

Original Research Article

Perceiver, Perceived and Perceptual Product Evaluating Experts' Interpretations of the Components of 'Landscape' Definition

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Abstract | In recent decades, the interpretation of the relationship between man and the environment has been one of the most important researchers' challenges, caused by the development of urban sciences. This issue has shaped new concepts such as landscape. The emergence of this concept has been the result of many studies conducted by experts and researchers over the years. Reviewing the literature shows that there is a semantic pluralism for the term landscape. It also highlights a lack of consensus on the term among the scholars. Experience has shown that the survival of a scientific approach requires reflection on its logical foundations. This could be achieved by providing a single definition for its basic concepts. Such a definition makes it possible for researchers to debate on the issues in the field. Multiple interpretations result in various strategies through which the environment can be influenced. The interpretations also lead to developing different approaches. This study shows that different and sometimes contradictory concepts have been used to describe the term landscape. In the proposed definitions, the term landscape has been conceptualized as perceptual relations including the perceiver and perceived components and this concept is the product of experts' interpretation of how these components are related and how their relations are verbalized. This paper sought to analyze contemporary approaches to explain the concept of the landscape. To this purpose, we examined the components of definitions and analyzed them using content analysis to propose a comprehensive definition of the term landscape. Growing research shows that experts' descriptions of the components (perceiver, perceived, relation, and product) fall into several conceptual categories. It seems that the term landscape can be best described as the perceptual relationship between "man as a perceiver" and "environment as a perceived element" established by a "continuous" link and results in products with an "objective-subjective" nature.

Keywords | *Definition of landscape, Perception, Environment, Human, Objective-subjective.*

Introduction | The logic of science is based on "definition" and "reasoning". For discussing any scientific topic, we first need to define its concepts in advance to be able to debate on a single construct. Defining landscape, as emerging knowledge, requires the development of a logical framework in which its basic concepts can be explained. The concept of landscape, based on the "holistic"¹ approach to phenomena, links several dimensions of

meaning. This sometimes makes it difficult for us to understand and express this concept. Examining the available definitions of landscape in the urban planning literature of Iran and the international contexts shows a lack of consensus on this concept among experts. Despite this, a review of contemporary approaches used for defining the landscape shows that most scholars agree on the "perceptual process" of the landscape. All definitions highlight the connection between the three concepts of 'perceiver, perceived, and its product', the first two

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components set the conditions for the third, a closer look at the definitions reveals a consensus among scholars on the interpretation and description of these components and the way they are related. Different and sometimes contradictory words are used by researchers to describe this term and its components. Different approaches for defining this term have resulted in a variety of strategies influencing the environment. This research seeks to review and describe the existing approaches used in explaining the concept of landscape. It also attempts to compare and analyze the existing definitions and classify available views then evaluates each of the concepts by highlighting the commonalities and differences between them.

Research questions

How have the experts of different disciplines interpreted three components of 'landscape' (perceiver, perceived, and its product), in approaches conceptualizing landscape as a perceptual process? How are the relationships between the components established in these interpretations? Which words can best and comprehensively convey the concept of the landscape?

Materials and methods

• Selecting resources

We examined 136 articles, 16 books, and 11 writing websites between 1939 and 2020 to see how researchers and experts have conceptualized the term landscape. We collected data from valid scientific databases such as Science Direct, Web of Science, and Scopus then deleted duplicate and irrelevant sources in which the landscape definition was absent. Finally, we selected 78 articles and books. As we did not have access to old sources, we used indirect citations. Total we had direct citations from 49 references.

• Research framework

The content analysis was chosen as the method of analysis. The data drawn from a bibliographical database were analyzed and categorized. This method is one of the basic research analysis methods in which the researcher describes, organizes, and analyzes the data and makes sense out of it (Barati, Davudpur & Montazeri, 2012, 113). In doing so, the messages and the interpretation of content are the basis of research. For this purpose, first, a model of "definition of landscape as an objective-subjective phenomenon" was developed then the data were categorized based on the model. The definitions provided by experts in each profession (landscape specialists, geographers, ecologists, environmental designers, etc.) were analyzed separately in the frame of the model and the data were categorized, interpreted, and tabulated. Then, each category and its main approach were presented to explain the components of landscape definition.

Literature review

So far researchers have highlighted the semantic plurality in the definition of landscape and have examined its concept. In an article entitled "What is landscape?" Towards a Common concept within an interdisciplinary research environment, Förster et al. (2012) scrutinized the definition of the landscape from the perspective of different disciplines. In their study entitled "Landscape; a shifting concept; the evolution of the concept of landscape from renaissance", Alehashemi and Mansouri (2017) examined the conceptual developments of the landscape in the historical timeline. In the article "The study of landscape concept with an emphasis on the views of authorities of various disciplines", Mahan and Mansouri (2017), explored the differences in the concept of landscape presented by different experts without considering its historical timeline. However, none of the above-mentioned studies has captured the nuances of landscape definition and has not focused on verbal pluralities existing in several definitions. Although in part of their research on landscape concepts and approaches, Angelstam, Munoz-Rojas and Pinto-Correia, (2019) refer to a conceptual model which is similar to the one used in this study, they have not analyzed the diverse contents of the definition components.

Landscape as a perceptual process

The definition of the term landscape consists of two parts, "definition" and "landscape", in which "definition" precedes "landscape". The science of logic refers to "definition" a set of known ideas that lead to the discovery of the unknown idea and the idea that is clarified by known ideas is called identified (Khansari, 1987). The rationality of a definition for explaining an unknown concept and identifying it through information is subject to the provision of conditions that are beyond semantic content.

