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THEORETICAL REFLECTION ON THE CONCEPT OF PERCEIVED QUALITY FROM AN ARCHITECTURAL PERSPECTIVE

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ABSTRACT

This paper is dedicated to exploring the subjective dimension of architectural quality, emphasizing the importance of understanding how individuals perceive architectural structures and spaces. To fully grasp this perception, it is essential to examine the multifaceted elements that capture the observer's attention, including the style, scale, form, color palette, and spatial organization of the building. Each of these factors contributes to the way a structure is experienced and interpreted, either in isolation or as part of an integrated whole. The combination of these elements can provoke a wide array of responses, ranging from aesthetic appreciation to emotional reaction, and thus, architectural design becomes a dynamic process that engages various facets of human experience. This paper aims to contribute to the body of knowledge surrounding architectural quality. The insights gained through this exploration hold the potential to inform and inspire design practices that foster greater aesthetic, functional, and emotional resonance with the individuals who engage with these spaces. Given the diverse and individualized nature of these responses, it is crucial to consider perception as a complex phenomenon in itself, one that not only encompasses sensory input but also emotional, cognitive, social, and cultural factors that influence how a building is perceived. Understanding this phenomenon allows architects and designers to identify the specific qualities that may enhance the effectiveness of their designs.

KEYWORDS

Architectural Quality, Perceived Quality, Perception, Subjective Dimension, Social Tendencies

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1. Introduction

"*All these [buildings] should be built with due reference to durability, convenience, and beauty. Durability will be assured when foundations are carried down to the solid ground and materials wisely and liberally selected; convenience, when the arrangement of the apartments is faultless and presents no hindrance to use, and when each class of building is assigned to its suitable and appropriate exposure; and beauty, when the appearance of the work is pleasing and in good taste, and when its members are in due proportion according to correct principles of symmetry.*" (Vitruvius, 1960: p.17).

The architectural building possesses the potential to influence users' satisfaction based on factors such as its design, presentation, function, and significance, which contribute to the fluctuation of its value. The characteristics inherent in the building's design and presentation play a vital role in shaping the users' overall experience.

From a subjective standpoint, it is important to acknowledge that users possess diverse viewpoints and assessments when it comes to evaluating the quality of different buildings. Consequently, the evaluation of a particular building can vary from one user to another, resulting in a wide range of perceived value estimations. It is worth noting that the perceived quality of a building is subjective in nature, and individuals are likely to have differing opinions and perspectives on the matter.

To gain a comprehensive understanding of the concept of quality, it is essential to delve into multiple perspectives and explore its various dimensions.

As stated in the Danish Architecture policy, there is a consensus that the quality of architecture is derived from the convergence of three essential components: the physical form, functional aspects, building techniques, all harmoniously blending with an artistic concept. It also emphasizes the importance of considering the distinctive environment and cultural characteristics as paramount objectives to be achieved.

This policy recognizes that architectural excellence can be achieved by integrating these aspects seamlessly, thereby creating a memorable and impactful experience for individuals. By recognizing the significance of form, function, and building techniques in conjunction with artistic vision, architects strive to create structures that fulfill quality demands (Rönn, 2014).

When it comes to the architectural quality, defining its concepts precisely is a complex task, mainly due to the distinctive attributes found in each location. This uniqueness stems from the characteristics of the surrounding buildings, the geographic location, and the preexisting architectural quality within the context. Therefore, assessing and understanding architectural quality requires a comprehensive analysis that considers these factors, resulting in an enriched perception of the subject (Rönn, 2014).

2. Methodology

In this paper, defining perceived quality in architecture was based on a multidisciplinary research method that involves integrating insights, techniques, and perspectives from various disciplines to address complex questions or problems. This approach typically emphasizes collaboration of ideas from fields such as social sciences, humanities, architecture, and more. To conduct such an analysis, a thorough literature review is essential to understand what is already known from each discipline. This helps identify knowledge gaps, conflicting findings, and complementary insights that can inform the research. The literature review should span multiple disciplines, reviewing both foundational theories and recent advances.

3. Discussion

Quality as notion

According to AFNOR NFX 50-120[1], the term quality is defined as: "what *gives satisfaction to the user*" and it consists of the "*properties and characteristics of a product or a service and their ability to satisfy expressed and implicit needs*" (Giordano, 2006: p.18).

