Visual Values in Landscapes

Subjects: Urban Studies
Contributor: Marta Pieczara

The term “landscape” can have different meanings depending on the field of study. For a geomorphologist, for example, the landscape represents the Earth’s surface and is considered as the result of the formational physical processes. Meanwhile, a landscape ecologist would consider a landscape in the light of interactions that once took place or now take place within it. The focus on the interaction is equally felt behind the definition of the landscape provided by the European Landscape Convention (ELC), which considers a landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”(art. 1). This definition combines three significant aspects of the landscape: its geographical origins, anthropogenic modifications, and human perception. Visual values in landscapes are strictly related to human perception: they exist because they are perceived.

Keywords: landscape ; panorama ; composition ; visual values ; landscape evaluation ; landscape management ; sustainable spatial planning

1. Introduction

The natural processes involved in landscape formation are the subject of geographical research with a long-established tradition “evolving from naturalists such as Alexander von Humboldt and Darwin” [1] (p. 2), the recognition of human participation in shaping the landscape came subsequently [1][2]. This was a starting point of the holistic approach to the landscape. By combining research approaches and methods typical for the natural (physical) and social (human) sciences, landscape studies have become an interdisciplinary field that contributes to overcoming the disciplinary division between the two scientific branches [3][4]. The multidisciplinary nature of landscape studies and the need to analyze landscapes as part of a holistic approach has already been noticed by von Humboldt, who is credited with defining landscape as “the total character of a region of the Earth” [5] (p. 27). By using the word “total”, this definition describes the landscape “as a holistic entity perceived by humans and having a distinct character or identity” [6] (p. 188). As can be deduced from the cited explanation, the holistic approach to the landscape incorporates human aspects in terms of the anthropogenic influence on its shaping process and perception. Besides the fact that landscape as a concept includes the material reality resulting from “a continuous dynamic interaction between natural processes and human activity” [6] (p. 188), it also refers to “the immaterial existential values and symbols of which the landscape is the signifier” [6] (p. 188). The mutual relationships between the social culture and the landscape can thus be represented as processes occurring between two endpoints—the first being land molding by human labor and the other being the landscape’s symbolic expression of a culture. In other words, the landscape is shaped by society members so as to materialize the values of their immaterial culture, and, in a feedback loop, its final appearance “shapes the citizens’ attitudes and behavior” [7] (p. 11).

2. Culture-Related Attributes

Every cultural landscape shaped by human labor is characterized by a set of culture-related attributes, some of which are perceived visually—for example, aesthetic, expressive, symbolic—or aimed at identification [7]. The importance of cultural features in the interpretation of landscapes was demonstrated by Kobayashi [8], who emphasized that the communication of meanings within the landscape is subject to cultural limitations. The effectiveness of linguistic expression in conveying understandable messages depends on the clarity of a landscape’s structure, with a high formality acting in its favor [8] (p. 180). Hence, the landscape is implied as a structured semiotic system, built of elements that play the role of signifiers. The relevance of semiotic theory in the study of visual design representations, and specifically in landscape design, was demonstrated by Raaphorst et al. [9]. Among the basic semiotic systems, the visual one seems to be most suitable for the image-based analysis of the landscape.

The importance of a landscape's visual aspect has been approached from different perspectives. Cosgrove highlighted the importance of visual perception in both forming and understanding landscapes by stating that "the landscape idea represents the way of seeing" [10] (p. 1). This statement also means that the perception of a single landscape can change depending on the viewer's background. "Semiotics and iconography teach us that there are as many meanings as there are stakeholders" [9] (p. 130). Iconography's approach to landscape treats its representations as "consistent images of its meaning or meanings" [11] (p. 1), making an image equal to the reality it represents. Iconographic research perceives landscape as an image or symbol, being at the same time based on the study of the symbolic imaginary [11].

By defining the role of symbols as objects representing, or denoting, something else [12][13], the image-based approach to landscape refers to the semiotics. Derived from linguistics, the theory of semiotics views language as "a system of signs where there is nothing essential except the union of meaning and the acoustic image" [14] (p. 32). Like the verbal semiotic system, the visual one also implies the unambiguous connection of a signifier (a sign) with its denotation (a meaning). At the same time, the differences in comprehension depend on the stakeholder's background [9][15]. As applied to landscape studies, the image-based approach thus aims to "identify the symbolic meanings and messages contained in the landscape" [13] (p. 212). Hence, the landscape is considered an organized system of symbolically represented values that are perceived visually. "Landscape carries meaning as well as minerals and agricultural wherewithal" [13] (p. 245). Using a linguistic metaphor, a signifier within a landscape can be presented as a visual element (e.g., tower), whereas the signified, or its meaning, refers to the relevant idea (e.g., the source of power).