In this case, the definition can limit the semantic aspect of a particular concept and differentiate it from other definitions and explain it². Although the definitions of experts vary widely in some aspects, most of them seem to agree that the landscape of the product is a perceptual process. That is, there are "perceptual apparatuses" or "perceivers" that form a perceptual process by interacting with the "perceiver." Many researchers have referred to the word "perception" directly. For example, Bell states that "landscape is the part of the environment in which we live and understand it through our perception" (Bell, 2015, 91). Haber also states that "it is a part of the land around us that we perceive it without focusing on its components and seems familiar to us" (Haber, 2004, 103). Castanza and his colleagues also refer to the "human-perceived perspective" in their definition (Costanza, Riitters, Vogt &

Wickham, 2019, 2051). From Taghvaei's point of view, the term landscape stands for a relationship between natural and cultural patterns, its constituent processes, and human perception of the beauty of this collection (Taghvaei, 2012, 22). The European Landscape Convention also states that "Landscape is a combination of Europe's natural and cultural heritage that deals with human health and the registration and preservation of European identity" (Council of Europe, 2000a). This definition emphasizes the individual perception and the dynamic nature of the landscape, which is perceived as a process of a dynamic whole through human-nature interaction. Gerber and Hess also express this aspect of the landscape using terms such as "phenomenological, sensory, and symbolic dimension of the living environment" (Gerber & Hess, 2017, 712).

Other scholars have referred to perception using different words such as spatial, space-place, human-environment, tangible dimensions, objective-subjective, perceived environment, etc. For example, Berque considers the landscape as another type of place that is the product of human-environment interaction in outer spaces (Berque, 2008, 88) or Lassus considers landscape as a visual hypothesis that relates to place and environment and reflects the constant interaction between visible and hidden elements and truth and fantasy (Mahan & Mansouri, 2017, 21; Mansouri & Atashinbar, 2011, 67). Ankelstam and his associates define this term as a "human-environmental" phenomenon (Angelstam et al., 2019, 1445). Mansouri defines it as spatial and the product of human experience in space (Mansouri, 2010, 31). Other definitions are as follows: "Landscape can be seen as a structure in which our sense of the place and memories have mental stability" (Habibi, 2009, 71). "Landscape is not defined only in the sensory and tangible layer of the city. It has three dimensions: emotional, cultural and ecological" (Sheybani, 2010, 4). Some researchers have also developed a model linking the subject (perceiver) and nature (perceived) and have introduced it as the main definition of landscape (Talento, Amado & Kullberg, 2019, 8).

Even researchers who consider the visual and objective aspects of the landscape refer to a perceptual relationship. For example, Khorasani Zadeh defines the landscape as the outer space of any place in plain sight (Khorasani Zadeh, 2003, 25). Zekavat states that "Urban landscape is a fixed visual quality at a distance from areas of the city perceived as specific places and areas" (Zekavat, 2010, 29). Researchers have also provided a separate model for objectivity and subjectivity. Golkar states that "from the study of the relationship between the urban environment and humans, it can be concluded that the urban landscape is a system that is formed by combining three subsystems

"objective view of the city"; subjective view of the city "and" subjective-evaluative view of the city ". In other words, the concept of the urban landscape is formed only from the interaction among the three subsystems" (Golkar, 2006, 3-4) and Mahmoudi also points out " ... If we introduce the first category as effective factors in the urban landscape, it is clear that the urban landscape is an objective view of the city whose components are tangible and functional. On the contrary, the perceptions and interpretation of individuals and spectators of the components in the city can be introduced as the image of the city" (Mahmoudi, 2010, 28).

Therefore, based on the perceptual model of the landscape, researchers have emphasized that perception refers to the "product" and the stages of "process". Perception of action within the mind has an external manifestation and shows continuity (Naghizadeh & Ostadi, 2014, 7). Perception in philosophy is one of the most important cognitive issues dealing with the relationship between "self" and "being". Although experts in this field have listed several types of perception so far³, the nature of all types can be considered in relation to "perceiver", "perceived" element, the status of their relationship, and the product of this relationship (Taghdir, 2017, 48-67; Soleimani, 2015, 41- 60; Khamenei, 2000, 8-14; Naghizadeh & Ostadi, 2014, 5). Alehashemi and Mansouri (2017, 35) describe this perceptual relationship as follows: "The concept of landscape is composed of three aspects, which unite in a complex relationship: a site (land), a view, a picture"⁴ (Fig. 1).

• First Component: Perceiver

In the process of perception, the "perceptual apparatus" or "perceiver" is the actor and initiator of the act of perception. Examining this component in the definitions reveals that a subtle difference existing among experts has a dramatic effect on the nature of the final product. Scholars have used two concepts of "individual" and "society" to express the perceiver. The difference between these two reflects the attitudes of the scholars' belief in the individual or collective legitimacy of the final product.

By expressing the term human, some scholars attribute the authenticity of the landscape phenomenon to the "human" and at the same time emphasize the relativity of the landscape. The philosophical roots of attributing the perceiver to the individual can be traced to the ideas of Rousseau, Weber, Mill, and Watkins. Using the heading of "individualism, these scholars introduce "the individual" as the source of influence " and give worth to the individual rather than society. Since in this view the source of the work is the individual and not society, the tendencies and goals of individuals are preferred over society (Soares, 2018, 18-20; Oyserma, Coon & Kimmelmeier, 2002, 4-5; Van Uchelen, 2000, 65-66).

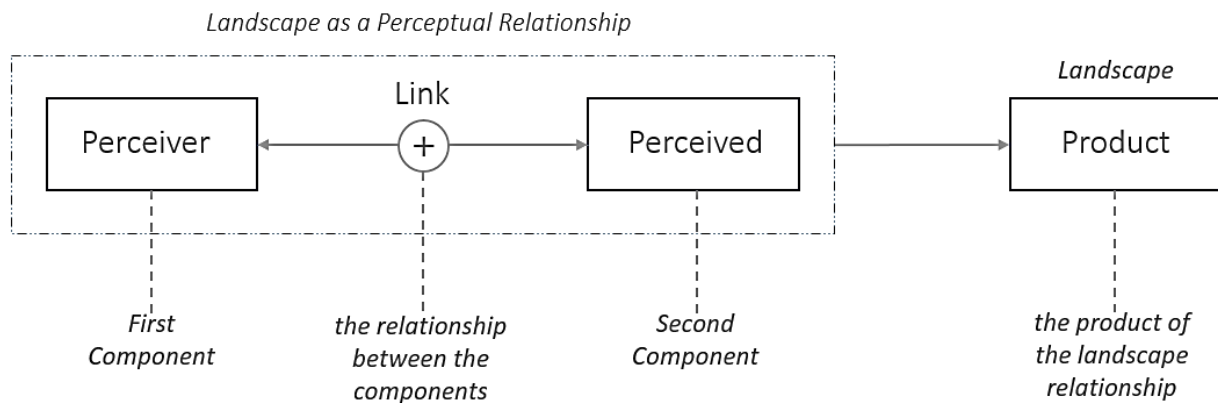


Fig. 1. Landscape, the product of the process, emerges when two components "perceiver" and "perceived" interact with each other in a certain perceptual relationship. Source: Authors.

