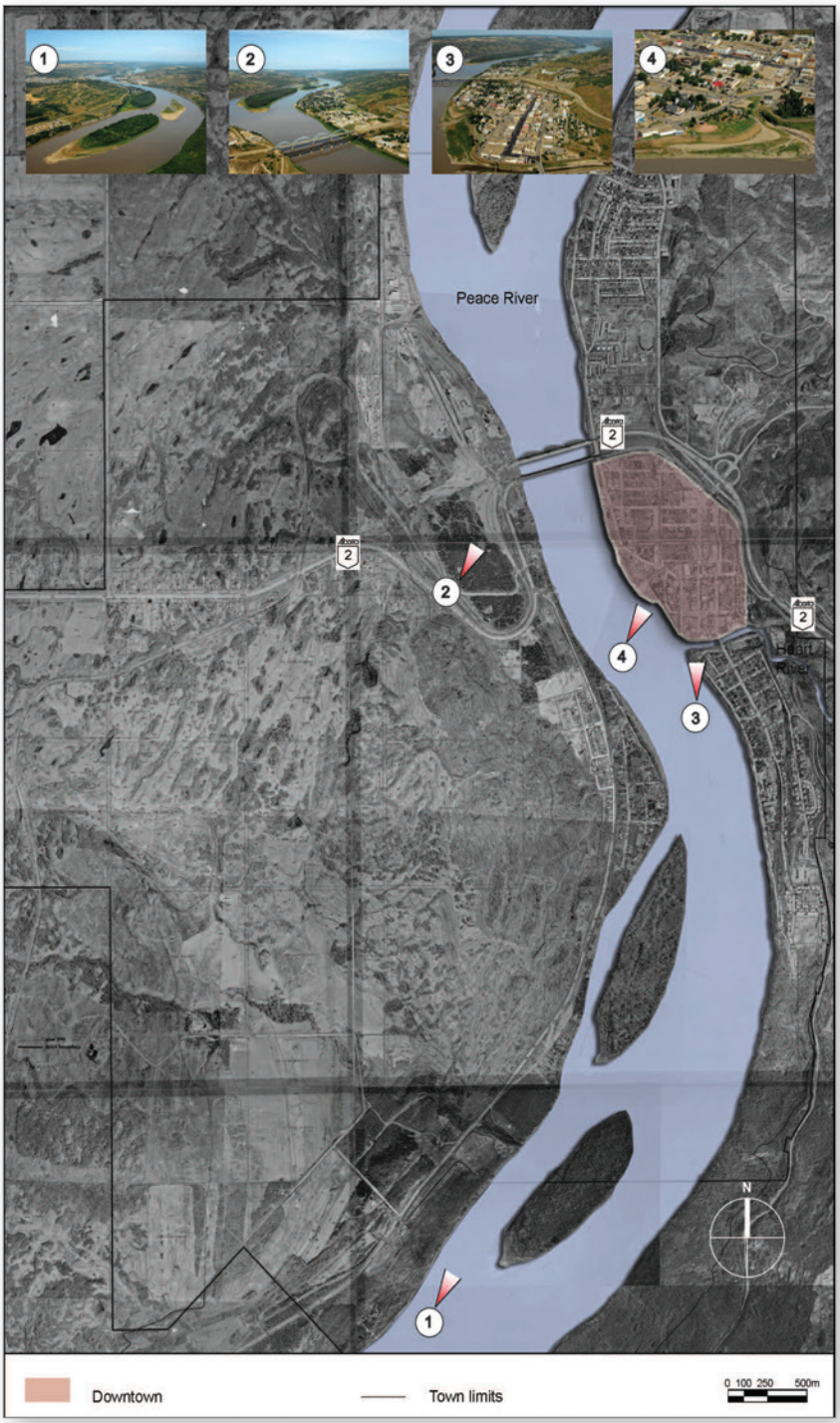
Conversations in third places are lively, colorful, and engaging. Being attentive to others, considering each other's feelings, talking about topics of interest to all will make for a lively exchange. The noise level and the choice of background music must

allow everyone to listen and talk in a normal tone of voice. They are places to which one can go alone at any time of the day or evening and be pretty sure that an acquaintance will be present. The regulars set a tone of conviviality that makes a stranger feel welcome.

Good third places need to be around long enough to age gracefully. They have special odors or beaten-up furnishings. Neatness is not the primary concern of those who run the place, but the comfort and the happiness of the patrons. Food, when the spot is an eatery, is not masterfully designed on the plate, but is tastefully cooked and cheerfully served. In a bookstore, you are welcome to sink into a sofa, undo your shoelaces, and sip from a tea that was offered to you by the owner, with whom you will later have a discussion about the book. You will also probably not mind when a total stranger asks you how your meal was or whether you enjoyed the book (Figure 8.16).

Not surprisingly, Tolbert et al. (2002) found that third places were a vehicle of civic welfare in both metropolitan and non-metropolitan small towns. Coffee shops are cited by Jeffres et al. (2009) to be the most frequent places. Pubs, senior centers, parks, and malls also appear on the list. One wonders whether the use of social media stands to erode the appeal of "third places." It no doubt has had an effect on encounters, but cannot replace face-to-face interactions.

Figure 8.16
A sign in a bookstore in Trani, Italy reads: "We open when we wake up, we close when the dreams wake up"



PLACE-MAKING IN PEACE RIVER

Peace River was named after the river that runs through it. The town, population 6,000, is located in the northern part of the Province of Alberta, Canada, and is also the meeting point of the Smoky and the Heart rivers **(Figure 8.17)**. Some 302 miles (486 km) separate the town from the capital Edmonton and 123 miles (198 km) from the City of Grande Prairie.

Whereas in its early beginnings at the turn of the century, the town was somewhat isolated and less accessible, it is now linked via highways to distant urban hubs. It has an airport used primarily by chartered flights and private airplanes.

With the building of a new commercial center on its edge, Peace River's core experienced a decline. Several businesses closed and others moved to the new commercial section. Another aspect of concern was the town's economic dependence on a few key industries. The need to broaden its economic base led to the exploration of tourism that can potentially take advantage of the area's natural beauty. There was also a strong desire to enhance the town's "sense of place" and to create meeting spots for its people. It is with this background that I was asked to offer ideas and prepare a plan for the town's future that would consider these emerging realities.