The decoding process of a landscape image can link one sign with additional secondary meanings, just like one architectural object can communicate different secondary functions [16]. Backed with the semiotic theory of logic developed by American philosopher Charles Sanders Pierce, the triadic understanding of semiosis is a key to decode sign-systems other than language, including visual ones [9][15]. According to the triadic model, each sign has an equivalent referent [9], or non-coded message [15]. In addition, it can connote diverse coded messages, or connotations [15], which are interpretations of the sign [9]. Taking for example a tower in a landscape, its denoted meaning (the referent) would be a source of dominative power (the rule), while the connoted interpretation can be a king's castle, a sacral building, or a bank headquarters. What decides the appearance of different interpretations is the context. Decoded meanings tend to depend on the viewer's background and experience, as well as on his knowledge [9][15]. Going further with the words of Muir, "viewers will tend to evaluate landscapes according to their perceived merits, which will include aesthetic and ecological considerations as well as others, like cultural characteristics" [13] (p. 182).

The iconography of landscape, backed up with the theory of semiotics, forms the aesthetic approach to the landscape. It aims to explain what features of a landscape make people like it and the reasons behind this. In the words of Appleton, "what is it that we like about landscape, and why do we like it?" [12] (p. xv) and [13] (p. 244).

The perception of the landscape, which gains core importance in the aesthetic approach, relies considerably on its characteristic visual features. The definition of landscape in the Oxford Dictionary indicates this, describing this interdisciplinary concept as "all the visible features of an area of land, often considered in terms of their aesthetic appeal". However, the importance of visually perceived landscape characteristics is not limited to the aesthetic approach and is also used in different analysis scales. For example, the renowned patch-corridor-matrix model [17] also applies a visual assessment method, to an extent, to analyze the land mosaic.

Landscape analysis methods based on distinguishing visual and non-visual elements form the basis of several significant contributions to the theory of landscape perception. First of all, the phenomenological approach must be mentioned. The concept of a phenomenon at its core is usually defined as something observable, manifesting itself. The idea of the phenomenon was derived from ancient Greek philosophy and was later re-defined by Immanuel Kant [18]. Kant placed it in opposition to the noumenon concept, which he described as representing the essence of things—such as, for example, truths and values, which cannot be observed and therefore are recognizable uniquely through reason. Revived in modern times by Kant, the concept of this phenomenon formed the beginning of the philosophical movement of phenomenology, which is described by Edmund Husserl [19] as focused on consciousness structures. The phenomenology trend continued in Martin Heidegger's [20] concept of Fourfold (das Geviert), which inspired further distinguishing and classifying phenomena that can be identified in a landscape.

3.Development

The philosophical movement of phenomenology inspired an analytical method for studying landscape that was developed and applied by Christian Norberg-Schulz, a Norwegian architect, theorist, and historian. According to Norberg-Schulz, phenomena are tangible things that build the world surrounding us [21]. They are interconnected in a complex and

sometimes even contradictory way. They can be classified according to their nature (i.e., natural or artificial), location (i.e., Earth or sky), or adoption (i.e., inside or outside) [21]. The phenomenological approach decomposes the landscape into elements, or entities, that have specific meanings and connotations in the range of landscape studies [22].

The phenomenological approach towards landscape has numerous distinguished contemporary successors. Breaking the landscape down into diverse visual and non-visual elements is their common denominator. The components identified are subsequently examined in terms of their impact on the overall perception of a landscape. Such an approach has been adopted, among others, by Górka, who distinguished creative and passive images of the landscape [23]. Particularly important for architectural and urban studies, the landscape's creative image is built prevailingly from visual elements, including forms and patterns [23]. Such an explicit image of the landscape finds its counterpart in imaginary values that refer to the collective consciousness. The social awareness of "the values attaching to landscapes and the issues raised by their protection, management and planning" [24] (art. 6 B) is at present considered crucial. This fact emphasizes the significance of landscape studies and visually oriented research, contributing to increased knowledge about the landscape. It is vital to shape citizens' expectations regarding a landscape's quality and improve their sustainable development responsibility [23]. Human perception is hence considered an indispensable factor of landscape integration in terms of sustainable development [25]. Particularly, a balance between landscape protection, enhancement, and sustainability issues needs to consider its perception by humans as well as the values they attach to it [25]. As shown by the work of Serraino and Lucchi [25], sustainable development must use an interdisciplinary approach to landscape, integrating multiple diverse aspects: technical (e.g., energy efficiency), ecological (e.g., preventing pollution, conforming with Green Deal policy), cultural (e.g., heritage protection) and humanistic (e.g., perception of the values).

