LANDSCAPE TRANSFORMATIONS: FROM PERCEPTION TO URBAN SUSTAINABILITY

Sandra Medina Benini[1], Jeane Aparecida Rombi de Godoy[2], Angelo Palmisano[3]
[1]Post-Doctorate in Architecture and Urbanism at PPGARQ-UNESP and Faculty member of the Master's program in Architecture and Urbanism at UNIVAG, Brazil.
arquiteta.benini@gmail.com
[2]Post-Doctorate in Architecture and Urbanism at PPGARQ-UNESP, Coordinator and Faculty member of the Master's program in Architecture and Urbanism at UNIVAG, Brazil.
urbanista.jeane@gmail.com
[3] Doctor of Social Sciences, Associate Coordinator and Professor of the Academic Master's in Architecture and Urbanism at UNIVAG, Brazil.
angelopalmisano@uol.com.br

ABSTRACT

This article aimed to address the evolution of the interaction between human beings and the environment, highlighting the transition from simple observation of nature to a comprehensive understanding of the landscape as a complex and multifaceted phenomenon. From Georg Simmel's distinction between nature and landscape, through the contributions of Augustin Berque and Gordon Cullen, to contemporary perspectives, the discussion about landscape has evolved to incorporate cultural, social, and emotional dimensions. The analysis demonstrates how the landscape, initially seen as a mere section of nature, has become a central element in discussions about sustainability, quality of life, and sociocultural integration, emphasizing its importance in urban planning and landscape architecture. It highlighted the need for an interdisciplinary approach that views the landscape as a system composed of biophysical, urban, and sociocultural elements, aiming to promote sustainability, social inclusion, and the improvement of quality of life in cities. The importance of open spaces in urban and regional landscape planning and design is underscored, exemplified by innovative projects such as the São Luís do Maranhão Urban Landscape Plan and the Curitiba Landscape Planning. These projects, in addition to integrating natural and built elements, emphasize the importance of the local context and the specific characteristics of each region, aiming to create greener, more livable, and resilient cities. In this sense, the relevance of a holistic understanding of landscape and landscape architecture, which considers the variety of subsystems and scales involved, recognizing the landscape as a multifaceted system that encompasses natural and human aspects, was highlighted. The dynamic nature of the landscape and the need for adaptive and reflective criteria in planning and management are emphasized, suggesting that landscape architecture can be a powerful tool in transforming cities, promoting more sustainable, livable, and resilient urban environments.

KEYWORDS: *Contemporary city, Environment, management.*

I. INTRODUCTION

The interaction between humans and their surrounding environment has been the subject of study across various disciplines over the centuries, evolving from simple observations of nature to a deeper understanding of the landscape as a complex and multifaceted phenomenon. This essay aims to explore the nuances of this evolution, addressing how different thinkers, from the early 20th century to the present day, have contributed to the development of a richer and more detailed understanding of the landscape. Starting with Georg Simmel's initial distinction between nature and landscape in 1913, through the broadening of the discussion by Augustin Berque and Gordon Cullen, to contemporary perspectives that consider the landscape as an entity inherently linked to the cultural, social, and

emotional dimensions of human experience, this text seeks not only to provide a historical overview but also to highlight the importance of landscape in urban planning and landscape architecture. Through this journey, it becomes evident that the landscape has transformed from a mere object of contemplation into a central element in discussions about sustainability, quality of life, and sociocultural integration, demonstrating its relevance not only as a physical component of the environment but as a key piece in the construction of urban spaces that are functional, beautiful, and meaningful for the communities that inhabit them.