Figure 8.17
Aerial view of Peace River

URBAN EVOLUTION

The urban evolution of Peace River is similar in nature to other mid-western towns of its size (Figure 8.18). The place was established to service traders, missionaries, and, in later years, the surrounding farming communities. The town adopted a gridiron street layout and roads were oriented parallel and perpendicular to the river. Despite its scenic view, the river was not always kind to the town and flooding was common (Figure 8.19).

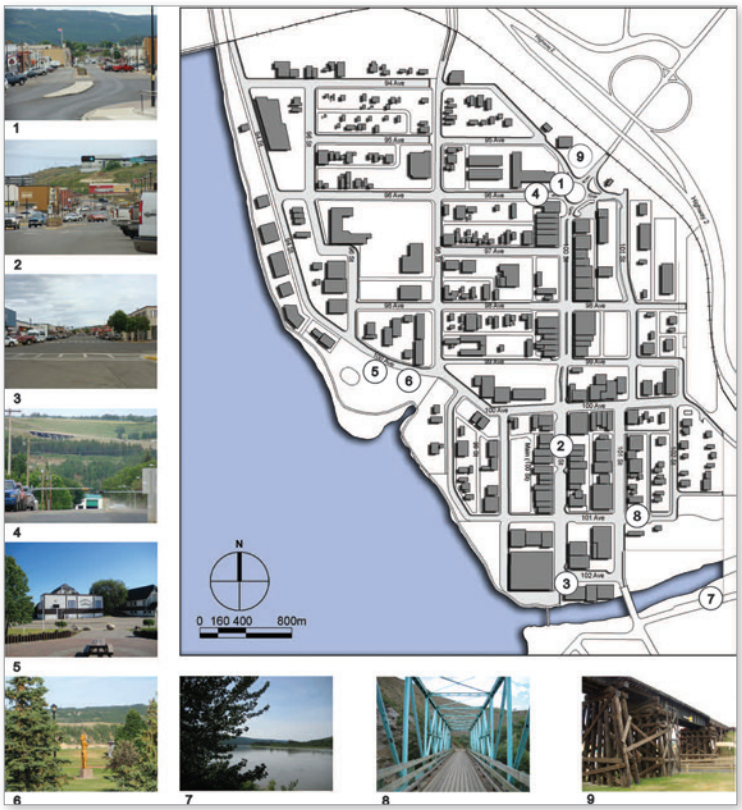


Figure 8.18
Plan and images of Peace River's core area

Figure 8.19
Flooding in Peace River in 1935. The white building in the center is the town's old fire hall

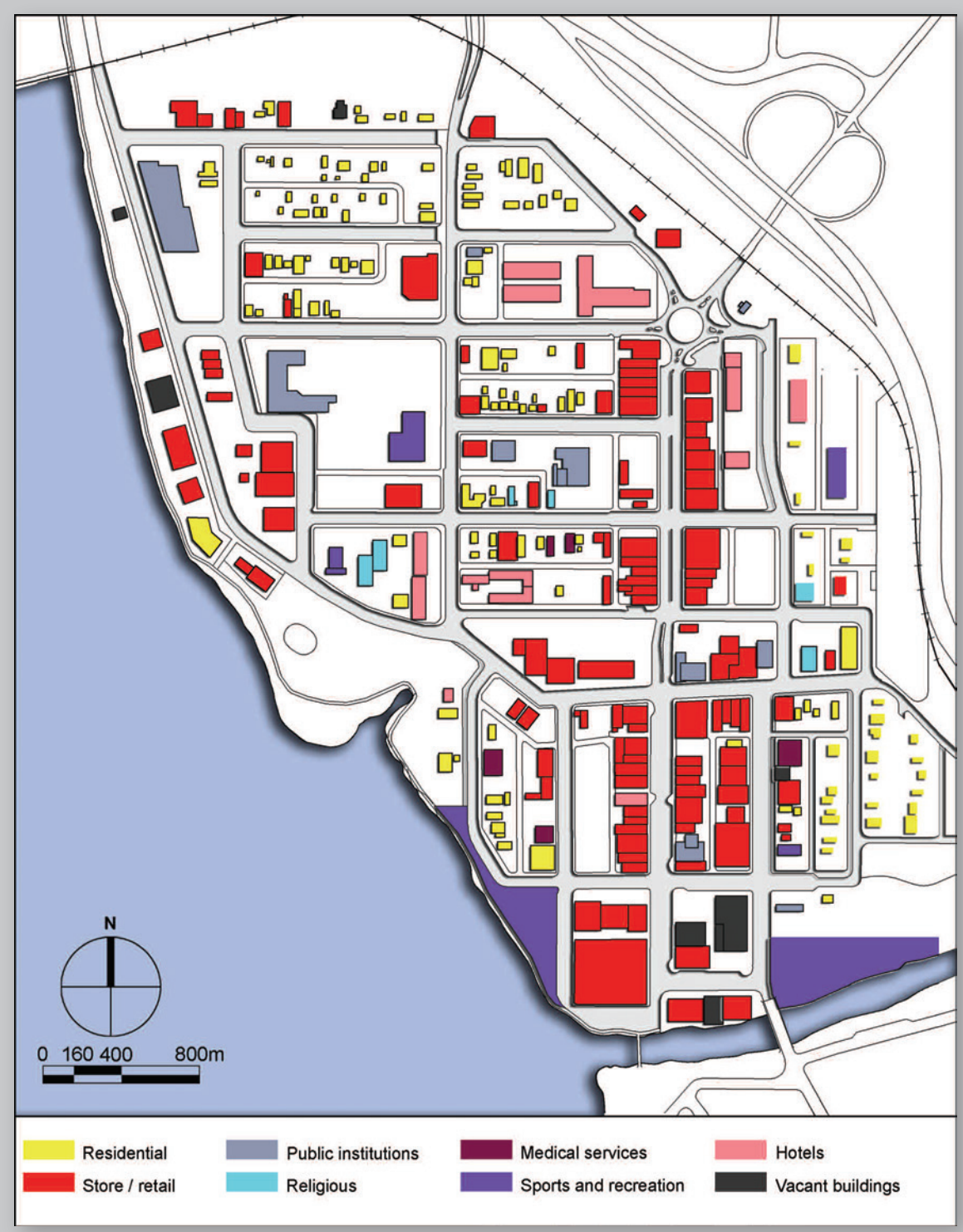


Figure 8.20
Current land use in Peace River's core

4 :: PEOPLE, PLACES, AND WELL-BEING

Peace River grew outwards from Main Street, which over the years has retained prominence as the chief commercial artery. Despite the harsh winter winds and floods, the town did not adopt a compact urban form and continued to evolve northward along the valley, where land was available. Subsequent flooding led to the construction of a protective berm along the river, which did not help create a riverside pedestrian experience.