Giordano (2006), in regard to the notion of quality, says that it concerns:

- Robustness
- Durability
- Reliability
- Technology
- Modernity
- Quality/price ratio

[1] L'Association Française de Normalisation, defines the quality vocabulary and the corresponding English terms.

Quality as a disputed concept in architecture

The concept of quality in architecture is highly subjective and open to interpretation, with connotative values that vary among individuals and evolve over time. It is important to recognize that perceptions of quality can differ from person to person, and there is no universally accepted definition. Consequently, the understanding of architectural quality is a complex and debatable subject that lends itself to a wide range of perspectives and opinions, due to the dynamic nature of design and cultural shifts. (Rönn, 2014)

In order to comprehend the concept of perceived quality, it is vital to have a clear understanding of the term "perception" itself. Perception refers to the cognitive ability to organize and make sense of the stimuli that are received from the external environment. It encompasses the process of detecting and interpreting these sensory inputs in a manner that is beneficial and meaningful to the individual.

In a similar vein, perceived quality is an intangible parameter that is evaluated based on a diverse range of preferences and inclinations. As highlighted by Aaker (1991), this notion revolves around seven distinct dimensions (**Figure 01**). These dimensions serve as the yardstick against which the perceived quality; is measured and evaluated. They provide a framework for assessing and understanding how individuals perceive the overall quality of a particular offering.

By considering these various dimensions, organizations can gain deeper insights into the factors that influence perceptions of quality and use this knowledge to enhance their products accordingly.

Architecture, viewed as both a visual and mental representation, is considered an art form centered on the perception of images (Harries, 1997).

The notion of architectural quality contains all senses, although this study focuses on specific dimensions that are integrated within the architectural model. These dimensions can be linked to parametric design and computer simulation applications, highlighting their significant role in this particular field.

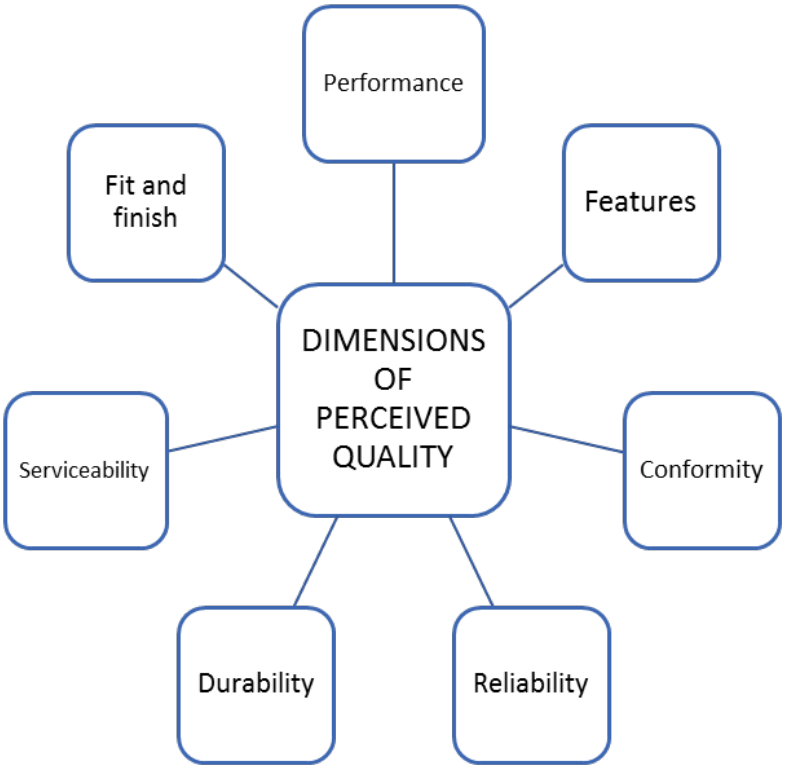

Fig. 01. Dimensions of perceived quality according to Aaker (1991) modified by Author (Source: Hamdaoui and Adad, 2020)

In a more ample manner, architectural quality can be described as a form of artistic expression that embodies both tangible and intangible aspects (**Figure 02**). It involves the creation of visual and mental representations that provoke a sensory experience. For the purpose of this study, a narrower focus is adopted, whereby architectural quality is understood as a collection of selected dimensions.