Udehn states that individualism has no reality in society; everything comes from people and everything flows towards the person. Society in this sense has only one existential form and brings only individuals together; In this sense, the person is the only tangible reality that the observer can see (Udehn, 2002). Therefore, according to some scholars, the perception of each person is the real source of influence and the concept of landscape is realized based on a reality called "individuality". Turner has used the phrase "perception of each person" (Mansouri, 2010, 32; Turner, 1998, 117), and Lewis and Haber by explaining "perception by each person" have highlighted the importance of individuality in the subjective aspect of the landscape (Haber, 2004, 103; Lewis, 1979, 12). However, many scholars have emphasized the "human" as a general concept that can be interpreted as an individual or a collective without emphasizing individuality or plurality. Also, some experts have expressed the authenticity of the concept in terms of its individuality (Adams, 1991, 16; Farina, 1998, 10; Mansouri, 2004, 72; Mansouri, 2010, 31; Förster et al., 2012, 175; Berque, 2013, 25; Bell, 2015, 91; Swaffield, 2016, 168; Mahan & Mansouri, 2017, 21; Mahan & Mansouri, 2018, 34-39; Angelstam et al., 2019, 1445; Kyvelou & Gourgiotis, 2019, 3). In the view of this group of scholars, "landscape" is a relative product that is individually achievable but is also valid as a collective concept.

As mentioned before, some experts refer to the concept of "society" in their definition. The term society refers to a group of people who interact with each other in pursuit of common goals. Emphasizing this, Hegel believes that "society has an objective reality that is completely different from individuals" (Hosseini Dashti, 2006) and Soares (2018, 17) also states that society is a concept beyond its components and understanding individualities

is possible only through the society in which they live. In this perspective, people are influenced by society, and in other words, society is the source of change and influence. Researchers who have used the term "society" to express their purpose seem to have a consensus on the legitimacy of the landscape. According to Casgrove, "landscape" is not the product of an individual's attitude, but it is the consensus of opinions and views of individuals in society" (Cosgrove, 1992, 85). Steiner also emphasizes the collective aspect of subjectivity in the landscape by introducing "social currents" (Steiner, 2011, 335). Similarly, Hägerstrand highlights the "social aspects" (Hägerstrand, 1993, 19). Daniels calls this component "ideological phenomenon" which, along with the material phenomenon, creates the landscape (Daniels, 1989, 198). Some researchers have also used the term culture, which is a collective concept, to express their definition, for instance, Lassus considers the "cultural aspect" as the element that creates the landscape (Duncan, 1990, 56; Duncan & Duncan, 2009, 3; Mansouri & Atashinbar, 2011, 67; Waldheim, 2016, 2-11). McHarg also proposes a process-oriented approach using the term "cultural processes" (Taghvaei, 2012, 22) and considers the landscape as the manifestation of these processes. Researchers such as Wu, Motloch, have also directly referred to the word "society" (Wu, 2008, 45; Motloch, 2009, 28-30). This group of landscape experts seems to consider a relationship that can only be achieved through the community of individuals and their collective wisdom.

• Second component: Perceived

One of the main challenges of intellectuals is describing the perceived component in relation to the landscape. This concept is presented through different descriptions such as the environment, natural environment, nature, geographical location, etc. The explanation of the

perceived component in the landscape is important because the landscape deals with the external space and lacks obvious architectural boundaries. Mansouri interprets the landscape as an intermediate arena that explains the medium between the architectural space in which the human plays a key role and the natural space, which is the manifestation of the area surrounding the human being (Mansouri, 2010, 31). In other words, the perceived component in the landscape is one of the aspects that can be used for the recognition of the landscape. This component determines its subjectivity. According to the existing definitions, the descriptions provided can fall into two main categories: scholars who have used the term “nature” to express their meaning and experts who have used the word “environment”.

Nature is one of the concepts which has been frequently defined by scholars. The term nature is a general concept that refers to specific materiality, and sometimes it refers to the physical world and it is the whole, which includes the processes of living and non-living organs, Sometimes it is equivalent to the universe. Although man is part of nature, man and his related activities are generally placed in separate categories. In Aristotle’s classification, natural phenomena are separated from human phenomena by their main characteristic which is dynamism (Kelsey, 2003, 59). However, people like Whitehead, who are skeptical of Aristotle’s views, see nature as the sum of what can be perceived by the human senses (Whitehead, 1920, 2). In many definitions, the objectivity component has been interpreted as nature. In explaining the objective aspect of landscape definition, scholars have used different terms such as “ecology and natural patterns, hydrology, wind, other natural factors” (McHarg, 2010, 29), “natural systems” (Waldheim, 2006, 43), and “natural aspects” (Hägerstrand, 1993, 19; Hägerstrand, 2000, 12). Some authors have used the concept of “environment” to refer to this aspect of the landscape definition. One of the most obvious differences between the term environment and nature is that the environment, unlike the term nature, is a relative concept. The environment is defined in relation to the subject. This means the environment in which the subject exists should be determined, or the meaning of this term must be clarified by other words: such as the natural environment, the environment of an object, and so on. Goudini and his associates state that “inclusive, comprehensive, and wide-ranging are the first set of meanings provided for this word, which indicates the dominance of something over something else” (Goudini, Bakhtiarimanesh & Barati, 2018, 8). According to Farshad, “the environment of a collection is its associated elements and properties that are not part of that collection, but a change in any of them can make changes in the state of the collection” (Farshad, 1983, 48). Emphasizing the biological implications of this

mutual effect, Lang states that “the environment around an organism is also the living environment of other beings and indicates the relationship with its surroundings” (Lang, 2016, 89-90).