The article aims to address the evolution of the interaction between human beings and the environment, highlighting the transition from simple observation of nature to a comprehensive understanding of the landscape as a complex and multifacetted phenomenon. For the development of this article, qualitative research was adopted, which allowed for a theoretical and analytical approach to explore the evolution of perception and understanding of the landscape, from simple observation of nature to a comprehensive and integrated understanding of the landscape as a multifacetted phenomenon involving cultural, social, and emotional aspects. The discussion is based on a comprehensive literature review, addressing the contributions of important thinkers in the field of architecture and urbanism. The analysis is conducted through an interdisciplinary perspective, considering the landscape as a system composed of biophysical, urban, and sociocultural elements, aiming to promote sustainability, social inclusion, and the improvement of quality of life in cities. The importance of open spaces in the planning and design of urban and regional landscapes is highlighted, exemplified by innovative projects, emphasizing the need for an approach that takes into account the local context and the specific characteristics of each region.

In this sense, the landscape's multiple facets, as a system composed of various subsystems that encompass both the natural and the human, the urban and the rural, as well as the artificial and the unbuilt, reflect a comprehensive and integrative understanding of landscape architecture. This holistic understanding is crucial for addressing the complexity of interactions within the landscape, highlighting the indispensable role of open spaces in formulating conscious analyses and interventions. The landscape's temporal dynamics require an approach that acknowledges its constant evolution, demanding adaptive and reflective criteria at all stages of the planning and management process, from initial conception to long-term implementation and maintenance.

The integration of different levels of scale in landscape design, as outlined by Michael Laurie, underscores the importance of an approach that fluidly transitions between the design detail of a single lot and the broad vision of regional planning. This scaled approach allows designers and planners not only to enrich the quality of the created spaces but also to promote a more creative and meaningful occupation by the communities. Laurie's contribution highlights the need for a landscape design practice that is sensitive to local nuances and capable of responding to the complexities of a constantly changing global context, thus encouraging an occupation that reflects both the immediate needs and future aspirations of communities.

This multidimensional perspective emphasizes the relevance of an integrated and systemic understanding of the landscape, transcending mere differentiation of scales to encompass a comprehensive view of landscape architecture. Such an approach does not aim to fragment but to unify the various aspects and scales of intervention, promoting a design practice that is in harmony with the principles of sustainability, resilience, and social inclusion. Contemplating the global and local transformations of recent years, the growing importance of open spaces and urban redevelopment projects in Brazil becomes evident, not only responding to demands for environmental and cultural preservation but also contributing to the revitalization of urban areas, demonstrating the potential of landscape architecture in shaping more sustainable and inclusive urban futures.

In this context of an expanded understanding of landscape and landscape architecture, the consideration of open spaces emerges not just as a necessity but as a central strategy for enriching urban life quality. Projects such as the Urban Landscape Plan of São Luís do Maranhão and the Landscape Planning of Curitiba, both conducted by renowned professionals like Rosa Kliass, exemplify the practical application of an integrated vision of landscape and urban planning. These pioneering initiatives reflect a conscious approach to landscape design, effectively balancing urban development with environmental

and cultural conservation, highlighting the importance of an advanced and modular analytical methodology in the analysis and intervention in urban areas.

The incorporation of geoecological criteria in the planning of Salvador, for example, demonstrates an innovative approach that prioritizes not only the aesthetics and functionality of open spaces but also their sustainability and capacity to meet the needs of different community segments. These examples illustrate how landscape architecture can

II. FROM NATURE TO URBAN LANDSCAPE: REFLECTIONS ON THE PERCEPTION AND TRANSFORMATION OF SPACE

In 1913, Georg Simmel, a prominent figure in philosophy, elucidated a fundamental distinction between nature and landscape. He proposed that landscape transcends mere natural existence by being a meticulously delineated segment of nature. This perspective implies that landscape is the result of a dialectical relationship between an observer and an observed element, thus emerging from this interaction (Simmel, 1986).

Continuing with this reflection, Augustin Berque (2016), a renowned geographer, enriched the discussion by suggesting that the conversion of nature into landscape goes beyond simple observation. He emphasized the importance of the emotional and cultural bonds forged by people with the spaces they inhabit. These connections, imbued with memories and intimate meanings, unveil the impossibility of neutrality in humanized spaces, reflecting the load of subjectivity and experiences that permeate them.

