

GUIDELINES FOR ASSESSING ARCHITECTURAL APPROPRIATION IN REDEFINING PERCEPTIONS OF ECONOMIC DISPARITY

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Contemporary architecture is currently a reflection of economic disparity, aggravating existing social differences. Architecture can modify this perception through the architectural appropriation of spaces and make it less noxious to cities' public spaces. This study develops a guideline to assess projects based on architectural appropriation of spaces using Henri Lefebvre's theory of the social production of spaces and its concepts through the lens of the following iconic experts: Bruno Taut (Germany) and Christian Norberg-Schulz (Norway) on landscape; Yi-Fu Tuan (China) on social appropriation; and Peter Zumthor (Switzerland) on materiality. As a result, the study identifies social appropriation parameters and the physical material parameters. The final guideline represents a tool to assess the ability of architectural projects to reduce economic disparity by fostering dynamic appropriation and empowerment in built spaces. The guideline focuses on landscape, social appropriation, and the use of local materials that reflect local identity, thereby mitigating perceived economic inequalities.

Keywords: Social crisis, Empowerment, Social space, Contextual integration, Symbolism of space, Kinesthesia, Aesthetics, Spirit of place.

1 ECONOMIC DISPARITY AND ARCHITECTURAL APPROPRIATION OF SPACES

According to economist Stiglitz (2015), economic disparity refers to the persistent gap between the rich and the poor, which causes inequality in accessing education, healthcare, political power and living standards. This disparity is often reflected in the scarcity of formal construction and public spaces. It is estimated that over 80% of the buildings worldwide are constructed without professional planning and with the limited available resources (Vellinga 2018). Current architectural practice is contributing to economic disparity worldwide, predominately serving the interests of luxury and comfort for a few (Palero 2021) while widening the gap between the social and economic groups and neglecting public urban spaces.

Architectural appropriation emerges as a powerful tool to catalyze positive social dynamics and transform the perception of economic disparity. This concept implies that citizens must actively engage in shaping and redefining their built environment to transform spaces according to their needs and aspirations. Through this, citizens become active agents of urban change as these actions improve their psychological well-being and promote greater social equality and empowerment by fostering a shared sense of community (Kaplan and Kaplan 1989).

2 HENRI LEFEBVRE AND THE THEORY OF SOCIAL SPACE

Henri Lefebvre's theory of social appropriation of space presented in his book "The Production of Space" (1974) defines the appropriation, as his theory of social space analyses how spaces are created, used, and lived by people and how these spatial interactions influence the construction of everyday life and identity. This implies that built spaces are not simply static objects but are in a constant process of appropriation and re-signification by the people who inhabit them (Lefebvre 1974). It is not just about how architects design spaces, but also how these spaces are perceived, experienced, and transformed by those who occupy them. Lefebvre argues that the appropriation of space is a social and political act, in which people can claim or resist the control imposed on spaces by dominant powers, linking space appropriation to an active participation in shaping the built environment and is experienced through the following aspects:

- **Landscape:** refers to the way people interact and modify natural, urban, and man-made environments.
- **Social interactions:** architectural spaces where individual and collective identities are expressed and dynamics of power manifested. The way people use and transform built spaces reflects underlying social relations and can be a means for resistance or the affirmation of social identities.
- **Materiality:** materials can reflect symbolic and cultural traditions, socioeconomic status, or cultural values. The way in which people interact with the materiality of the space, whether modifying it, adapting to it or re-signifying it, is part of its appropriation.

3 ASPECTS OF ARCHITECTURAL APPROPRIATION OF SPACE THROUGH THE LENS OF ARCHITECTURE

Bruno Taut (Germany), Christian Norberg-Schulz (Norway), Yi-Fu Tuan (China), and Peter Zumthor (Switzerland) are crucial authors in discussing architectural appropriation and the transformation of economic disparity due to their complementary perspectives to Lefebvre's study. These authors, denoting ideas from 1919, 1979, 1977, and 1998, respectively, provide a deep understanding of how architecture can be a powerful tool for addressing and transforming perceptions of economic disparity. Taut (1919), with his work in social housing, showed how architecture can improve people's lives. Norberg-Schulz (1979) emphasized the importance of context and identity in the perception of the built environment through his concept of *genius loci*. Tuan (1977), from humanist geography, explored how spatial experiences influence perception and social inclusion; and Zumthor (1998), by focusing on quality and atmosphere, demonstrated that thoughtful design can transform the perception and functionality of spaces, promoting dignity and a sense of belonging.