Thus, the concept of the environment has a wider scope and in addition to the material spectrum, can also include a range of immaterial concepts such as virtual environments. On the other hand, the term nature may sometimes be used in relation to man-made and artificial environments. In his essay, Wilkoszewska discusses the necessity of understanding the subtle differences between the concepts of nature and environment in landscape study (Wilkoszewska, 2019, 89-95). As Naghizadeh states, “In the contemporary view, nature is something that man has not been involved in its creation and is the product of the mental dialectic of man and the world of objects” (Naghizadeh, 2005, 132). In contrast, the environment is anything that surrounds itself and can be both natural and artificial. The compound nouns such as natural environment and artificial environment are terms that have been created to clarify the subject. Accordingly, some experts have preferred to use the term environment, for example, Lassus has used the term “environment” to explain the objectivity (Mansouri & Atashinbar, 2011, 67; Capone, 2013, 63; Mahan & Mansouri, 2017, 21). Using the term “human environment” (Arts et al., 2017, 457) by Artes and his colleagues and the “tangible phenomenon by Swaffield and Sheybani shows that they have attempted to cover a wider range of meaning” (Sheybani, 2010, 4; Swaffield, 2016, 168). Similarly, some other experts have used the word environment to describe this component (Mansouri, 2004, 72; Mansouri, 2010, 31; Berque, 2013, 25; Bell, 2015, 91; Angelstam et al., 2019, 1445).

• The relationship between two components (link)

One of the most important parts in defining the concept of landscape is the way through which the relationships between these components are presented by experts. The discrete link is one of the major interpretations used to describe the connection between the two components of the landscape, the perceiver and the perceived. Despite this, the issue has been less focused on. In some of the definitions of scholars, the components of the landscape are considered as separate and discrete factors, and a description of the attribute of its coherence and entanglement is not provided. Emphasis on this link is noteworthy because if such a description is provided, the nature of the product of the relationship will change. This also indicates that the product is the result of analytical integration that can not be decomposed into components while retaining properties. For example, Mahmoudi has divided the landscape into two categories, objective and subjective. “... Now, if we introduce the first category as effective factors in the urban landscape, it becomes clear that the urban landscape is an objective

landscape of the city whose components are tangible and functional elements. On the contrary, the perceptions of individuals and spectators of the elements in the city can be introduced as the image of the city” (Mahmoudi, 2010, 28). Also, in other definitions, these two aspects have been seen through an atomistic and discontinuous view (Samuels, 1979, 58; Daniels, 1989, 198; Duncan, 1990, 56; Adams, 1991, 16; Duncan & Duncan, 2009, 3; Mahan & Mansouri, 2017, 21). Another interpretation considers the relationship between the two components of the model as continuous or entwined. This form of description implies that these two factors are inseparably integrated. Integration is not simply renaming or combining different elements. It is neither acquiring a new identity nor dominating one element over another. As a result of integration, the interaction between all the elements and the final change in all, a new being is born with a fully integrated identity (Westra & Rodgers, 1991). Lamei also mentions integration as the process of forming a new whole. “The concept of integration includes the process of combining one or more elements and forming a new whole. The interactions between the elements of this whole cause its integration” (Lamei, 2007). This group of scholars has used different words to emphasize the concept of continuity and integration. For example, this form of perception in the definition of Lassus is reflected by the phrase “indivisible aspects” and Wu uses the phrase “interaction” to show this relation (Wu, 2008, 45; Mansouri & Atashinbar, 2011, 67; Capone, 2013, 63). Also, these two components are “not the sum of components but a whole” (Tuan, 1979, 90) and are described by the terms “integration”⁵ and “Combination”⁶ (Waldheim, 2006, 43).

• Product of the relationship

One of the challenges in defining a landscape is describing the product through linking its two components, perception and perceived. This product is ultimately called “landscape”. This issue has led to a plurality of ideas among experts to explain the nature of “landscape” sometimes it is not and its nature remains unclear. In general, the attitudes of scholars with an objective-subjective approach in describing the nature of landscape can fall into three categories. Some researchers have considered the two-component to be “objective” in nature. Objective nature means that the landscape is an external phenomenon and has exclusively physical dimensions. This group of researchers defines the landscape by terms that are associated with geographical and ecological features. For example, Khorasani Zadeh refers to the landscape as the outside space of any place that is in the field of view (Khorasani Zadeh, 2003, 25). According to, Risser “landscape ecology is a system consisting of interval periods and spatial boundaries. For example, the landscape ecology of a village is the interval of the annual periods of planting and growing plants or the movement of insects

and animals in a few days, which takes place in areas such as farms, forests, jungles, and roads. The combination of these temporal and spatial currents constitutes an ecological landscape (Risser, 1987, 18). Naveh similarly states that “landscape, as a whole unit of physical, ecological, and geographical features, integrates with natural and man-made processes and patterns” (Naveh, 1987, 78). Forman describes the term landscape as “a heterogeneous land area consists of a cluster of interactive ecosystems that repeat in similar forms” (Forman & Godron, 1984, 89; Forman, 1987, 24). Wu also argues that “landscape is a geographical place. Heterogeneous spatial variables are composed of a mosaic of patches of varying size, shape, content, and history.” These landscape areas are defined by geographical, ecological, human units” (Wu, 2008, 45). In this definition, although in addition to ecological issues, human being has been mentioned, man is not a perceiver but he is a part of the ecosystem. Thus, the definition still expresses the nature of the landscape objectively and physically.