Downtown Peace River had a healthy mix of businesses and residences in close proximity, as shown in **Figure 8.20**. During successive periods of growth, homes were built around downtown and, in particular, south of the Heart River. The building on the western bank of the Peace River took place with waves of immigration and subsequent growth spurts after World War II. Single-family detached dwellings were the common housing type and, in later years, some townhouses and low-rise apartment buildings were added. Lumber was a common façade material in the early years, yet with the town's population and economic expansion, masonry buildings were constructed to offer a sense of permanence.

The construction of a new commercial area with "big box" retail along with the move of the hospital to the river's west side marked a decline of the downtown, which our intervention attempted to address.

OPPORTUNITIES AND BARRIERS

Prior to offering retooling ideas we looked at the opportunities and the barrier that Peace River poses. At the outset we recognized that currently the town acts as a well-established regional service draw to the surrounding communities. Due to its location and easy access, it is an excellent geographic focal point with natural beauty as its greatest asset. A location in a valley, a meeting place of rivers, and a breathtaking view of the surrounding forested mountaintops make it unique.

Downtown Peace River, a home to hotels, restaurants, government buildings, banks and offices, still acts as a draw. In addition, although not many residents call downtown home, the area is surrounded by several neighborhoods, which offers a patronage base to the businesses. Also, it has a pedestrian-friendly character with wide sidewalks facing storefronts.

Main Street is the area's natural center with short walking distances from the place's edges and plenty of parking nearby. Downtown has a number of centrally located empty lots that offer investment opportunities for commercial and residential developers. The core is also the location of many annual and sessional cultural activities, which add to its attraction and help turn it into a tourist draw.

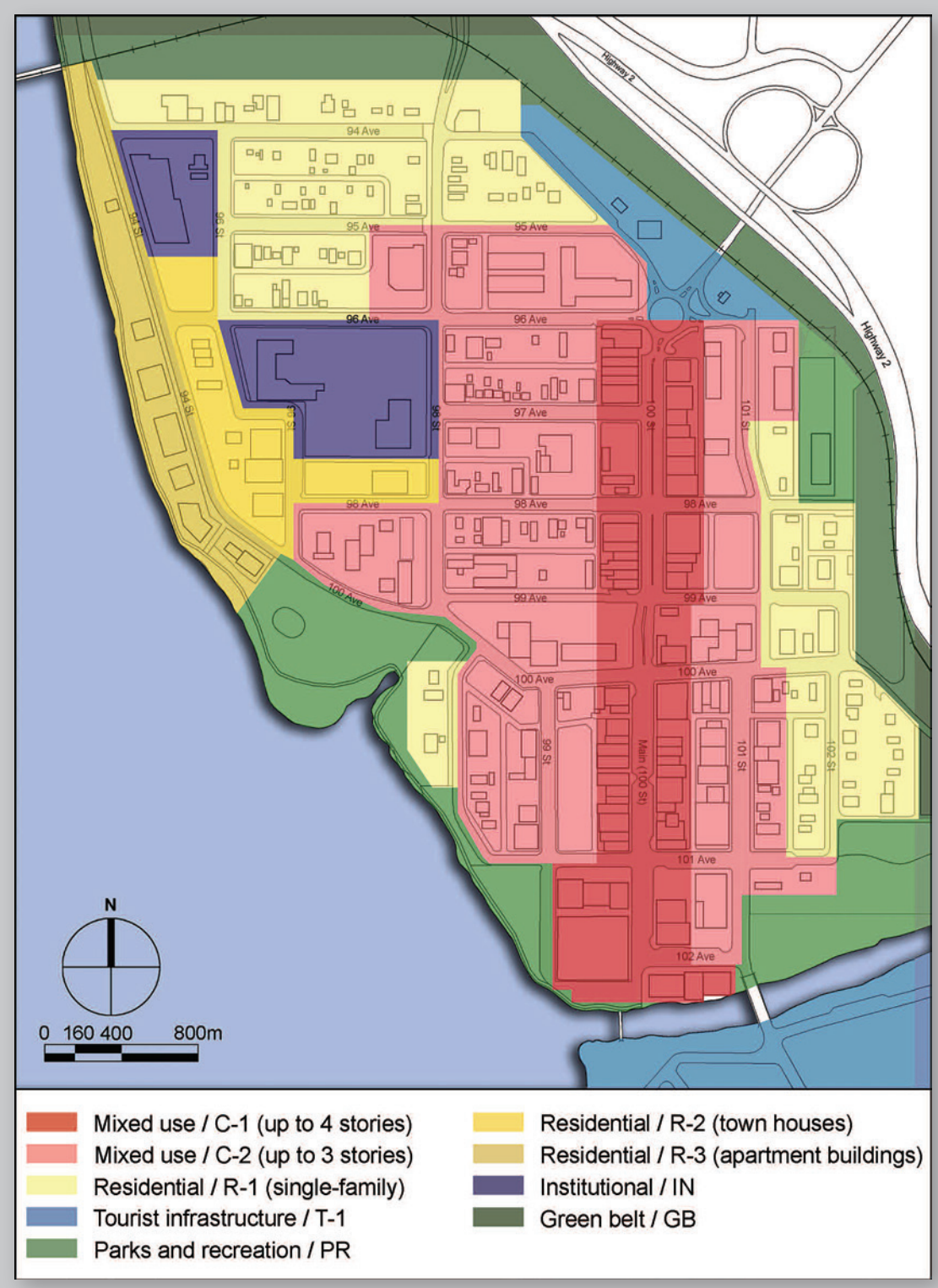


Figure 8.21
Proposed land uses in the core

In mapping existing conditions we also noted several barriers to future development, first among them are stagnant population growth. To cover the costs of its renewal, Peace River needed to expand its tax base and generate wealth. Attracting new enterprises will initiate a prosperity cycle, create employment, and bring new residents.