Following this line of thought, in 1961, Gordon Cullen, a visionary architect, introduced the concept of urban landscape. He argued that such a landscape is constituted from subjective values that elevate it to the level of art, being also shaped by common understanding and the inherent logic to everyday experiences. Cullen proposed that the urban landscape exceeds mere functionality, suggesting a complexity that encompasses both aesthetics and human experience (Cullen, 2005).

This chain of thought, initiated by Simmel and later expanded by Berque (2016) and Cullen (2005), demonstrates an evolution in the understanding of landscape, from its conception as a mere cutout of nature to its appreciation as a phenomenon rich in cultural, emotional, and aesthetic meanings, shaped by human perception and social interactions.

Thus, the landscape is a complex entity, intertwined with natural and human elements, transcending the simple relationship between observer and the observed object. It unfolds from an intense interaction among various factors, encompassing multiple spatial and temporal dimensions. However, Joan Nogué (2009), a renowned theorist, perceives the landscape as a deeply rooted social and cultural entity in the territory. From this perspective, the landscape reveals itself simultaneously as a tangible physical entity and a social construction, reflecting the duality of being both a concrete reality and a symbolic representation.

The appreciation and understanding of the landscape require an active observer, someone capable of interpreting and reimagining it. This observation process is not passive; on the contrary, it is an act of creation and recreation, where the landscape is continually invented and reinvented. By engaging in reflection on landscapes, we are invited to a deeper understanding of the world around us, recognizing them not just as physical sceneries but as spaces laden with meaning, history, and social relationships. This expanded understanding allows us to see the landscape as a palimpsest, a surface on which layers of time and humanity are inscribed, revealing the intricate tapestry of human and natural existence.

From a broader perspective, the landscape can be conceived as a multifaceted space of experience, where elements and processes, both material and immaterial, natural (including biotic and abiotic), and sociocultural, coexist. It encompasses the set of human perceptions that confer meaning, integrating the environment we live in and the values that sustain it. Landscape degradation not only results in the loss of natural resources but primarily entails a significant reduction in people's quality of life (Tardin, 2018).

In this framework, it is crucial to address the design of the urban landscape from an interdisciplinary perspective, recognizing it as a system composed of biophysical, urban, and sociocultural aspects. This approach considers the landscape as a set of interconnected dynamics and values, providing an essential foundation for the understanding and interpretation of the landscape. Such understanding is vital for the development of strategic guidelines for urban planning and projects, enabling practical and effective interventions in the lived space (Tardin, 2018).

When exploring the concept of landscape, we often resort to adjectives to describe its nature, with "natural landscapes" and "cultural landscapes" being the most commonly used terms. These categories originally served to indicate the level of human influence on a given landscape.

Thus, a natural landscape is understood as one that presents minimal or no human intervention, remaining in harmony with natural and ecological processes and rhythms. On the other hand, a cultural landscape reflects a significant transformation by humans, distinguished by the predominance of elements that express cultural identity.

Over time, various cultures have urbanized and modified landscapes, imprinting unique characteristics on them without, however, unlinking them from the natural laws that govern the environment. These modifications introduce both material and immaterial attributes, influencing not only the geoecological dynamics but also decisions related to their future management and conservation.

According to Cavalcanti (2018), in his work "Landscape Cartography - fundamentals," the landscape is structured in three distinct layers: physical, biological, and cultural/social. This division highlights the complexity of the landscape, evidencing the interconnection between its natural aspects and the human influences

III. THE SOCIOCULTURAL DYNAMICS IN SHAPING THE LANDSCAPE

The sociocultural dynamics within a landscape are a clear reflection of human existence in a given space, encompassing a diverse spectrum of values, beliefs, and cultural expressions, ranging from art, politics, philosophy, and religion to the minutiae of daily life. These components are intrinsically linked to human perceptions of an environment, whether natural or modified, as well as to the interactions that form among individuals and between them and the environment (Tuan, 1974; Spirn, 1998). From the perspective of cultural geography, such dynamics imprint physical evidence on the landscape, including architecture, agricultural methods, and cultural artifacts, and are simultaneously shaped by this physical context, in a recurring process of perception, conceptualization, and action.