Another view considers the landscape as a “subjective” phenomenon. In the interpretation of this group of scholars, the product of landscape is abstract in nature and ultimately exists in the mind. Turner, in describing the interpretive nature of the landscape, explains it as “a particular view of the world” and in part, he states that “our perceptions of the city are what is called landscape” (Turner, 1998, 117). Casgrove also interprets landscape as a kind of discourse between nature and society “ and argues that this discourse is philosophically and practically closely related to our attitude” (Cosgrove, 1992, 85). Phrases such as “aesthetic experience” (Tuan, 1979, 90) and “description of objects” (Farina, 1998, 10) emphasize the interpretive and subjective nature of the landscape. This conceptualization of the landscape is similar to some descriptions provided for the “text” and “reading” in literature. Lewis and Samuels describe the landscape as “the history of human beings” (Lewis, 1979, 12; Samuels, 1979, 58) and Duncan describes it as an interpretable “text” (Duncan, 1990, 56; Duncan & Duncan, 2009, 3). From a group of experts’ perspective, “landscape” is “objective-subjective” in nature. It can be argued that today this interpretation of the landscape is the most common one among scholars. In this view, the landscape is not the sum of the features of the first two components, but synthesis representing complex and new features known as “objective-subjective” and has not previously existed in either dimension of objectivity and subjectivity. Landscape with an objective-subjective nature is a completely new concept that has been formed by the integration of the previous heterogeneous dimensions. Scholars have used various terms to express this concept, such as “place”, “perceived environment” and “objective-subjective”. The

term place refers to a part of space that has acquired a special identity through the factors in which it is located (Grütter, 2004, 138). By expressing the spatial nature, Berque refers to the objectivity-subjectivity of the landscape and considers the landscape as another kind of “place” (Berque, 2008, 88) and Mansouri also states that “the landscape has the nature of place and is the product of human experience in space” (Mansouri, 2010, 31). Bell and Haber also emphasize the objective-subjective nature of the landscape using the term “perceived environment” (Haber, 2004, 103; Bell, 2015, 91). Hägerstrand also uses the term “geographical area” which has social aspects (Hägerstrand, 1993, 19). Sheybani and Habibi have also interpreted the landscape as a spatial phenomenon using the term “place” (Sheybani, 2010, 4; Habibi, 2009, 71). Lassus also directly refers to the nature of “objective-subjective” arguing that “the perspective of a continuous phenomenon whose objective and subjective aspects are inseparable” (Mansouri & Atashinbar, 2011, 67; Capone, 2013, 63; Mahan & Mansouri, 2017, 21). Swaffield describes this concept as follows: “Landscape not only represents a tangible phenomenon and the product of potentiality before our eyes, but it also triggers a subjective or imaginary subject in the mind” (Swaffield, 2016, 168). Finally, the analysis and classification of the definitions provided by experts indicate that scholars have presented various interpretations for the different components of the definition. The interpretations can fall into semantic schemata. Experts have proposed a “continuous” or “discrete” model to define the perceiver component, “human” or “society”, and perceived component, “nature” or “environment”, and to describe their relationship. Finally, for the product of relationship (landscape), they have considered “objective”, “subjective” or “objective-subjective” description (Fig. 2).

Discussion

Multiple interpretations of each component can lead to semantic pluralism of the concepts and this multiplicity prevents researchers from discussing the same subject. As mentioned, in explaining the “landscape” component, the two concepts of “human” and “society” have been proposed by different scholars. The first group, which focuses on “human” in this definition, generally emphasizes his psychological aspects while the second group, ignoring individual tendencies, considers “society” as the source of the landscape and tends to sociological aspects to interpret it. In neither of the specialized groups, there is a noticeable dominance of this interpretation. For this reason, accurate conclusions can not be made. This can be associated with the main ambiguities of the term landscape that researchers have not reached a consensus on. However, the human concept seems to be more comprehensive. The concept of human is more inclusive and it is included in different descriptions of the landscape types. The reason is that this relationship can also be practical for an individual and it is formed based on the wisdom of the crowd and the mindset of society. Comparatively, society itself is a concept with a relative scale, which can be related to the perception of different populations about the subject of different scales. For example, the people of a city, a neighborhood, and the urban grain itself provide a range of different scales that can be hypothetically limited to the level of a human being. The second component in question is “perceived”. There are two main approaches for describing this component. They can fall into two terms: “nature” and “environment”. The term nature is most often suggested by ecologists and geographers (Table 1) and reflects the concerns of their profession. The concept of nature is philosophically comprehensive and encompasses all artifacts. The common

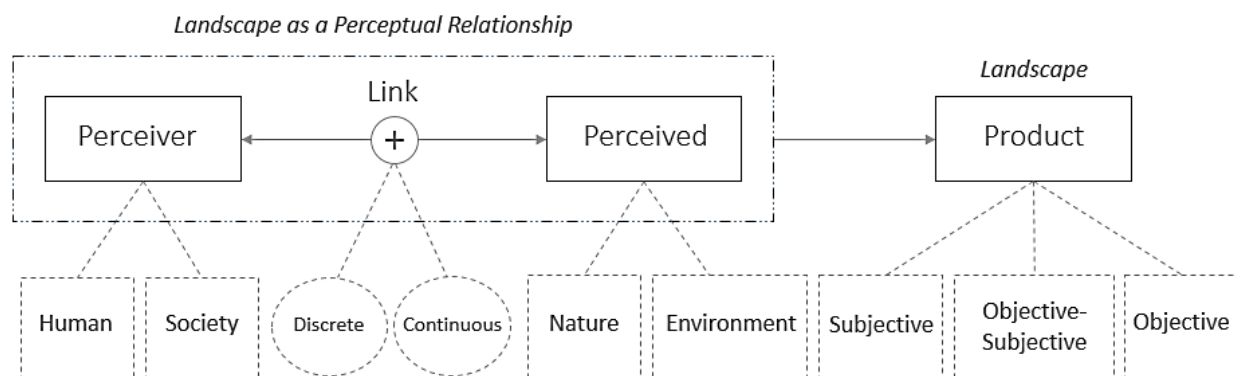


Fig. 2. Different interpretations used by experts for explaining the relationship between the perceiver and the perceived, the type of relationship, and the nature of the product of the landscape relationship. Source: Authors.