The town also needed to review its land-use allocation and bylaws. Garages and other industrial types of businesses give the place a poor image, primarily those buildings that face the river. If the area is to be made attractive, current regulations need to be tightened to permit only residential and commercial uses (Figure 8.21).

A vital facet of Peace River's revitalization is access to the rivers. Currently, the town's location along a major river and confluence of two others does not benefit the core. The water can be seen from several avenues, but there are no direct pedestrian connections since many of the principal roads are oriented north–south. There is also a lack of human scale. The wide streets, one-story buildings, and empty lots do not contribute to narrowing the scale gap. Yet, there are notable heritage buildings that can be distinguished and recognized. The town can also use more intimate public meeting places to celebrate holidays and mount events.

Winter's cold and strong winds make walking in downtown a challenge for part of the year. The many open lots, lack of trees, and low buildings do not help the situation. As a result, patrons have a disadvantage compared to the comfort they are offered at the new large stores. Also, a lack of coordination exists between elements that can offer a measure of urban coherence, human scale, and sense of place. The many empty lots expose the edges of buildings whose windowless walls are highly visible and create a negative urban image.

To be a draw, places need to be active all day long. Downtown Peace River does not have many social venues, "third places" of sorts, which stay open after hours to attract young adults and support other businesses.

A PROPOSAL

When we contemplated renewal strategies and began the planning process, a pivotal question was how the town of Peace River, and in particular its core, could be made more welcoming to local residents and out-of-town visitors. We went on to establish several design anchors that are illustrated in Figure 8.22.

There needs to be a population increase in downtown by encouraging, through a system of grants and incentives, residential construction, which will target primarily young families. The new housing projects, three- and four-stories tall, will have on-site parking,

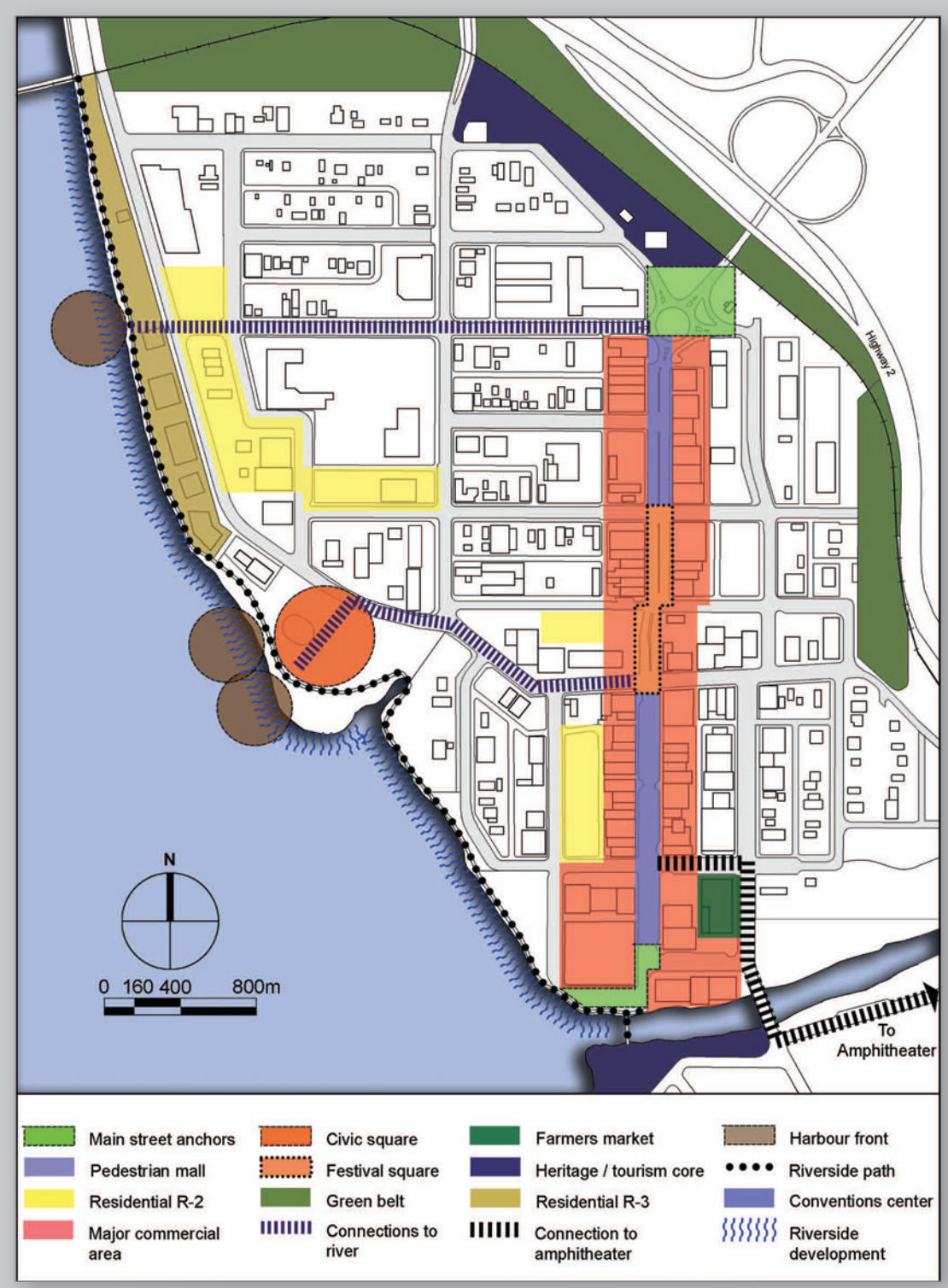


Figure 8.22
Conceptual renewal plan for Peace River

Figure 8.23
A detailed development plan

either on or underground. Also, since downtown is surrounded by neighborhoods, it makes sense to connect them to the core by a safe network of bike paths.