3.1 Landscape - Bruno Taut and Christian Norberg- Schulz

Bruno Taut through his work "Alpine Architektur" (1919) and Christian Norberg-Schulz, in his book "Genius Loci: Towards a Phenomenology of Architecture" (1979) emphasize the influence that landscape elements exert on architecture that is in tune with the environment and helps to develop a sense of emotional and cultural appropriation of its inhabitants. To illustrate their perspective, they explore the next key points:

- **Character and "spirit of place":** it refers to the Genius Loci or "spirit of place", which emphasizes how elements such as topography, climate, and vegetation define a place's identity and allow people to emotionally connect with it.

- **Sensorial and phenomenological experience:** considers how landscape elements influence architectural spaces, creating environments that are not only seen but also experienced through all senses.
- **History and Collective Memory:** explores how landscape elements that evoke history and collective memory can foster a deeper emotional and cultural appropriation, enabling people to significantly identify with the built environment (Norberg-Schulz 1979).

3.2 Social Appropriation - Yi-Fu Tuan

Yi-Fu Tuan's work, "Space and Place: The Perspective of Experience" (1977) helps to comprehend how architecture can either facilitate or limit the way individuals actively engage with their physical and cultural environments, imbuing them with personal and cultural meaning while shaping urban and natural landscapes. The following aspects socially evaluate space appropriation:

- **Space perception:** evaluates how individuals perceive and experience the physical space around them and how these perceptions influence their daily activities and social interactions.
- **Symbolism of place:** analyses the personal and cultural meanings that individuals attribute to a certain place by understanding how its physical characteristics and cultural history intertwine to shape the identity and sense of belonging of the people who inhabit it.
- **Use of space:** refers to how individuals and groups adapt to the physical environment to meet their needs and aspirations and how they use the space for specific social, economic, or cultural activities.
- **Social Dynamics:** analyses how social interactions and power relations are reflected and reinforced through the shared use and perception of space in order to create a cultural identity of a particular community.
- **Design and Planning:** evaluates how architectural and urban planning decisions influence the appropriation of space of an entire community by considering how accessibility, aesthetics, and environment's functionality affect its use and perception.

3.3 Material – Peter Zumthor

Based on Peter Zumthor's work "Thinking Architecture" (1998), appropriation through the use of material can be defined as the process of giving poetic and transcendent meanings to materials used in architectural works by showing their natural and sensory qualities. The following key points allow evaluating materiality in space appropriation:

- **Significant materiality:** select materials that serve functional purposes and convey meaning and sensations.
- **Sensitive construction:** refers to a technical approach in the selection and use of materials, considering traditional and contemporary construction methods.
- **Constructive appropriation:** relates to how materials are manipulated and assembled together in construction affects the emotional and physical appropriation of space.
- **Sensorial quality:** materials are more valuable if they enrich the tactile, visual, and acoustic sensory experience of users.
- **Durability:** materials that age gracefully over time, maintaining their beauty and relevance are more valuable.

- **Contextual integration:** refers to the importance of choosing materials that harmonize with the natural and cultural environment. The use of endogenous materials with historical and cultural connections is preferred since they physically blend with the surroundings and hold symbolic and emotional value for the local community, fostering a sense of belonging.

4 GUIDELINE TO ASSESS ARCHITECTURAL APPROPRIATION OF SPACES IN ARCHITECTURAL PROJECTS

Considering the previous aspects, the following guideline, shown in Table 1, was developed in order to assess architecture projects based on the three main aspects of architectural appropriation of spaces:

Table 1. Guideline to architectural appropriation of spaces in architectural projects (Source: Own elaboration).

Guideline for Architectural Appropriation of Spaces		
Aspects for appropriation	Key point	Evaluative Questions
Landscape Taut (1919) and Norberg-Schulz (1979)	PLACE IDENTITY THROUGH LANDSCAPE. <i>Character and "spirit of place (genius loci)":</i> how landscape elements define a place's identity and allow people to emotionally connect with it	• How do the <i>landscape elements</i> define the identity of the place? • How does the project <i>respect and enhance</i> this identity? • How does this <i>identity emotionally connect</i> through landscape features such as: <i>topography, climate and vegetation</i>?
	HISTORY AND COLLECTIVE MEMORY. Determines how landscape elements that <i>evoke history and collective memory</i> enable people to <i>identify with and relate to the built environment</i>	• What landscape elements that <i>evoke the history and collective memory</i> of a community are integrated in the project? • How are these elements incorporated to <i>help people identify</i> with the project and with the natural environment? • How does the project <i>balance the preservation</i> of historical elements contemporary use, ensuring that the <i>landscape remains relevant and meaningful</i>?
	KINESTHESIA. <i>Sensorial and phenomenological experience:</i> how landscape elements contribute to <i>environments experienced through all the senses</i>	• Which landscape elements create <i>kinesthetic experiences</i> and how do they do so?
Social appropriation Tuan (1977)	PLACE CULTURAL IDENTITY. <i>Symbolism of place:</i> how <i>spatial physical characteristics and cultural history</i> intertwine to <i>shape identity</i> and sense of belonging	• How does the project reflect and engage with <i>the local culture</i>?
	BEING INCLUSIVE. <i>Social dynamics:</i> how <i>social and cultural identity</i> is constructed through interactions and power relations within shared spaces	• Which <i>social dynamics</i> does the project enhance to help <i>create a shared social and cultural identity</i>? How are these dynamics enforced? • How does the project <i>reflect the social structure</i> of the community while <i>ensuring inclusivity and collective well-being</i>?