Table 1. Evaluation of experts' interpretations of the components of landscape definition. Source: Authors.

Area of Specialty	Scholar	Perceived	Perceiver	Relationship Between the Components	Product of the Relationship
Landscape Specialists	Bernard Lassus (Mahan & Mansouri, 2017, 21; Mansouri & Atashinbar, 2011, 67; Capone, 2013, 63)	Environment (environment)	Society (cultural aspect, creative element)	Continuous (inseparable aspects)	Objective-subjective (Place)
	Martha Schwartz (MSP, n.d)	Nature (natural environment)	Human (human)	Continuous (Interaction)	Objective-Subjective (Spatial Context)
	Borrell Marx (Adams, 1991, 16)	Nature (Nature)	Human (human)	Discrete (relation)	Objective (visual features)
	Ian McHarg (Taghvaei, 2012, 104; McHarg, 2010, 29)	Nature (ecology, hydrology, natural patterns, etc.)	Society (cultural processes)	Continuous (Interaction)	Objective (manifestation of changing ecological processes)
	Tom Turner (Mansouri, 2010, 32; Turner, 1998, 117)	Environment (geographical location)	Human (Perception of each person)	Continuous (Interaction)	Subjective (specific view of the world)
	Simon Swaffield (Swaffield, 2016, 168)	Human environment (tangible phenomenon)	Human (mental subject)	Continuous (Interaction)	Objective-subjective (perceived environment)
	John Motloch, (Motloch, 2009, 28-30)	Environment (environment)	Society (people)	Continuous (link)	Objective-subjective (Place)
	Simon Bell (Bell, 2015, 91)	Environment (environment)	Human environment (perception by humans)	continuous (Interaction)	Objective-subjective (perceived environment)
	Seyed Amir Mansouri (Mansouri, 2013, Mansouri, 2010, 31; Mansouri, 2004, 72)	Environment (Geography)	Human / Society (Human ,Society)	Continuous (Interaction)	Objective-subjective (Place)
	Amin Habibi (Habibi, 2009, 71; Mansouri & Habibi, 2010, 67)	Environment (environment)	Society (people)	Continuous (alignment)	Objective-subjective (Space-place)
Mehdi Sheybani (Sheybani, 2010, 4)	Environment (sensory and tangible layer of the city)	Human / Society (human emotional dimension and cultural dimension of society)	Continuous (with three dimensions of emotion, culture, and ecology)	Objective-subjective (Place)	
Specialized Associations	International Federation of Landscape Architects (IFLA) (IFLA, n.d)	Environment (environment)	Human (human)	Discrete (related)	Objective-subjective (Place)
	American Association of Landscape Architects (ASLA) (Asla, n.d)	Environment (natural environment, artifact, etc.)	Continuous (relationship)	Continuous (Interaction)	Objective-subjective (Place)
	Council of Europe (2000a), Council of Europe (2000b)	Nature (Nature)	Society (people)	Continuous (relationship)	Objective-subjective (Perceived environment)
	European Association of Landscape Architects (ECLAS) (ECLAS, n.d)	Environment (external environment)	Human (human)	Continuous (relationship)	Objective-subjective (Place)
	British Institute of Landscape Architects (UK LI) (Landscape Institute, n.d)	Environment (environment)	Society (people)	Continuous (intermediatr)	Objective-subjective (Place)
	Australian Association of Landscape Architects (AILA) (AILA, n.d)	Environment (environment)	human (human)	continuous (interaction)	Objective-subjective (Spatial response)
	Canadian Association of Landscape Architects (CSLA) (CSLA AAPC, n.d)	Environment (spaces, signs and structures open to the public)	Ambiguous	Ambiguous	Objective-subjective (Place)

Rest of Table 1.

Area of Specialty	Scholar	Perceived	Perceiver	Relationship Between the Components	Product of the Relationship
Ecologists	Jingle Wu (Wu, 2008, 45)	Nature (Nature)	Society (Society)	Continuous (Interaction)	Objective-subjective (A set of physical and social dimensions)
	Frederick Steiner (Steiner, 2011, 335)	Nature (ecological flow)	Society (social flow)	Continuous (Interaction)	Objective-subjective (Perceived environment)
	Wolfgang Haber (Haber, 2004, 103)	Environment (surrounding land)	Man (perceived by the individual)	Continuous (perceived land)	Objective-subjective (Perceived environment)
	Almo Farina (Farina, 1998, 10)	Nature (living or non-living bed)	Human (individual description)	Discrete (presence of conditions)	Subjective (Description of objects)
	Katrina Saltzman (Saltzman, 2000, 64)	Nature (nature)	Human (human)	Continuous (Interaction)	Objective-subjective (Place)
	Charles Waldheim (Waldheim, 2006, 43)	Nature (natural systems)	Humans (human intervention in nature)	Continuous (integration and combination)	Objective (the realm of infinite flows and diverse areas)
Geographers	Richard Hartshorne (Hartshorne, 1939, 46)	Nature (limited piece of land)	Man (Earth Aesthetics)	Ambiguous	Ambiguous
	Richard Hartshorne (Hartshorne, 1939, 46) Augustine Berque (Berque, 2013, 25)	Environment (environment)	Human (human)	Continuous (Interaction)	Objective-subjective (Place)
	Thorsten Hägerstrand (Hägerstrand, 1993, 19)	Nature (natural aspects)	Society (social aspects)	Continuous (Landscape Fixed Assets Framework)	Objective-subjective (Place)
	Ufi Tuan (Tuan, 1979, 90)	Environment (limited part of the land)	Human (structure of mind and human)	Continuous (not the sum of components but a whole)	Subjective (visual and aesthetic experience)
	Dennis Cazgrove (Cosgrove, 1992, 85; Mansouri & Habibi, 2010, 67)	Nature (ecological approach)	Society (perspective is not the product of an individual's attitude but the aggregation of opinions and attitudes of people in society)	Continuous (discourse)	Subjective (This discourse is philosophically and practically closely related to our attitude)
	Donald Meinig (Mahan & Mansouri, 2017, 21)	Environment (what is in front of our eyes)	Man (what is in our minds)	Continuous ("and")	Objective-subjective (perceived environment)
	Stephen Daniels (Daniels, 1989, 198)	Environment (material phenomena)	Man (Man; each with his own lifestyle)	Continuous (These two should be seen side by side)	Ambiguous
	Pierce Lewis (Lewis, 1979, 12)	Nature (Natural Environments)	Society (ideological phenomenon)	Discrete (General Relationships)	Subjective (Biography of Human History)
	Marvin Samuels (1979, 58) Mental (History)	Artifact (intentionally written environment)	Human(s)	Ambiguous	Subjective (History)
	James Duncan (Duncan, 1990, 56; Duncan & Duncan, 2009, 3)	Artifact (text including human cultural products)	Society (culture)	Vague	Subjective (text)
Geographers	Claude Lévi-Strauss (Lévi-Strauss, 1992, 85)	Environment (environment)	Human (human)	Ambiguity	Subjective (a way to decipher human symbols and signs in the environment)
	Georg Simmel (Simmel, 2007, 25)	Nature (natural phenomena)	Ambiguous	Continuous (it penetrates all the separate components, without being attributable to any of them)	Ambiguous