Connecting the town to the river was another key feature of developing a new harbor front area in which water-related activities will include a marina. A land strip from the Heart River in the south to the railway bridge in the north along the water will be developed for this purpose. To create a better link with the river, two avenues will become prime corridors facilitating pedestrian and vehicular access. The area facing the river will be designated mixed-use, where four- to six-story apartment buildings will be constructed above businesses **(Figure 8.23)**.

To enliven Main Street and turn it into a meeting place and a draw, a segment will be redesigned to include large-scale awnings and street furniture. To offer a "counterpoint" to the roundabout at the northern edge of the street, a direct access and opening to the Heart River will be made in the south. Public art can also be placed at that point as well as other spots in downtown.

To encourage tourism, the area north of the roundabout, one of the main entrances to the core, would be developed as a welcome and heritage site to include a public display of the town's visual history. In addition, the 12 Foot Davis Ball Park will be turned into the new festival grounds and fitted with seating and a stage. A week-long festival will be initiated and advertised regionally and provincially **(Figure 8.24)**.

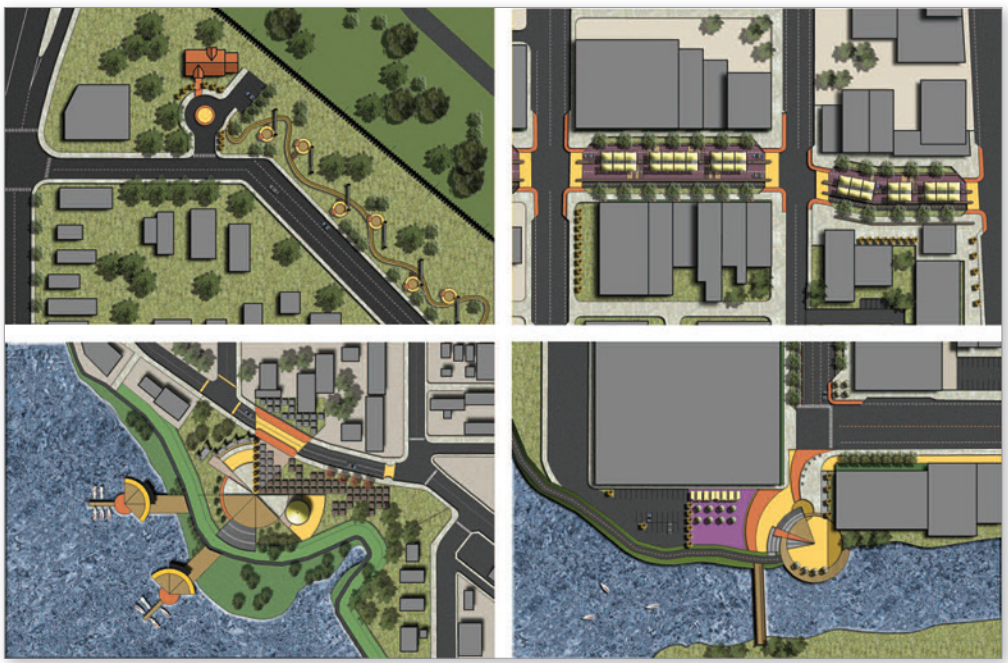
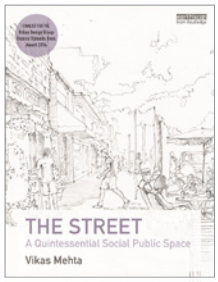


Figure 8.24
Close-ups of the area's design: the welcome area (top left); festival square on Main Street (top right); a civic square (bottom left); the opening to the river at the bottom of Main Street (bottom right)

EVERYDAY SOCIAL BEHAVIOR AS A BASIS FOR DESIGN

5 :: EVERYDAY SOCIAL BEHAVIOR AS A BASIS FOR DESIGN



The following is sourced from *The Street: A Quintessential Social Public Space* by Vikas Mehta.

Social behavior on the street, like any human behavior in space, occurs as a result of the interaction between people and the setting. The factors that influence social behavior include the attributes of the individuals—their age, gender, cultural affiliations, past experiences, needs and expectations, emotional condition and so on—as well as the characteristics of the setting—its location, access, configuration, condition, the amenities it provides, sensory qualities, activities and people in it and so on. Some believe that culture, above all, determines the meanings and use of space and hence the human behaviors in space (Hall, 1966; Rapoport, 1990). On the other hand, scholars recognize the role of culture but nonetheless suggest the importance of the characteristics of the setting (Rapoport, 1990). Without overemphasizing the role of space as a determinant of behavior, Dear and Wolch (1989) suggest that social relations may be "constituted through space," "constrained by space" or "mediated by space." With his work particularly in Copenhagen but also in several other cities across the world, Gehl (1989; Gehl and Gemzoe, 2004) has shown that sometimes, albeit gradually, changing the settings can modify cultural practices. Put another way, if people are inclined toward certain behavior, perhaps even to try out something new which they may have seen or heard about, the settings can act as a catalyst for the behavior to occur. We are aware that the rules of social behavior on the street vary with cultural variations: Even a cursory comparison of urban streets in Asia, Europe, and South and North America will demonstrate that. At the same time, however, operating within the reference of cultural norms and mores, all behavior occurs within an overarching universality of human needs in urban public space. If culturally appropriate, social behavior is likely to occur if the space is designed and managed with psychological, physiological and anthropometric needs of people in mind. This is the environmental *probabilism* or *possibilism* view where the role of planning and design is to provide the best possible conditions to support known and new social behaviors without assuming that the design will *cause* behavior to occur (see, e.g., Michelson, 1977). In this chapter, we will discuss relevant theories and concepts to understand everyday social behavior within the context of universal human needs in urban public spaces such as streets.

