

Shaping Cities and Housing Environments for People

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Abstract

Since the 1960s, urban landscapes and housing environments have been profoundly shaped by industrial and technological advancements, alongside globalization. However, despite increasing environmental consciousness, urban planning has often neglected human-centered and neighbourhood-scale approaches, resulting in urban environments and housing complexes lacking essential physical and social qualities. Modernist urban planning, while addressing certain urban challenges, has inadvertently given rise to issues such as urban sprawl, lack of diversity, and social alienation, as exemplified by the failure of developments like the Pruitt-Igoe housing complex. This article explores human-centered approaches in urban planning and design, championed by influential figures like Constantinos A. Doxiadis, Jacqueline Tyrwhitt, N. John Habraken, Amos Rappoport, Christopher Alexander, and others. Their theories emphasize integrating human needs, behaviors, and cultural contexts into planning, focusing on fostering vibrant communities, adaptable environments, and responsive design principles. Inspired by traditional Mediterranean and Middle Eastern settlements, the neighbourhood emerges as a pivotal unit for fostering social cohesion, well-being, and belonging through the integration of private, semi-private, and public spaces to create meaningful connections. Addressing the deficiencies of contemporary car-centric and fragmented urban environments requires strategies that prioritize pedestrian-friendly spaces, community participation, and responsive design tailored to local contexts. Ultimately, achieving socially and environmentally sustainable urban environments depends on cohesive planning, innovative policymaking, and active community involvement. This vision requires a commitment to addressing both social and environmental dimensions of urban life, ensuring liveable, inclusive, and resilient cities for future generations.

Keywords: urban planning and design; human-centered approach; influential figures; traditional settlements; contemporary and future visions.

Introduction

Since the 1960s, industrial and technological advancements, coupled with globalization over the past two decades, have significantly shaped our urban landscapes and housing environments. Despite efforts toward environmental consciousness, particularly in developed countries over the last thirty years, much of the environmental literature has overlooked urban or neighborhood scales. Many housing complexes worldwide still lack essential physical and social qualities owing to the neglect of local values and needs in housing design.

In the middle of the 20th century, modernist urban planning sought to tackle urban challenges, yet inadvertently gave rise to social issues. These included problems such as urban sprawl and expansion, a lack of functional and formal diversity, and the presence of non-functional outdoor spaces as remnants of planning efforts. Consequently, the imperative to develop livable housing environments and cultivate community has become essential in addressing the adverse effects of modernism on cities worldwide. In this context, the decision to demolish the Pruitt-Igoe housing complex (St. Louis, Missouri, USA) in its fifteenth year of use not only draws attention to the influence of urban and environmental design on human behavior but also demonstrates the alienating effects of modernist planning and design



Figure 1: The most striking example of the negative consequences of design that disregards the social dimension: the Pruitt-Igoe housing complex in St. Louis, Missouri, USA (Source: Vliet 1998, 440).

principles, leading many theorists and critics to consider it as the end of modernism (Fig. 1).

In the last three-four decades, global changes have led to the emergence of cities that are not only disorderly and visually dull but also face significant environmental challenges that threaten the well-being of their residents. Contemporary development strategies, although they excessively consume land and natural resources, leading



to harm to ecosystems, also exacerbate the growing divide between various societal groups. This is because they often overlook the importance of considering local social dynamics, resulting in the erosion of local community values, economies, and overall quality of life. Additionally, the predominant approach of viewing the city merely as a mechanical assembly of buildings, rather than comprehending its unique context, poses challenges in sustaining its identity and meeting the inhabitants' needs for a supportive social environment.

In the late 20th century, recognizing the need to reduce car dependency for environmental and community reasons became increasingly apparent. Despite this awareness, urban environments remain largely car-centric, emphasizing the necessity for design alternatives prioritizing walking and cycling. Housing projects, often tailored to car needs, are thus unsustainable, requiring a shift towards transportation options favored by residents. Beyond environmental concerns, car-centric layouts also hinder community cohesion by dividing neighborhoods and isolating individuals. In dense urban areas, traffic poses safety risks for children due to poorly maintained streets and inadequate pedestrian infrastructure. Additionally, heavy traffic impedes neighborly interactions, highlighting the social drawbacks of car-oriented environments.

Advancements in communication technology have significantly altered perceptions regarding belonging to environments. Nonetheless, despite this shift, the importance of community remains evident. Especially in places and situations where communication with the internet has effectively entered daily life, there is a growing concern that the excitement of new connections will negatively affect urban social life. In essence, with each residence becoming the center of the world for its inhabitants, individuals are becoming more isolated from the community they are closely related to, leading to individualization (Oktay 1999, 54; Oktay, 2011).