The recognition of a landscape's visual value as one of the necessary conditions for any appropriate sustainable development strategy [24][23][26] contributes to the appreciation of visual landscape research as particularly important. Contemporarily applied visual methods include the Landscape Physiognomy Assessment (LPA) and Landscape Visual Capacity Assessment (LVCA) [26]. The latter approach, modeled over the landscape capacity assessment analysis carried out across the UK as part of preparing a local plan [27], defines a landscape's visual capacity as its resilience to changes resulting from the absorption of new investments [26]. Applied as a part of the integrated landscape management strategy, the method contributes to recognizing visual values in landscape and minimizing visual hazards due to the appearance of new investments (e.g., residential settlements).

Despite the difficulty of avoiding natural subjectivity [9][15], the visual assessment of landscape quality has entered both discussion and practice in landscape-related studies. Its usefulness for land management policies has been proven theoretically [28][29][30] and through practical examples of using visual analysis to design a landscape protection strategy [28] (pp. 117–118, 136). Largely inspired by the development of perception studies, the idea of using landscape evaluation for planning purposes profoundly influenced the approach adopted towards landscape by British geographers in the 1970s [30] (p. 46). This approach, which considered the preservation of the visual qualities in the landscape as an integral part of any consistent planning strategy, was originally short-lived [30]. More recently, its essential elements have received new attention in the form of contemporarily applied methods of landscape assessment—for example, Landscape Character Assessment (LCA) [27], Landscape Physiognomy Assessment (LPA), and Landscape Visual Capacity Assessment (LVCA) [26].

As remarked by Daniel [31] the contemporary environmental management practice mainly uses an expert approach to landscape, while contemporary research is dominated by the perception-based approach. The two approaches differ in terms of landscape conceptualizations and "the relative importance of the landscape and human viewer components" [31] (p. 267). While landscape perception studies draw from the Gestalt holistic approach, considering landscape images through the prism of its conceptualizations, the environmental approach develops towards rigorous scientific studies. They aim to collect relevant data and apply analytical tools to build models with which to explain specific relationships between the condition of the environment and the viewer's impression. Both approaches seem incomplete if separated, hence this study will combine two stages: a visual study of landscape composition and a survey used as the basis of quantitative research. Recently, a need to create a more integrated approach to landscape has been identified [32].

From the point of view of architectural studies, which belong to visually oriented disciplines, both aesthetic and phenomenological approaches constitute the essential background of any research analyzing a landscape's composition and humans' perception of it. Treating the landscape as a structured system that can convey semantic messages irrevocably refers to visual elements' significance. If specific types of such elements could be assigned a positive or negative value, the questions of what we like about a landscape and why this is so could be answered. This is precisely the goal of the research presented in this paper, which uses visual assessment methods to test such a possibility for a few exemplary locations from the Poznań agglomeration. The study's expected results can form a starting point for a new landscape management strategy, integrating landscape visual quality with the traditional geographical view.