DESIGN OF MODERN PUBLIC SPACE

Critically examining the nineteenth-century city, Camillo Sitte, considered to be the father of modern urban design by many, sensed the boredom and inhumane qualities of the modern city of his time. In his treatise he elaborated upon Alberti's idea of a "science of art" which suggests that in order to provide aesthetic pleasure the built environment must follow a set of rules that are imposed by the human body (Choay,

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1997). Aside from visual aesthetic pleasures, Sitte was aware of Alberti's concern with commodity and he acknowledged its importance in his work. By meticulously studying the spaces and forms of Italian cities, Sitte (1889) scientifically formulated universal principles for the design of urban space by basing his work in the realm of psychology, and he urged city planners and architects not to overlook the visual, experiential and social dimensions of the historic city. Of these, the former, the visual (artistic) aspects, became the focus of urban design in the twentieth century. As Cullen suggests, "We turn to the *faculty of sight*, for it is almost entirely through vision that the environment is apprehended" (1961, 8; emphasis in original). As a result, traditionally, the "visual-aesthetic tradition" has been the dominant urban design paradigm (Jarvis, 1980; Carmona *et al*., 2003), and the process of design has been largely governed by the personal tastes, intuitions and aesthetic criteria of professionals trained in the field of design. Even liveliness and vitality are associated with the appearance of buildings and their formal and spatial composition without recognizing people's behavior and activities that lend the life to any environment. Cullen suggests that when "buildings have been put together in a group so that one can get inside the group, then the space created between the buildings is seen to have a life of its own over and above the buildings which created it" (1961, 7). Following this tradition, the visual needs and personal tastes of the few trained professionals became the benchmark for the design of the environment. It is thus not surprising that a substantial source of literature on streets and other public spaces emerges from architectural and design circles, and is largely conceptual, theoretical and inspirational in nature (see, e.g., Rowe and Koetter, 1978; Krier, 1979; Rossi, 1982). This kind of literature is often engaged in the evolution of new and creative methods to analyze form and space rather than the understanding of issues of use and meaning for everyday users of these spaces. Based on this literature and the ensuing education of urban designers and architects, a design culture has emerged where a normative approach, based on stylistic notions that happen to be current at the time, serves as the primary driver of design.

THEORIES IN ENVIRONMENTAL AND ECOLOGICAL PSYCHOLOGY

By the mid-twentieth century, changes and advances in environmental psychology, behavioral sciences, and other social sciences began to provide an alternative to this visual-aesthetic approach. Architects and environmental designers working with psychologists and researchers and scholars from other fields of social sciences began to emphasize that, for the planning and design of the environment, the study and analysis of human behavior provides a more appropriate, relevant and richer view

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of human needs in the use of space, form and artifacts than the traditionally intuitive visual-aesthetic approach.[1] The new scientific approach, also known as a social ecological approach, was based on evidence and accountability and of testing designs and theories in real places. Of the several ideas that emerged through these new interdisciplinary alliances, three theories stand out. Barker's (1968) theory of *behavior settings*, Gibson's (1979) theory of *environmental affordances*, and Canter's (1977) *theory of place* were all developed in the fields of environmental and ecological psychology, and have been recognized as foundations for environment and behavior research (Lang, 1987), also known as environment-behavior studies or EBS (Rapoport, 1990). What follows is a brief description of these theories.

BEHAVIOR SETTINGS

Barker's (1968) concept of behavior setting and the creation of the field of ecological psychology focus on the study of everyday human behavior with relation to physical settings. This concept of a behavior setting examines the relationship between a physical environment (setting) and the patterns of behavior that may possibly take place in it. A behavior setting consists of a *milieu* (a particular layout of the environment), a *standing pattern of behavior* (a recurrent activity), and a *synomorphy* (a congruent relationship between the two) (Barker, 1968; Bechtel, 1977, 1997; Lang, 1987). The greater the congruent relationship between the particular layout of the environment and the activity, the better the behavior setting is able to afford human behaviors and needs. Allan Wicker, a student of Barker, further enhanced the concept of ecological psychology by placing it in the context of larger social contexts and issues. His work emphasizes the importance of behavior settings as the most immediate and "behaviorally significant, human environments" (Wicker, 1979), and the importance of the theory of "manning"—the dependency of the behavior setting to operate with an optimal number of people. Wicker suggests that in the case of undermanning or overmanning, adjustments must be made in order for the behavior setting to operate normally.

ENVIRONMENTAL AFFORDANCES

The term "affordances" coined by Gibson (1979) refers to the physical properties of an object or environment (setting) that enable it to be used for some activity. Unlike the concept of behavior settings, *affordances* do not possess "coercive" or "invitational qualities" (Gibson, 1979; Lang, 1987). Gibson further developed Barker's work on behavior settings and proposed that the physical properties are characteristics and

[1] See the work of Lynch, 1960, 1984; Jacobs, 1961; Alexander, 1964, 1965; Studer, 1969; Perin, 1970; Alexander *et al.*, 1977; Jarvis, 1980; Lang, 1987; Brower, 1988.

configurations of the object or setting that not only afford behaviors but aesthetic experiences as well. By physically altering an object or setting, we can, and constantly do, change its affordances. Even if we do not alter the affordances of an object or setting, their usefulness and meaning may change with the needs, and the cultural and individual background of the individual who perceives them (Lang, 1987). In addition, similar to the idea of a behavior setting, the various affordances of an object or setting do not imply that it will be used. Affordances may either support or limit activities; they do not necessarily generate or "trigger" an outcome (Heft, 1997). "The affordances of the environment are what it offers . . . what it provides or furnishes, either for good or for ill" (Gibson, 1979, 129).

PLACE THEORY

Canter's (1977) *theory of place* adds another dimension to the concept of behavior setting in environmental psychology. According to Canter, environments or places are defined by, and understood as, the physical characteristics of the place, the activities in them, and the meanings that they hold for people. Unlike many scholars who have written about place, such as Tuan (1977), Relph (1976), Norberg-Schulz (1980) or Hiss (1990), this concept of *place* does not imply a quality of a setting. Instead it makes "available a unit of study that encapsulates a mixture of processes that create our experience of our socio-physical surroundings" (Canter, 1991, 118). Therefore, in essence, Canter suggests that our understanding of a setting depends on what we *do* in places and how we *feel* about them.

These developments in environmental and ecological psychology provide important lessons in the understanding of people–environment relationships. Two such important lessons relevant to the understanding of social behavior on the street are territoriality and personal distance and proxemics.