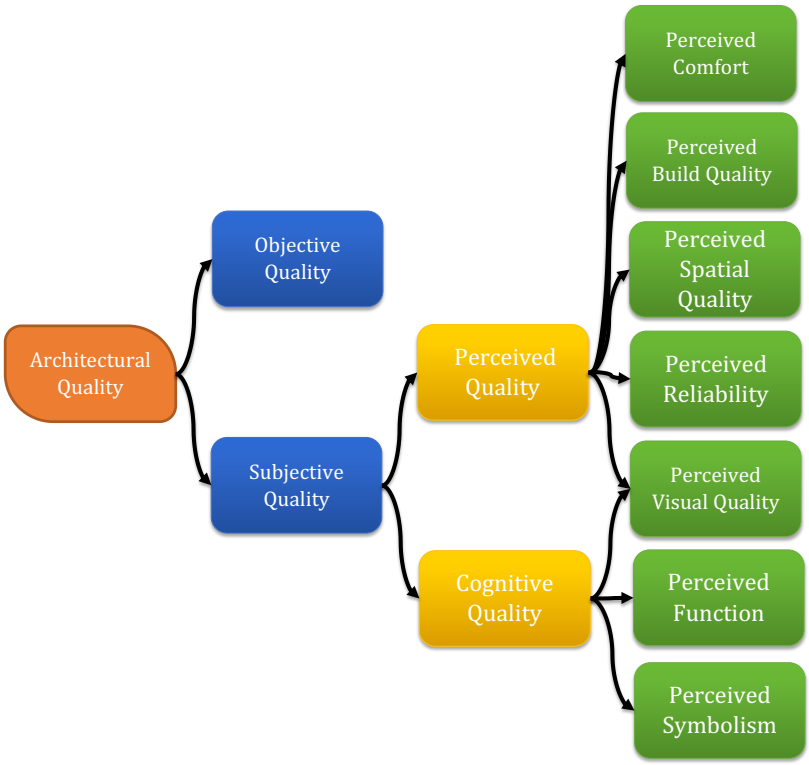

Fig. 02. Dimensions and sub-dimensions of architectural quality (Source: Author).

Architectural quality and design

Caroline Lecourtois stated that assuming that quality proceeds from the cognitive phenomena of perception, it is therefore impossible to adhere to the thesis of Ph. Dehan according to which the architect would be "*the mediator in his capacity*" (Lecourtois, 2009).

Architectural quality is a concept that invites debate and can be subject to various interpretations (**Figure 03**). It incorporates a range of ideas that have been introduced by scholars such as Gallie in 1956 and later expanded upon by Janek in 1991, as highlighted by Rönn (2014). This contestability of architectural quality implies that there is no singular, universally accepted definition. According to Rönn (2014), quality represents:

- Something good.
- A well-designed object
- Good attributes and characteristics

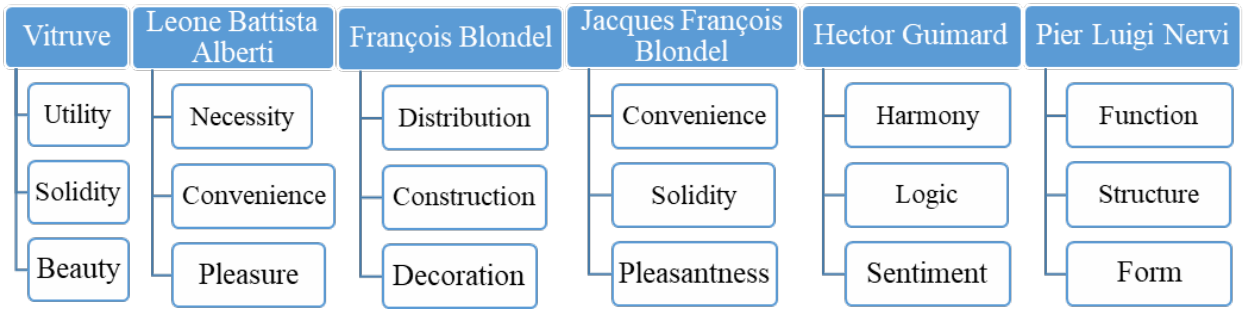

Fig. 03. Different definitions assigned to architectural quality (Source: Author).