This process is particularly significant for a society, as it provides an interpretative framework for a specific place, directing the shaping of the landscape. Thus, the landscape consequently serves as a reflection of the relationship between humans and the environment, being both influenced by and influential on this interaction. In this way, the physical landscape takes on collective meaning, acting as a driver of the social process of perception, conception, and action, promoting a continuous and dynamic interaction between communities, the built space, and the environment.

Understanding this collective meaning and the values attributed to a particular landscape is crucial for deciphering what a community values, outlining the foundation of its existence and persistence in that space. Such understanding is deeply enriched by actively listening to the people involved, uncovering the connection between their values and the physical context in which they reside. The absence of this human dialogue turns the analysis of sociocultural manifestations into mere theoretical speculation or abstraction. Therefore, it is imperative to incorporate the human perspective in the assessment of the landscape, to achieve a broader and more detailed understanding.

Exploring the essence of a physical landscape requires a comprehensive analysis, including its artistic manifestations, such as paintings and literary works, as well as the policies and institutions that influence its configuration. However, it is crucial to recognize the values that give meaning to the landscape for those who experience it daily. These values reflect people's perceptions and evaluations

of their community, the built space, and the environment, finding expression in the landscape through elements like architecture, urban planning, and land management.

In this sense, the landscape is conceived as the result of a collective effort of societies, transcending mere human spatial organization. It consists of a series of marks and clues that imprint a dense layer of symbolism and substance on the ground.

Within this framework, the landscape presents itself as an entity in perpetual evolution, sculpted by cultural values through time and space. It functions as a channel through which humanity leaves its mark on the Earth, endowing the landscape with a durability that surpasses natural rhythms, converting it into a historical compendium.

Observed through a temporal lens, the landscape is constantly in flux, being shaped both by natural forces and human interventions that mirror the social, economic, and political structure. The emergence of cultural landscapes is driven by human needs, whether in the conquest of territories or the struggle for survival. The establishment of the first urban parks in 18th-century England, for example, arose as a solution to the adverse sanitary conditions of industrial metropolises, improving the urban environment and offering a sanctuary for the physical and psychological rejuvenation of its inhabitants.

Identifying the values that underpin community practices and desires for the future design of the landscape facilitates the establishment of meaningful connections between these values and the dynamics of the biophysical and urban environments. This approach is essential to highlight the elements and processes that reflect the residents' values, which must be considered in the development of landscape planning strategies.

Taking into account the values and meanings attributed to the elements and processes of the biophysical and urban environments, as well as their spatial and functional logics, guides the definition of guidelines for planning and proposing projects. These guidelines can integrate collective values into the design of open spaces and systemic landscape ordering strategies. Thus, sociocultural dynamics emerge as active vectors in the formulation of collective and systemic landscape ordering strategies.

IV. SCALES AND DIMENSIONS OF LANDSCAPE ARCHITECTURE: URBAN AND ENVIRONMENTAL TRANSFORMATION IN BRAZIL

The landscape can be interpreted as a multifaceted system that encompasses a variety of subsystems, including natural and human aspects, urban and rural, as well as natural and artificial elements, buildings, and unbuilt areas. In this context, the system of open spaces plays a vital role in analyzing and understanding these interactions.

In this process, it is essential to recognize the dynamic nature of the landscape over time. Thus, intervening in the landscape implies engaging with temporality, applying specific criteria for proposal, evaluation, planning, and management.

The concept of space is intrinsically linked to the notion of scale, which can vary from the dimension of a single lot to the broader context of streets, neighborhoods, cities, municipalities, municipal agglomerations (vectors), metropolises, and regions. Regardless of the scale under consideration, the primary goal of landscape design is to enrich the quality of space, encouraging creative and meaningful occupation by the community.