Rest of Table 1.

Area of Specialty	Scholar	Perceived	Perceiver	Relationship Between the Components	Product of the Relationship
Historians	Simon Schama (Schama, 1995, 10)	Nature (Nature)	Society (Culture)	Discrete (Dual)	Subjective (One way of looking)
Philosopher	Mikhail Bakhtin (Bakhtin, 1986, 53)	Nature (natural environment)	Human (Human)	Discrete (participation)	Objective-mental (nature as the main text of the landscape)
	Arnold Berlint (1997, 12; 2000, 18; 2005)	Environment (environment)	Human (human)	Continues (correlation and complexity)	Subjective (aesthetic experience)

notion that uses this term against artifacts runs the risk of giving rise to a misconception about the term landscape that confines it to non-artifacts such as green space. Phrases such as “ecological landscape” or practical measures that equate landscape with the organization of natural space are also associated with this view. In these approaches, examples of nature are often presented with terms such as ecological environment, green spaces, animal species, wind currents, etc. (Risser, 1987, 18; McHarg, 2010, 29; Taghvaei, 2012, 22). On the other hand, professional associations and landscape architects have considered a wider scope for this component that is beyond the natural environment, and have expressed it by the general term “environment”. In this category of definitions, the researchers refer to dimensions beyond the natural environment and consider other functional dimensions for the landscape. The definitions refer to examples of man-made environments such as cities and artificial elements. This method of interpretation emphasizes the existence of other environments in addition to nature. The environments are not exclusively natural products and could be the products of human-environmental interaction. In other words, the concept of environment, while encompassing nature, can also include artificial concepts. This definition dispels common misconceptions that limit the landscape to natural environments. On the other hand, the term environment itself has relativity in the concept. This feature is more in line with the essence of this concept, which measures the environment in relation to humans. The relationship between the two components of the landscape, perceiver and perceived is part of the definition of landscape. This relationship has a significant impact on its interpretation. In describing the relationship between these two components, the two statuses of “continuous” and “discrete” are mentioned. Most associations and landscape experts have emphasized the necessity of the continuity of them and considered the landscape products not as a combination of these components but as an entanglement of them. In describing the landscape construct as a

perceptual phenomenon, the landscape disappears when the perception is absent. Simply put, the existence of the landscape depends on the continuity of the perceiver and perceived relationship. On the other hand, one of the basic characteristics of the landscape concept is its “holism”, which has been emphasized by many researchers and scientific societies as its essential attribute (Naveh, 1987, 78; Council of Europe, 2000b; Mansoori, 2010, 31; Berque, 2013, 25; Makhzoumi, 2015, 113). In contrast, atomistic measurements are the result of discreteness between these two components. In the models in which social components are partially integrated and mainly focus on the structure, the two components are conceived to be separated and decomposed. As the landscape has a holistic nature, the continuous model of perception, in which the subject and object of perception are continuously interacting with each other, describes a more accurate model of perspective interaction. Scholars have expressed the perceptual product of the landscape in three ways: “objective”, “subjective” and “objective-subjective”. An examination of the definitions in which the landscape has been an objective phenomenon indicates that the product of landscape lacks the subjective dimensions of the audience. Thinking of the landscape as an objective phenomenon eliminates from the concept what is the essence of the landscape and prevents the creation of this perceptual relationship. The result would be something that is not part of the landscape, but something different from it. Some experts have also considered landscape as an abstract concept with a subjective nature. These definitions are also inconceivable because there is a reciprocal, intertwined relationship between the perceiver and the perceived. Therefore, changes in each would influence the whole relationship. The objective-subjective nature, which is the product of simultaneous in both of these worlds, provides a better understanding and describing the characteristics of the concepts that are obtained in the reciprocal and continuous relationship between objectivity and subjectivity. In other words, if the product of the perceptual relationship

of the landscape is conceptualized as an objective-mental phenomenon, space will be interpreted as a spatial phenomenon that has both external -physical and mental dimensions, which are formed in the spectator's perceptual system. Therefore, the landscape appears not in one of the two but through a continuous and dynamic relationship between them.