TERRITORIALITY IN PUBLIC SPACE

Territoriality, or territorial behavior, first recorded in animals, is a human spatial behavior that involves permanently or temporarily laying claim to ownership of an area by personalizing it with the use of physical and/or symbolic barriers, markers and artifacts (Hall, 1966; Altman, 1975; Brower, 1980; Lang, 1987). Territoriality is more than a property defense mechanism; it helps organize human behavior on various levels by providing a "reliable piece of space" to carry out various everyday routines and functions (Edney, 1976). Territoriality serves multiple goals: It acts as an

important mechanism to maintain privacy (Proshansky *et al*., 1970; Altman, 1975); it is a critical mechanism for achieving private needs such as intimacy and solitude (Brown, 1987); it provides identity for the individual or group (Porteous, 1976); it is a vital mode of communication (Hall, 1966); and it provides stimulation at the setting (Porteous, 1976). Territoriality is more than just expressing ownership of objects. It is a social-behavioral construct that serves to communicate ownership and relationship to objects and space relative to other individuals and groups (Brown *et al*., 2005). Territorial behavior extends beyond the level of the individual (Altman, 1975; Brown *et al*., 2005) and can foster a sense of belonging to social groups (Altman, 1975; Lewis, 1979). In addition, social behavior also relies on the ability of people to temporarily territorialize and claim space. Hence territorial behavior is an important behavior mechanism in the public realm, especially in the context of social behavior in public spaces such as streets.

PERSONALIZATION AS A TERRITORIAL BEHAVIOR MECHANISM

Personalization is an important mechanism for territoriality. Individuals and groups exercise territorial control by personalization and defense (Porteous, 1976); they mark territories using control-oriented and identity-oriented markings. Personalization serves as a non-verbal communication mechanism that provides environmental messages of territoriality (Becker and Coniglio, 1975). By marking territories through personalization, individuals or groups are also able to make the territory "distinctive and identifiable" (Edney, 1976). On the neighborhood commercial street, these gestures and objects, as manifestations of personalization, suggest the presence of people and activity, and therefore of occupancy, adding a human touch to the environment.

> Signs associated with occupancy can do more than announce the existence of territorial claims; they can also be seen as visible evidence of caring. They can represent a feeling of attachment between the occupant and the physical setting, and as such they will be felt to add "warmth" or "intimacy" to a setting, which, in the absence of such signs, would be too "monumental" or "sterile" or "inhuman."
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> (Brower, 1980, 189)

Thus, personalization and sense of occupancy on the street act as signs of communication and a proxy to the presence of people and activity. "The concept of territoriality deals, then, with behavior that directly affects the security and maintenance of the physical environment. Because of this, it has much to offer city

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planners and urban designers" (Brower, 1980, 183). Personalization of territory is directly related to attachment to the territory (Brown, 1987) and increased opportunities for personalization add those elements in the environment that are of prime interest to people (Gehl, 1987). When people personalize their territories, they clarify individual or group territories, make the environment more attractive and complex, and set the stage for interaction.[2] Several studies have emphasized this aspect of facilitation of social behavior rather than mere prevention for defense as an important role of territorialization.[3] Further, territorial flexibility and opportunities for defining personal space are especially important in public spaces that are designed for supporting casual leisure behavior (Hall, 1966; Sommer, 1969 from Joardar, 1977). On the street, for example, the availability of movable chairs and other furniture allows people to create and define space as social territories within a larger public territory. Behavior settings offering the ability for people to personalize and territorialize space transfer a level of control, which not only provides freedom and comfort to the users, but also aids in supporting social behavior.

The ubiquity and immediacy of the street to the private dwelling or commercial space provides easy access and ability to extend the private territory. The most visible signs of this appear as private physical objects are placed in public space. But physical claim of space is only one way that the street facilitates the extension of territory. Perhaps more importantly, the wide range of behaviors and encounters on the street allow for a psychological claim on the public space, and this adds new dimensions to the lived experience of the individual and groups in the city. In addition, although the degree of the extension of territory varies with needs and cultural practices, it occurs in several societies. In India, for example, the space of the residential as well as the commercial street is often claimed as an extended space of the private territory. The residential street is used as an extended space for play, social interaction, and in some cases even as a space for ablutions and sleep. On the commercial street, businesses do not hesitate to occupy and claim the street space as a territory for storage, display and sale of goods and services (Mehta, 2009; also see Rapoport (1987) and Edensor (1998) for a detailed account of the Indian street).

TERRITORIAL GESTURES AND SOCIAL BEHAVIOR

Like households, businesses also mark their territory through advertising, personalizing their environment and by placing goods and wares in the street space. Studies in retailing and marketing indicate that the physical retail environment affects consumers' behaviors, and businesses personalize their shops to increase sales. We

[2] See Becker and Coniglio (1975) for a detailed discussion, and Greenbaum and Greenbaum (1981) for a good summary of this.

[3] For example, in a study in Philadelphia, Bush-Brown (1969) (referenced in Greenbaum and Greenbaum, 1981) found that personalization of space resulted in higher levels of social behavior.

often see public space of the street temporarily or permanently personalized and claimed by the adjacent businesses and the users of the business and the street. Territorial gestures include temporarily or permanently modifying the physical environment and caring for it. Embellishing the building façades, store entrances and shop-windows with personal touches such as temporary or permanent displays, decorations, signs, banners, planters, flowerboxes, goods for sale, and other wares all amount to territorial gestures. Also included are the ways in which a business claims public space and maintains it by placing chairs, tables, retractable umbrellas and other furniture on the street. First, the business claims and establishes territory on the public space of the street, but to be successful the business has to establish territory that allows customers to temporarily claim their own territory. Through these territorial gestures, businesses on the street personalize the interface with the street and extend a sense of ownership and identity to the outdoor public space on the street. There are other ways in which people territorialize space on the street aside from the territorial claims related to businesses. Fixed and movable furniture and objects on the street provided by the city help in defining space and territorializing it. Although people cannot permanently claim space in a public space such as the neighborhood commercial street, they are able to establish territories by repeated patterns of use. On a daily basis people may territorialize space using obvious and subtle gestures. Over time these territories become evident to other users.