While the French urbanist and architect Christian de Portzamparc[11]states that architectural quality is divided into three categories:

[1] Pritzker Prize winner in 1994, born in May 5, 1944, Casablanca, Morocco. Education : Diplôme d'Architecture, École Nationale Supérieure des Beaux-Arts, Paris, 1969

- Perception: it refers to the phenomenology and the philosophy of the individual who lived the experience.
- Production: it refers to technical aspects of the construction.
- Representation: it refers to the style and aesthetic aspects.

Moreover, Rönn (2014) describes architectural quality as:

- An open concept based on knowledge
- A concept charged with values
- A concept that encourages debate due to the different views of quality.
- The controversial concept.
- A concept that is understood through value-charged design criteria (opinions, values, ideals and impressions of needed characteristics)
- A part of a learning form related to design and critical review. The design develop and expresses Knowledge
- The combination of elements that form a whole.
- A method of practicing history through benefiting from architectural history to produce models and understand design problems.
- An idea connected to interests of society and design power
- A concept consisting of an aesthetic dimension and a technical dimension.

Additionally, Rönn (2014) states that quality is dynamic concept that changes over time starting from the era of the philosophers in ancient Greece, where quality was trying to take position between objectivity and subjectivity due to the nature of the relationship between the object and how an individual perceive it. Additionally, the subjective aspect of quality is bound to learning and knowledge. An educated perceiver will produce credible judgments of subjective quality; hence, it is essential, to highly consider the assessments of well-educated and experienced individuals.

Expressed qualities, perception, and perceived quality

In a thorough investigation of the human perception process, which involves studying how individuals perceive and make sense of their surroundings, it becomes evident that the ability to organize sensory input into meaningful information plays a crucial role. This process not only enables to detect and interpret the environment, but also aids in the apprehension of perceived quality as a concept. Moreover, it significantly contributes to establishing a strong connection between perception and the architectural structure.

Giordano (2006) mentioned three terms related to quality:

- Expressed qualities
- Perception,
- Perceived quality

Then he proceeded to define each one of them in **Table 01**:

Table 01: Definitions of expressed qualities, perception, and perceived quality (Based on the work of Giordano, 2006)

Term	Definition
Expressed Qualities	In the age of constant change, function and appearance alone are not enough; the image of an object plays a major role through expressing other satisfying perceived qualities.
Perception	Perception is essential because it shapes mental representations based on received sensations, which are interpreted by spirit without neglecting the important cognitive role of the brain.
Perceived Quality	The object does not only display its benefits and performance but it needs to express those attributes using different signs. It shows from the first impression that it signifies a well-done job. The notion of perceived quality lies in giving the user a sensation of confidence and satisfaction from the first look.

Perceived quality

Perceived quality is a subjective measure that covers a wide range of preferences and inclinations. As described by Aaker (1991), this concept encompasses multiple dimensions, including features, conformance,

reliability, serviceability, fit, and finish. Evaluating perceived quality involves considering these different aspects and how they contribute to the overall evaluation of a product or service. It is important to note that perceived quality is an intangible parameter that varies according to several circumstances.

In the field of architecture, the connection between a building and its visual representation is often highlighted as a significant aspect. However, in order to truly grasp the meaning and significance of a building, it is crucial to delve deeper into its essence and purpose, going beyond its mere external appearance (Leatherbarrow, 2005).

Hence, the notion of perceived architectural quality encompasses not only visual appeal but also engages all senses, making it crucial to discern its various dimensions. Perceived architectural quality can be defined as the holistic assessment of the value a person derives from a built environment, considering factors such as perception, recognition, and personal experience. This multifaceted concept demands a comprehensive understanding of its diverse aspects, engaging with both the subjective and objective components of architectural evaluation.