Human-Centered approaches: The influencers

Constantinos A. Doxiadis, the visionary Greek architect and planner, and the founder of *Ekistics*, the predecessor journal of *Ekistics and the New Habitat*, distinguishes himself from other urban thinkers of his time through subtle differences in their approaches (Lawrence, 2024; Keleş, 2024; Tyrwhitt, 1962). He developed the concept of Ekistics in the mid-20th century, between the 1950s and 1960s, as a comprehensive theory of human settlements with his influential book *Ekistics: An Introduction to the Science of Human Settlements*. His approach represented a holistic understanding of the built environment and was conceptualized through five fundamental elements: (i) Anthropos (peoples and individuals), (ii) Nature, (iii) Society, (iv) Shells (buildings), and (v) Networks (roads, utilities, transportation, communication, and administrative boundaries). So, his approach can be seen as one of the earliest instances of human-centered urban planning within the context of planned cities (Doxiadis, 1968; Doxiadis, 1972).

Jaqueline Tyrwhitt, an influential urban planner, educator, writer, and the first editor of *Ekistics* journal, specifies a list of disciplines that have the similar concerns with the

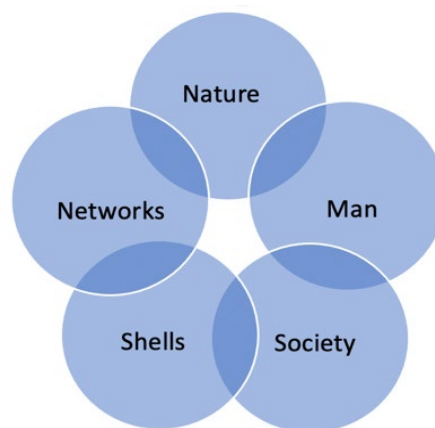


Figure 2: The Five Ekistics elements.

(Source: C. A. Doxiadis © Constantinos and Emma Doxiadis Foundation; redrawn by the author).

Ekistics; but refuses to reduce it to a mere bundling together of several different facets of the human environment. She considers Ekistics as an earnest and scientific endeavor to find ways of identifying and verifying the relations between the most significant factors that combine to make a viable human settlement (Tyrwhitt, 1962). Tyrwhitt collaborated closely with renowned planners like Patrick Geddes, Josep Lluís Sert, and Constantinos A. Doxiadis. Her vision centered international knowledge exchange, socially responsive design, and nurturing women's leadership.

N. John Habraken, a Dutch architect, and theorist, developed his concepts on housing design primarily in the late 1960s and early 1970s (Habraken, 1962). His objective was to conceive housing that addresses the varied needs of residents and promotes vibrant, inclusive communities by emphasizing user participation, adaptability, and versatility in design.

In the subsequent years, Amos Rapoport, a prominent figure in the field of architecture and urban planning, emphasized the importance of understanding the human aspects of urban form (Rapoport, 1977; Rapoport, 2006). He advocated for a human-centered approach to urban planning and design, emphasizing the importance of addressing human needs and experiences.

Christopher Alexander emphasized the importance of considering social life in architecture, advocating for designs that enhance social interactions and well-being. In *A Pattern Language* (Alexander et al, 1977), he introduced design patterns for communal spaces that foster social interactions. He promoted a human-centered design approach, creating comfortable, inviting environments that meet users' needs. In *The Timeless Way of Building* (Alexander, 1979), he discussed a 'living' architecture that evolves with the community, fostering belonging. He also highlighted architecture's role in promoting emotional and psychological well-being. Criticizing modernist architecture for neglecting social needs, Alexander believed integrating social considerations into design is essential for nurturing social interactions, community ties, and overall well-being.



Henry Sanoff promoted the idea of directly involving community members in the design process of their environments (Sanoff, 1999). His work encouraged more democratic and inclusive design and planning approaches, ensuring that the resulting designs better fulfill the needs and aspirations of communities.

The 'Responsive Environments' approach by Ian Bentley, Alan Alcock, Paul Murrain, Sue McGlynn, and Graham P. Smith, introduced in the 1980s and detailed in their book *Responsive Environments* (Bentley et al, 1985), has significantly influenced human-centered planning and design. This approach has been instrumental in educating professionals at the renowned Joint Centre for Urban Design at Oxford Brookes University¹. Bentley et al. developed guidelines to make environments responsive to users' needs, focusing on principles such as legibility (making environments understandable and navigable), variety (promoting diverse building types and public spaces), robustness (designing adaptable spaces), permeability (ensuring well-connected streets and spaces), visual appropriateness (aligning appearances with functions and cultural context), richness (offering diverse sensory experiences), and personalization (allowing individuals to personalize their environments). These principles collectively enhance urban livability and community cohesion by prioritizing the human experience in urban design.

The neighborhood as nexus for a humane urban environment

The neighborhood stands as a fundamental cornerstone of urban life, its contexts wielding significant influence over human behavior. It's imperative that neighborhoods transcend mere geographic entities; they should serve as vital contexts for daily existence, offering identifiable, well-equipped, and interconnected spaces that development involves fostering social closeness and cohesion among residents within a defined housing area; in essence, it's an endeavor to cultivate not just a collection of buildings in design, but a cohesive community of individuals who inhabit them (Lang, 2017/2005; Talen, 2019).