In "An Introduction to Landscape Architecture" (1986), Michael Laurie explores the broad spectrum of landscape architecture, detailing its main strands: Landscape Design, Urbanism, and Landscape Planning. Landscape Design focuses on the aesthetic and functional arrangement of open spaces on smaller scales, exemplified by the innovative work of Roberto Burle Marx, who united art and botany. Urbanism deals with urban spatial organization, involving the creation of public spaces and road structuring. Landscape Planning, aimed at large areas, is based on ecological principles to develop land use plans and public policies, emphasizing environmental conservation. Laurie points to the need for a holistic understanding of landscape architecture, overcoming scale differences to integrate the various

dimensions of the discipline, underscoring the importance of designers' project approach in shaping space.

The discrepancies in the approaches of landscape architecture seem to be rooted in the tendency to interpret it in an absolute and unified manner, neglecting the importance of scale variations. These variations are fundamental in delineating the specific domains of action in landscape architecture, as well as in establishing its theoretical, conceptual, and methodological bases. The segmentation proposed by Laurie in 1986 brought three significant contributions to clarify the issue of intervention scales, although it still requires a broader contextualization within landscape architecture in Brazil.

The goal is not to fragment knowledge through the distinction of scales, which would represent a regression to reductionist thinking. Instead, an integrated understanding of the landscape is sought, serving as a unifying link between the various magnitudes of project intervention in landscape architecture.

In project practice, scale and size play crucial roles, influencing our performance as designers. It is possible to work on small-scale projects, such as designing a residence on a challenging site; medium-scale projects, such as developing new urban developments or parks; or large-scale projects, like planning new cities or regional conservation strategies. However, competence in a specific scale does not automatically imply the ability to design at other scales.

The last three decades of the 20th century witnessed profound changes in the global economy, information circulation, and the configuration of urban environments. Within this framework of transformation, Brazil underwent a phase of reorientation and restructuring, focusing on the urban redesign of central and potentially central areas, as well as the protection and revitalization of inactive or deteriorated urban and peri-urban zones. These strategies are notably reflected in the projects for open public spaces carried out at the time, observable in various parts of the country, particularly in the Southeast region.

During this period, both in Brazil and on the international scene, various urban redevelopment projects were implemented, affecting neighborhoods and cities on a scale that reached regional repercussions. These efforts were often driven by the need to preserve environmental and cultural heritage. Significant initiatives were also taken to protect previously neglected natural ecosystems, such as mangroves, areas along watercourses, lagoons, springs, remnants of native forests, and for the recovery of degraded spaces, such as quarries.

In the context of urban and regional landscape planning and design, open spaces assumed a central role, guiding the planning and design of cities by integrating vital aspects of the territories, such as natural elements, visual appreciation, and the potential for physical transformation.

V. LANDSCAPE PLANNING

In the context of urban and regional landscape planning and design, open spaces stand out as fundamental components, adding vital resources such as nature, visibility, and the capacity for transformation. This focus is exemplified in the Urban Landscape Plan of São Luís, Maranhão (2003), developed by Rosa Kliass, Gláucia Dias Pinheiros, and Nícia Paes Bormann, aiming to valorize the cultural and environmental heritage. The plan adopts a targeted strategy, identifying priority areas for preservation or urban development, and establishes guidelines for sustainable occupation (Farah; Schlee; Tardin, 2010).

Similarly, the Landscape Planning of Curitiba, envisioned by Rosa Grena Kliass in 1966, in conjunction with the Urban Plan by Jorge Wilheim, stands out as a pioneer of an innovative methodology for its time. This plan focused on creating a hierarchized system of open spaces to meet the growing demand for green areas, provoking a remarkable transformation in Curitiba's urban landscape.

In 1977, the city of Salvador was the subject of a study on open spaces conducted by Rosa Grena Kliass and the Ergam team, aiming to guide urban planning. The plan established criteria based on geoecological characteristics for the occupation of the territory, suggesting the formation of parks and

preservation areas, and implementing a system of green areas to serve different segments of the community (Farah; Schlee; Tardin, 2010).