Perceived quality of an object is predominantly determined by the users' perceptions, according to research conducted by Tsiotsou (2006) and Ariffin et al. (2016). It involves their levels of satisfaction and the trust they place in the object (Kim et al., 2008). Furthermore, it can be viewed as a construct that amalgamates various factors to form a comprehensive assessment of a building's excellence. This assessment is crucial in understanding how users evaluate and deem a building to be superior.

Zeithaml (1988) and Chaudhuri (2002) emphasized the considerable impact of perceived quality on the overall satisfaction of users and highlighted the strong correlation between user satisfaction and their perception of quality.

As observed by Tsiotsou (2006), the positive influence of architectural quality on user behavior and subsequent revisit intention cannot be overstated. It has been established that the greater the perceived architectural excellence of a building, the more frequent the visits to that particular location. This correlation between architectural quality and visit frequency reinforces the significance of design aesthetics in attracting and engaging users.

Perceived quality refers to the comprehensive assessment made by the user regarding the overall excellence of a building, at the time when the cues received based on its inherent characteristics. It is important to note that the evaluation of perceived quality is subjective and contextual, varying depending on the specific situation experienced by the user (Snoj et al., 2004).

The users' perceptions of the building undergo variations depending on factors such as the timing and location of receiving the information (Asshidin et al., 2016), along with their cognitive and affective states. These variations in perception are influenced by a multitude of factors that encompass the subjective experiences and emotional states of the users.

According to the comprehensive analysis conducted by Oude Ophuis and Van Trijp (1995), they elucidated the concept of perceived quality, emphasizing its multifaceted nature and the existence multiple dimensions.

Garvin (1984) proposed a classification system for perceived quality, identifying eight discrete dimensions that encompassed this concept. Building on this foundation, Parasuraman et al. (1988), along with notable researchers like Gronroos (1984) and Hjorth-Anderson (1984), also recognized perceived quality as a multi-dimensional construct.

Olson and Jacoby (1972) examined intrinsic cues as a means to evaluate perceived quality. These cues encompass the physical attributes of a building that are inherently linked to its overall appearance and cannot be altered without fundamentally changing its essence. In other words, they are closely tied to the structural aspects of the building itself. By focusing on intrinsic cues, researchers sought to understand how these characteristics contribute to the way individuals perceive the quality of a building.

From an alternative standpoint, one could posit that the concept of "perceived quality" refers to the evaluation of a product or service based on the subjective judgments and perceptions of the user (Steenkamp, 1990). This term encapsulates the idea that the perceived level of quality is contingent upon the individual's interpretations and assessments.

Numerous scholars and experts in the field have provided definitions for an object of good perceived quality. According to Kuehn and Day (1962), such an object is considered to be suitable and appropriate for its intended use. In addition, it is expected to fulfill the user's needs and requirements, as emphasized by Juran and Godfrey (1999).

According to Box (1983), fulfilling the intended function is the primary factor contributing to the architectural quality of an object. This notion is considered a crucial pillar within the triad of architectural quality. The concept of functionality refers to an object's ability to effectively serve its designated purpose. It encompasses the idea that an architectural element should seamlessly and efficiently perform the task it was designed for.

Numerous researchers, including Mitra and Golder (2006), Oxenfeldt (1950), Maynes (1976), Kupsch et al. (1978), and Bockenhoff and Hamm (1983), have collectively acknowledged that the perceived quality of architectural buildings hinges upon the subjective perceptions of users regarding the characteristics exhibited by the objects in question. This notion asserts that the user's perception plays a crucial role in determining the quality attributed to the building.

Perceived quality, a multifaceted concept, can be examined from a theoretical standpoint, as suggested by Olson and Reynolds (1983). This notion hinges on subjective evaluations, judgments, and attitudes shaped by individuals' perceptions. These perceptions, susceptible to alteration over time, can be influenced by diverse factors such as the acquisition of new knowledge and personal experiences (Zeithaml, 1988). Unlike objective quality, which adheres strictly to pre-established criteria, perceived quality is inherently subjective and dynamic, making it essential to consider users' changing perspectives and evolving expectations.

Lutz (1986) coined the term "cognitive quality" to describe the overall assessment of quality made by users. It refers to the users' superordinate inferential assessment of quality. This concept goes beyond a simple evaluation of the entity's attributes and delves into a more advanced and analytical evaluation. For instance, when it comes to a building with a remarkable perceived architectural quality, it should evoke a corresponding cognitive response from those who experience it. This means that users should engage in a deep cognitive assessment that takes into account the inherent attributes associated with the perceived quality.