Conclusion

A review of the definitions of landscape in the period (1939-2020 AD) indicates that scholars hold different views about its components. This study shows that scholars use different approaches to express the four categories of “perceiver”, “perceived”, “the relationship between the two components” and “ the product of the relationship”

1. The definition of perception is made of the two concepts of “human” and “society”, which indicates the interpretation of the experts whether the landscape is viewed as the individual or social construction. The main difference between these concepts is that the former emphasizes the legitimacy of the landscape based on the idea of the individual while the latter on the specific group. Given that the landscape can be defined by a person, the first interpretation is a more accurate and comprehensive interpretation of this concept.
2. To define the concept of “perceived”, there are two concepts, “nature” and “environment”, the first of which may be interpreted as natural and non-artificial environments, but the second brings to mind a broader meaning - including artificial environments. On the other hand, the concept of the environment has the meaning of relativity within itself, which corresponds to the essence of this relationship, which expresses the environment in relation to the perceiver

3. Determining the relationship between the two components of “perception” and “perceived” play shaping the nature of the concept of landscape. So far, the link between these two components has been interpreted as “discrete” and “continuous”. Contrary to the discrete model, the continuous model seems to be consistent with “holism”, a fundamental principle in the concept of landscape, because holism emphasizes the synchronicity and uniformity of all aspects, but in the discrete model there is no need for synchronization of aspects and they can be considered at different times. Therefore, in the case of interpreting the landscape discretely, this definition is in contradiction with the essential attribute of holism.

4. The nature of the product of the landscape relationship is expressed in three ways: “objective”, “subjective” and “objective-subjective”. The first two concepts can not present all the features and dimensions of the landscape, and each conveys part of the perceptual relationship. As the “objective” nature focuses on the perceived aspect and the subjective nature emphasizes the perceiver aspect. However, this relationship has two simultaneous and interactive aspects that occur only if they are seen as a whole. Thus, only the “objective-subjective” nature, which in its essence uses both sides of the relationship between man and the environment, allows the expression of identity and fundamental features of the concept of landscape.

Therefore, classification and analysis of the approaches used for defining the term landscape show this concept is the result of a perceptual relationship created between “human as a perceiver” and “environment as a perceived element “ established by a “continuous” link and results in products with an “objective-subjective” nature (Fig. 3).

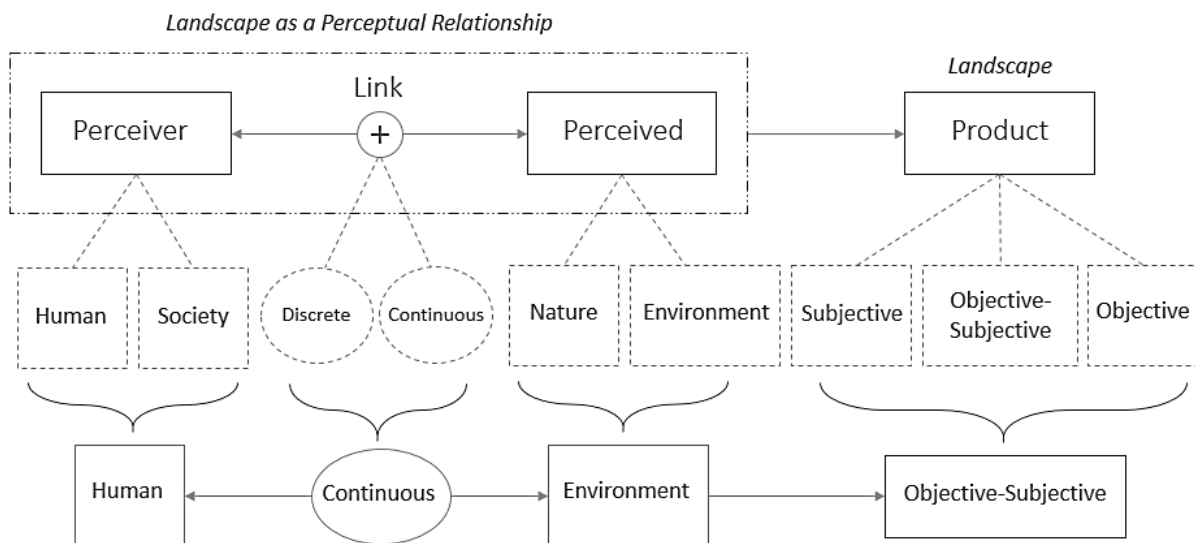


Fig 3. Landscape is the perceptual relationship between "man as perceiver" and "environment as perceived" established by a "continuous" link result in products with an "objective-subject" nature. Source: Authors.

Endnote

1. Belief in the holistic approach of the landscape was formed in the historical course in the 16th century. Over several hundred years and in the present century, the developments of the approach turned it into a holistic concept that critiques modernist atomistic ideas (Alehashemi & Mansouri, 2017, 38-41). The adjective “holistic “ is known today as one of the basic principles of landscape, as Mahan and Mansouri (2018, 23) state “Today, in the holistic approach to landscape, which is considered by critics as a standard approach in scientific and professional societies, the landscape has been conceptualized as a whole.
2. In the book of formal logic, Khansari states six conditions for defining a concept: 1) it should be comprehensive. 2. It should be exclusive. 3. Identifier and identified should be in contrast 4. It should be clearer. 5. The general premises should be explained before the specific ideas. 6. Strange and vague expressions should be avoided.
3. According to most philosophers, there are two main types of perception, “sensory perception” - perception related to the external senses - and “rational perception” - esoteric perceptions in completing sensory data. Some theories have proposed four

types of perceptions and they have been referred to as the stage of perception.

4. This perceptual relationship is based on a schema that has roots in the view of Western scholars about the process of perception. However, in philosophy, especially in the thought of Eastern philosophers, other perceptual schemas explain another form of relationship between perceptual components. For example, the theorem of the “union of the universe and the known” formulated by Mulla Sadra states that the subject or the soul finds existential unity with knowledge and reaches its perfections due to existential strength. In other words, the essential movement of the soul is achieved by perception and awareness, and the gradual departure of the soul from the potential to the actual action and the intensification of its actuality is realized by thought and knowledge (Alizadeh, 2002, 16-17). Since the focus of this paper is on examining and evaluating the views of thinkers who have explained the concept of landscape based on perceptual structure, we have excluded the philosophical analysis of the relationship between these components in other perspectives.

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