PROXEMICS AND PERSONAL DISTANCE

The relationship and distance of human bodies to each other determines the range of social behaviors possible on the street. Because social behavior requires passive or active engagement with another, the interpersonal distances encountered by people on the street shape their experiences and social behaviors. In his 1966 work *The Hidden Dimension*, E.T. Hall defined four scales of distances between people: Intimate, personal, social and public. Since these four scales are determined by the increasing physical distance between bodies, each distance permits a different sensory perception between people. The intimate distance, where people are between 0m and 0.5m (less than 1.5 feet), allows the most sensory exchange. At this distance, two or more people are able to share a great deal through close sensory contact. People can see the intimate details of each other's faces and clothing; they are close enough to sense thermal information of other bodies; they are able to clearly hear the others even when they talk in whispers; and they can touch and smell their companions. This proximity permits a certain exchange of very personal and emotional information and also conveys the closeness to others. On the street, people at an intimate distance may be seen embracing, holding hands,

touching, or simply sitting very close to each other. The presence of people at an intimate distance on the street usually indicates a high level of ease for those engaged but this can also signal a message of comfort to those new to the street.

At the personal distance, people are between 0.5m and 1.2m (about 1.5 and 4 feet) from each other. At this distance, two or more people can engage in personal conversation and the details of their faces and bodies are visible to the others. Each person can occupy their private space but the distance allows them to reach out and touch the other, especially if the other person reaches out as well. The design of the neighborhood commercial street, by providing behavior settings suitable for close interactions and conversations such as a dedicated area for gathering and lingering, alcoves, niches, small setbacks and so on, can support interactions that take place within the personal distance. Places to sit, particularly movable seating options, allow people to create their own comfortable personal distances that are valuable for social interactions.

At the social distance, people are between 1.2m and 3.6m (about 4 and 12 feet) from each other. The social distance allows each individual to maintain a measure of privacy: There is no expectation of physical contact. Yet, as the name suggests, at much of this distance active social contact takes place since eye contact is possible and people can clearly recognize each other. Because of the street's linear configuration, the social distance serves multiple functions on the neighborhood commercial street. Encounters among known neighbors are most likely to occur within this space and to graduate to a more personal distance if needed. While standing or sitting on the street, strangers are likely to occupy space within the social distance, be aware of others around them and yet maintain their own privacy. A neighborhood commercial street with richly furnished wide sidewalks to accommodate benches, movable seating and other objects on the street creates a setting for groups to gather in a social distance.

Finally, according to Hall, public distance ranges from over 3.6m to 7.6m and more (about 12 to 25 feet and more). At these distances, people's personal space does not overlap and there is no expectation of any active interaction. Communication is facilitated primarily through the sense of sight. But because people are still able to recognize each other, they may move from this distance to a social, personal or intimate distance to interact more actively. Usually people will not communicate verbally at these distances unless there is a need to attract attention, such as calling out the name of a known person. In the context of the street, where strangers cross paths, the public distance is ideal for maintaining personal privacy, safety and the choice of engagement with unknown persons. This distance is also ideal for performance, as the distance is well suited for communication across groups.

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An understanding of these distances helps us appreciate the value of the street as a public space. As briefly discussed in Chapter 1 of *The Street*, urban scholars have explored the value of being in the presence of strangers—a true public—and advocated for it (Lofland, 1973; Sennett, 1977). Due to its limited space, the street often compels strangers or people who are little known to each other and who may have chosen to be at a public distance, to be at social or personal distances, particularly for those using the same side of the street. This creates opportunities for people to move from their individual territorial bubbles into a shared space to engage in passive and active social behaviors. These opportunities, namely to be in the presence of others and to feel part of a larger community, are crucial in contemporary times when we are able to satisfy most of our needs in our private realms or in an ersatz urban public realm—one that is under the control of privatized corporate groups disguised as civic entities, where even the strangers look the same as us and there is no chance to encounter the "other."

HUMAN BEHAVIOR AS A BASIS FOR DESIGN

Environmental psychologists and other researchers studying environment–behavior relationships have developed research methods in order to test their theories. These methods involve studying real-life situations and engaging common users of the environment—an effective way to understand human needs and preferences by empirically observing human behavior (Studer, 1969; Craik, 1970; Michelson, 1975).

> The most commonly accepted unit for design purposes is "human need". Such a concept has relevance perhaps; what it lacks is empirical substance. That is, we cannot observe need, but we can only infer its existence through observation of its empirical counterpart, behavior. ... Human behavior to be more correct unit of analysis, it has characteristics, which are relevant, empirically verifiable and operationally definable.
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> (Studer, 1969 quoted in Joardar, 1977)

Of the various methods, one good example is Perin's *behavior circuit*. Based on theories in ecological psychology and criticizing the results of architectural designs, Perin (1970) developed the concept of *behavior circuits* suited to the field of environmental design. A *behavior circuit* implies "an anthropological ergonomics, tracking people's behavior through the fulfillment of their everyday purposes at the scale of the room, the house, the block, the neighborhood, the city, in order to learn what resources—physical and human—are needed to support, facilitate or enable

them" (p. 78). However, following Canter (1977) and Gibson (1979), we may conclude that the criteria for selection of place encompass more than its ability to afford behavior. The role that aesthetic responses and affective qualities play in selection of place is equally important in understanding the use of space (Hull and Harvey, 1989; Kaplan *et al*., 1989; Nasar, 1994). On a fundamental level, aside from fulfilling needs, we derive aesthetic or sensory pleasures from the environment. These pleasures are a result of the "townscape"—the composition and organization of the fixed, semi-fixed and movable elements of the environment. Much has been written about this in the architecture and design fields, but we also derive pleasure and satisfaction from passive and active interactions with people and their activities. Lofland (1998) has categorized these as aesthetic pleasures and interactional pleasures. This pleasure and satisfaction, or the lack of it, becomes manifest in human behavior as people show signs of engagement or disinterest, comfort or anxiety.

Learning from the theories in ecological psychology and the understanding of human behavior suggests that an effective way to better evaluate neighborhood commercial streets would be to examine how the streets are able to fulfill everyday needs and provide aesthetic and interactional pleasures. This can be done by empirically studying the interrelationships between the characteristics of the street, including its uses, physical characteristics, and the management of the uses and the street space, and the behaviors (actions) as well as attitudes (feelings) of the users.