It must be acknowledged that the presence of consistency plays a vital role in the correlation between perceived quality and the values and expectations of users, consequently leading to the establishment of confidence (Kim et al., 2008). This principle also holds true in the context of architectural phenomena. The maintenance of consistency in various aspects, such as design, functionality, and user experience, is crucial in order to instill trust and foster a positive perception of quality.

A well-constructed edifice that displays remarkable visual cues, maintains a unified style, exhibits a coherent design, and possesses aesthetically pleasing qualities will evoke a favorable cognitive reaction. The perception of such a building is greatly influenced by its exceptional architectural elements.

The principles that contribute to the creation of a good form, such as complexity, unity, harmony, and balance, are essential in achieving an aesthetically pleasing and well-designed outcome (Arnheim, 1985). Additionally, it is important to note that there exists a significant correlation between the perceived quality and image of a building. Any efforts directed towards enhancing a building's image will inevitably lead to an improvement in its perceived quality as well (Sprott and Shimp, 2004).

Architectural quality as a concept is considered disputable (Rönn, 2014). Perceived quality, as explained by Giordano (2006), covers the meaning and value attributed to an object. It involves an assessment of all its attributes and encompasses the sensory and emotional impressions it evokes. Alongside this, perceived quality also takes into consideration the indicators that captivate the user upon initial observation and their interpretation, subsequently fostering confidence and facilitating satisfaction. It is essentially a promise of quality that aims to minimize the risk of product failure through elements such as:

- Seduction
- Confidence
- Satisfaction

In a comprehensive exploration, he goes beyond the conventional understanding of perceived quality and emphasizes that it is a subjective concept with various interpretations. The perception of quality is not solely determined by the objective signs and indicators that an object presents, but it also involves the user's subjective evaluations and experiences. This holistic perspective takes into account cognitive judgments, sensorial responses, and affective experiences associated with the object. Perceived quality may also represents a coexistence between:

- Objective aspects: functional and measurable.
- Subjective aspects: aesthetic, pleasure experienced, etc.

By considering perceived quality, individuals can evaluate and appreciate the overall worth and desirability of a particular object.

Responding to social tendencies

The architectural structures must possess the requisite perceived quality in order to effectively address the evolving social needs and preferences of the users. It is crucial that these buildings are capable of adapting to the changing societal trends and accommodating to current demands and tendencies. In this context Giordano (2006), cites some points regarding the subject:

- Perceived quality gives the user the possibility of personalization.
- It responds to the needs related to *image* and *information transfer speed* through the received signs from first contact.
- It offers a seductive product (the term product refers to the building) that provides the user with the pleasure that he wishes for.
- It gives sense and significance to the product through signs, symbols and images allowing it additionally to express its function.
- It generates confidence and reassurance.

4. Conclusions

Henceforth, the elucidation of perceived architectural quality as per prior research shall encompass the comprehensive assessment of the architectural excellence of a building, taking into account the user's discernment and perspectives that articulate their requirements and desires. This notion is multifaceted (multidimensional), situational (contingent upon the situation), and susceptible to the influence of an individual's experiences, knowledge, and personal inclinations. In order to enrich our understanding, it is imperative to delve deep into the various dimensions that contribute to the overall assessment, such as aesthetics, functionality, sustainability, and cultural relevance.

Nasar (1989) emphasized a crucial matter that often goes overlooked by professionals and experts. They tend to disregard subjective factors, deeming them "unquantifiable." However, it is important to recognize that the user's satisfaction is inherently tied to these subjective elements. Therefore, the individual's sensitive decisions, whether they are the users themselves or anyone involved in the project, play a vital role in the pursuit of excellence in architectural design. By examining the user's perspective and considering their opinions and preferences, architects can create projects that are compatible with present demands.

According to Yazdanfar et al. (2015), it is crucial for designers to effectively communicate with users in a manner that is easily understandable and perceptible. This requires both the designer and the user to possess the necessary tools and understanding to decode the environmental cues and signals.

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