In *Bowling Alone: The Collapse and Revival of American Community*, Robert D. Putnam (2000) examines the decline of social capital in American neighborhoods, highlighting a significant reduction in neighborly interactions, trust, and collective engagement. He attributes this decline to factors such as suburbanization, increased commuting, and changing work patterns, which have weakened traditional community ties and diminished participation in local organizations. This erosion of social capital has undermined neighborhoods' ability to foster trust, reciprocity, and collective action, leading to less vibrant civic life and reduced mutual support. Putnam advocates for revitalizing neighborhood networks through initiatives that encourage community

engagement, trust-building, and social interaction to restore societal cohesion.

Given that space is the primary tool for social interaction, it's essential that housing areas are designed to facilitate social integration across various scales, spanning from the broader context of urban housing down to the scale of individual housing units. The integration of urban form with the ideal density determined by local socio-cultural dynamics positively affects the social relationships of individuals within the residential living environment. Especially when considering the 'neighborhood' unit, which enables the formation of a very strong sense of 'place' and 'belonging' among residents, when examining the unique structure of traditional Turkish (Ottoman) cities, the importance of designing the city by dividing it into *mahalles*, the small-scale and distinguishable quarters with social cohesiveness, becomes better understood (Oktay, 2004/2017/2020). When the urban form is dispersed and its structure and boundaries become blurred, as observed in many modern cities, social differentiation and alienation begin.

Oktay's survey findings (Oktay, 2023) underscore a strong connection between perceived social attributes, quality of life, and urban design and physical environment characteristics, aligning with previous research. Perceived neighborhood characteristics such as sense of community, feeling of neighborhood as home (Marans, 2003), perceived friendliness, and attachment (Hidalgo and Hernandez, 2001; Hunter, 1974) are notably more positive in consciously designed neighborhoods.

Research findings from various cities around the world indicate that the satisfaction of residents in housing communities is more closely linked to the design of the spaces between housing units rather than the quality of indoor spaces alone (Cooper Marcus and Sarkissian, 1988). Examining the architectural traditions of Mediterranean and Middle Eastern cities reveals a close integration between indoor and outdoor spaces, often achieved through semi-open areas like courtyards or open patios (Oktay 2020/2017/2004). However, modern city structures have deviated from this approach, resulting in a lack of spatial richness and meaningful connections between indoor and outdoor areas. To address this, it's essential to reintroduce the significance of outdoor spaces within housing developments, drawing from the hierarchical order of private, semi-private, semi-public, and public spaces found in traditional settlements if a more human-centered housing environment is desired.

Conclusion

The evolution of urban planning and housing design since the mid-20th century reveals a critical need to balance technological and industrial advancements with the social and environmental well-being of urban inhabitants. Modernist approaches, while addressing some urban challenges, often overlooked the human dimension,

¹ The author of this paper was fortunate to be one of the students who learned urban design under the mentorship of the three authors of this book.



leading to the erosion of community values and cohesion. Automobile-centered urban environments further exacerbate these challenges, hindering community interaction and fostering isolation. In contrast, human-centered approaches championed by visionaries like Constantinos A. Doxiadis, Jacqueline Tyrwhitt, N. John Habraken, Amos Rapoport, Christopher Alexander, and Henry Sanoff emphasize the integration of human needs, cultures, behaviors, and experiences into urban planning.

Addressing the deficiencies of contemporary urban planning demands a comprehensive strategy that considers the interconnected social and environmental dimensions of urban life. This involves revisiting transportation policies to diminish reliance on cars, improving the layout of public and semi-public spaces by seamlessly integrating them into residential areas, advocating for pedestrian-friendly environments, and proactively involving communities in the planning process. Such a comprehensive strategy also encompasses the implementation of responsive urban design strategies tailored to accommodate evolving societal needs and preferences.

In cities, neighborhoods are pivotal units for community interaction, support, and civic engagement, essential for tackling urban challenges and improving residents' quality of life (Putnam, 2000; Lang, 2017/2005; Talen, 2019). They should be seen as central units in urban planning and design, forming the foundation of a more human-centered urban environment. It is important to expand our understanding of neighborhoods to address both social and environmental needs, taking inspiration from the residential quarters of traditional Mediterranean and Middle Eastern cities as social-spatial models, while adapting to modern lifestyles.

The effective realization of these ideas and principles concerning urban planning and design depends on a suitable implementation strategy within a broader political-economic context. It necessitates a unified vision across society, sustained by unwavering commitment to avoid inferior solutions. Additionally, policymakers should creatively promote socially sustainable practices and encourage individual engagement in environmental practices.

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