These projects reflect the application of advanced analytical methodologies in landscape architecture, as proposed by Ian McHarg, allowing for a modular approach in the analysis of urban areas. Such initiatives demonstrate the ability of landscape architecture to integrate natural and built elements, promoting sustainability and enriching the urban fabric.

Furthermore, these projects underscore the importance of considering the local context and specific characteristics of each region when planning urban development. They also highlight the need to balance development with the preservation of the environment and cultural heritage, ensuring that cities are pleasant and sustainable places to live. These initiatives serve as inspiring examples of how landscape architecture can contribute to creating greener, more livable, and more resilient cities.

VI. FINAL CONSIDERATIONS

This text has outlined the evolution and complexity of the concept of landscape in landscape architecture, emphasizing the transition from a purely natural understanding to a more integrated approach that incorporates cultural, emotional, and aesthetic aspects. It highlights the importance of the interaction between the observer and the environment in the creation of the landscape, underscoring the role of human perception and social interactions in this process. Moreover, it discusses the need for an interdisciplinary approach in urban planning that considers the landscape as a system composed of biophysical, urban, and sociocultural elements, aiming to promote sustainability, social inclusion, and the enhancement of life quality in cities.

In this regard, the significance of a holistic understanding of landscape and landscape architecture is paramount, considering the variety of subsystems and scales involved. The article points out that the landscape is a multifaceted system that encompasses natural and human aspects, urban and rural, and that the system of open spaces plays a vital role in analyzing and understanding these interactions. Being a multifaceted system that spans a variety of subsystems, including natural and human, urban and rural, as well as natural and artificial elements. This conception recognizes the importance of open spaces in analyzing and understanding interactions within the landscape and highlights the dynamic nature of the landscape over time. The article also discusses the relationship between the conception of space and scale, emphasizing that the primary goal of landscape design is to enrich the quality of space, regardless of the scale under consideration. Furthermore, it stresses the importance of a holistic understanding of landscape architecture, overcoming scale differences, and examines changes in the Brazilian urban landscape, especially in the last decades of the 20th century, highlighting the importance of open spaces in urban and regional landscape planning and design.

By discussing the conceptual approach to landscape and its relevance to urban design and planning, it presents open spaces in urban and regional landscape architecture, exemplified by projects such as the Urban Landscape Plan of São Luís do Maranhão, the Landscape Planning of Curitiba, and the study on open spaces in Salvador. These projects demonstrate the application of advanced methodologies in urban analysis and planning, integrating natural and built elements to promote sustainability and enrich the urban fabric. Additionally, they emphasize the importance of considering the local context and the specific characteristics of each region, seeking to balance urban development with the preservation of the environment and cultural heritage, aiming to create greener, more livable, and more resilient cities.

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AUTHORS

Sandra Medina Benini - Faculty member of the Master's program in Architecture and Urbanism at UNIVAG-MT. They have a Bachelor's degree in Architecture and Urbanism from UNIMAR (1995), a PhD in Architecture and Urbanism from Universidade Presbiteriana Mackenzie, CAPES/Prosup scholarship holder (2016), and a Post-doctoral degree in Architecture and Urbanism from FAAC/UNESP, PNPD/Capes scholarship holder (2017).

Jeane Aparecida Rombi de Godoy - Coordinator of the Postgraduate Course in Architecture and Urbanism at UNIVAG in association with the Pontifical Catholic University of Campinas. Postdoctoral research in architecture and urbanism at FAAC-UNESP (2016-2017). Architect and urban planner from the Faculty of Architecture and Urbanism of Tupã (1986), PhD in Architecture and Urbanism at the Presbyterian University Mackenzie/SP (2016).

Angelo Palmisano - Associate coordinator of the academic master's course in Architecture and Urbanism at the University Center of Várzea Grande - UNIVAG, in association with the Pontifical Catholic University of Campinas. Doctor of Social Sciences (2003), Master in Business Administration (1999), Bachelor in Business Administration (1981), all completed at the Pontifical Catholic University of São Paulo - PUC/SP.