Table 1 (contd)

Social appropriation Tuan (1977)	ROUTINARY USAGE. <i>Space perception:</i> how individuals' perception of physical space influence <i>daily activities and social interactions</i>	How does the project impact people's <i>daily activities and social interactions</i>?
	ADAPTATION & APPROPRIATION. <i>Use of space:</i> how people <i>adapt</i> their environment to <i>meet social, economic, and cultural needs</i> .	- Does the project allow people to <i>adapt</i> and <i>use</i> space flexibly <i>over time</i>? - In what ways does the project <i>support</i> the <i>social, economic, or cultural activities</i> of the community?
	AESTHETICS. <i>Design and planning:</i> how <i>aesthetics and functional qualities</i> are <i>accessible, respectful, and meaningful</i> to local users.	How is the project's aesthetic <i>respectful of and approachable</i> to the <i>local values and sensibilities</i>?
Materiality Zumthor (1998)	CONTEXTUAL INTEGRATION. Choosing materials that <i>harmonize both physically and symbolically with the natural and cultural environment</i>	- How do the materials <i>harmonize with the natural environment</i>? - What <i>meaningful connections</i> do these materials foster with the local community?
	FUNCTIONAL PURPOSES. <i>Significant materiality:</i> materials serve <i>functional purposes</i> while conveying <i>meaning</i>	- How do the selected materials fulfill <i>functional requirements</i> within the project? - In what ways are these materials <i>meaningful</i>?
	TRADITIONAL & CONTEMPORARY CONSTRUCTION METHODS. <i>Sensitive construction:</i> material selection considers both traditional and contemporary construction techniques.	How does the <i>technical approach</i> address both <i>traditional and contemporary construction methods</i>?
	APPROPRIATION THROUGH THE CONSTRUCTION PROCESS. <i>Constructive appropriation:</i> how materials are manipulated and assembled affects <i>emotional and physical appropriation of space</i> .	How did the <i>construction process</i> contribute <i>emotional and physical appropriation</i> to the community?
	SENSORIAL QUALITY OF MATERIALS. <i>Materials are more valuable when they enrich tactile, visual, acoustic, and sensory experiences.</i>	How do the selected materials <i>enrich the sensorial experience (tactile, visual and acoustic and sensory)</i> of the space?
	DURABILITY Materials that <i>age gracefully and maintain relevance over time</i> .	How does the design address long-term material maintenance to ensure continued performance and value as materials age?

5 CONCLUSIONS

The guideline presented represents a tool to assess the ability of architectural projects to reduce economic disparity by fostering dynamic appropriation and empowerment in built spaces. It focuses on the following key aspects to mitigate the perceived economic inequalities:

- Landscape:** including landscape elements into an architecture project empowers a community by celebrating its natural environment while responsibly exploiting its beauty

- and features. Designing spaces that welcome both residents and visitors fosters the sense of shared traditions and boosts the local economy by allowing the creation of small business and increasing job opportunities. As a result, the collective memory of the landscape can be preserved as it helps to reduce the social and economic inequalities within the community.
- **Social appropriation:** creating a neutral space where all community members can come together to work towards a common goal fosters empowerment within the community. By encouraging interactions and collaboration in an understanding environment that values free expression of traditions and cultures, these spaces promote the development of mentorships, working networks and increases economic support within the entire community. These collective efforts strengthen the community, making it more united and willing to face economic and social inequalities together, promoting a more equitable future.
 - **Materiality:** the use of local materials that reflect the identity of a place and that community is skilled in work with can greatly support the growth of the local industry as it revitalizes and promotes the use of these materials within the community. This also represents a significant cost savings as the maintenance of the project can be entirely managed by community members themselves. These savings can then be redirected to other essential economic sectors, such as education and healthcare, contributing to reduce economic inequalities through a multidisciplinary approach.

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