References

1. Antrop, M. Geography and landscape science. Belg. Rev. Belge Géographie 2000, 30, 9–36.
2. Vidal de La Blache, P. Principes de Géographie Humaine: Publiés d'après les Manuscrits de l'auteur par Emmanuel de Martonne; ENS Édition: Lyon, France, 2015.
3. Castree, N.; Demeritt, D.; Liverman, D. Introduction: Making sense of environmental geography. In A Companion to Environmental Geography; Castree, N., Demeritt, D., Liverman, D., Rhoads, B., Eds.; Wiley-Blackwell: West Sussex, UK, 2009; pp. 1–15.
4. Franch-Pardo, I.; Napoletano, B.M.; Bocco, G.; Barrasa, S.; Cancer-Pomar, L. The Role of Geographical Landscape Studies for Sustainable Territorial Planning. Sustainability 2017, 9, 2123.
5. Zonneveld, I.S. Land Ecology: An Introduction to Landscape Ecology as a Base for Land Evaluation, Land Management and Conservation; SPB Academic Publishing: Amsterdam, The Netherlands, 1995; p. 199.
6. Antrop, M. Sustainable landscapes: Contradiction, fiction or utopia? Landsc. Urban Plan. 2006, 75, 187–197.
7. Bonenberg, W.; Zierke, P. Dobra Kultury Współczesnej Jako Element Krajobrazu Powiatu Poznańskiego (en. Contemporary Cultural goods as an Element of the Landscape of the Poznań County); Poznań University of Technology: Poznań, Poland, 2014; p. 245.
8. Kobayashi, A. A Critique of Dialectical Landscape. In Remaking Human Geography (RLE Social & Cultural Geography), 1st ed.; Kobayashi, A., Mackenzie, S., Eds.; Routledge: London, UK, 1989; pp. 164–185.
9. Raaphorst, K.; Duchhart, I.; van der Knaap, W.; Roeleveld, G.; van der Brink, A. The semiotics of landscape design communication: Towards a critical visual research approach in landscape architecture. Landsc. Res. 2017, 42, 120–133.
10. Cosgrove, D.F. Social Formation and Symbolic Landscape, 2nd ed.; The University of Wisconsin Press: Madison, WI, USA, 1998; p. 332.
11. Daniels, S.; Cosgrove, D. Introduction: Iconography and landscape. In The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments, 1st ed.; Cosgrove, D., Daniels, S., Eds.; Cambridge University Press: Cambridge, UK, 1988; pp. 1–10.
12. Appleton, J. The Experience of Landscape, 2nd ed.; John Wiley and Sons Ltd.: Chichester, UK, 1996; p. 296.
13. Muir, R. Approaches to Landscape; Palgrave: London, UK, 1999; p. 336.
14. de Saussure, F. Cours de Linguistique Générale; Payot: Paris, France, 1983; p. 509.
15. Barthes, R. Rhetoric of the Image. In Image, Music, Text; Heath, S., Ed.; Hill and Wang: New York, NY, USA, 1977; pp. 32–51.
16. Eco, U. Function and Sign: Semiotics of Architecture. In The City and the Sign. An Introduction to Urban Semiotics, 1st ed.; Gottdiener, M., Lagopoulos, A., Eds.; Columbia University Press: New York, NY, USA, 1986; pp. 55–86.
17. Forman, R.T. Land Mosaics: The Ecology of Landscapes and Regions, 1st ed.; Cambridge University Press: Cambridge, UK, 1995; p. 656.
18. Kant, I. The Critique of Pure Reason; Guyer, P., Wood, A.W., Eds.; Cambridge University Press: Cambridge, UK, 1998; p. 785.
19. Husserl, E. The Idea of Phenomenology, 1st ed.; Hardy, L., Ed.; Husserliana: Edmund Husserl—Collected Works; Springer: Dordrecht, The Netherlands, 1999; Volume 8, p. VI 72.
20. Heidegger, M. Basic Writings, Routledge, 1st ed.; Routledge: Abingdon, UK, 1978; p. 392.
21. Norberg-Schulz, C.H. Genius Loci. Paysage, Ambiance, Architecture, 3rd ed.; Seyler, O., Ed.; Mardaga éditions: Brussels, Belgium, 1997; p. 216.
22. Pieczara, M. An architecture course to teach respect for the landscape. World Trans. Eng. Technol. Educ. 2020, 18, 450–455.
23. Górka, A. Landscape perception and the teaching of it in Poland. World Trans. Eng. Technol. Educ. 2020, 18, 124–128.
24. European Landscape Convention, European Treaty Series—No. 176, Council of Europe, Florence (2000). Available online: (accessed on 26 June 2020).
25. Serraino, M.; Lucchi, E. Energy Efficiency, Heritage Conservation, and Landscape Integration: The Case Study of the San Martino Castle in Parella (Turin, Italy). Energy Procedia 2017, 133, 424–434.

26. Górka, A. Visual Capacity Assessment of the Open Landscape in Terms of Protection and Shaping: Case Study of a Village in Poland. Sustainability 2020, 12, 6319.
27. Swanwick, C.; Fairclough, G. Landscape character: Experience from Britain. In Routledge Handbook of Landscape Character Assessment. Current Approaches to Characterization and Assessment, 1st ed.; Fairclough, G., Sarlöv, H.J., Swanwick, C., Eds.; Routledge: London, UK, 2018; pp. 21–36. Available online: (accessed on 2 February 2021).
28. Laurie, M. An Introduction to Landscape Architecture, 1st ed.; American Elsevier Publishing Company: New York, NY, USA, 1975; p. 214.
29. Zube, E.H.; Brush, R.O. Landscape Assessment: Values, Perceptions and Resources, 1st ed.; Zube, E.H., Brush, R.O., Fabos, J.G., Eds.; Dowden, Hutchinson & Ross: Stroudsburg, PA, USA, 1975; p. 367.
30. Cosgrove, D. Prospect, perspective and the evolution of the landscape idea. Trans. Inst. Br. Geogr. 1985, 10, 45–62.
31. Daniel, T.C. Whither scenic beauty? Visual landscape quality assessment in the 21st century. Landsc. Urban Plan. 2001, 54, 267–281.
32. Bürgi, M.; Ali, P.; Chowdhury, A.; Heinimann, A.; Hett, C.; Kienast, F.; Mondal, M.K.; Upreti, B.R.; Verburg, P.H. Integrated Landscape Approach: Closing the Gap between Theory and Application. Sustainability 2017, 9, 1371.

Retrieved from https://encyclopedia.pub/entry/history/show/21397