

***Landscape* game spaces: Understanding experiences of video game spaces through the concept of Topological Space**

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EXTENDED ABSTRACT

In the context of an ongoing study bringing together architectural, landscape and game studies, this paper aims to reconsider the notion of “topology” regarding video game spaces. The idea of “topology” has been and can still be found in various studies on video game space, but its meaning differs from one text to another and is used sometimes in contradictory ways. The concept is also rarely explicitly defined, nor is made clear from which author(s) the term has been taken. We would like for this conference to make a review of the different uses of the term in studies on game spaces and offer a different interpretation, that wants to add to the comprehension of the relation with space represented by video game. More specifically, we will examine the concept of “topological space”.

Initially a mathematical and geometrical term conceptualized among others by Leonhard Euler, “topology” has been interpreted by many research fields, including geography, cartography, or study of networks. It describes a changing point of view that dismiss the Euclidean distance to focus on the ideas of connectedness and closeness. Concerning game studies on video game spaces, “topology” is often used as an alternate word for “topography”. However, as Günzel (2016) has underlined it, the two terms are very different and don't refer to the same approach of space. The differences shall be made clear during the presentation, but also how the two terms can relate to each other. Beside this confusion, we can find a use of “topology” in Espen Aarseth's researches (2001), where he introduces “topological structures” as constrictive and bound to gameplay – an idea followed up by Leino (2013). Collaborating with Solveig Marie Smedstad and Lise Sunnanå (2003), they choose nonetheless to present a different interpretation of the term in their typology of games. This interpretation considers “topology” as the relation of non-overlapping positions of objects and the possibility of their discreet movements, an analysis closer to Stephan Günzel's researches (2012 and 2019), that describe games like chess or textual adventure games (e.g. Colossal Cave Adventure, Crowther and Woods, 1976) as

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topological spaces. Stephan Günzel also offers to understand play space – space created by the activity of playing a game – as more topological than geometrical (2016). Other texts associate the term “topological” to the digital network: Jean-François Lucas (2013) uses “topology” to question the proximity of two homes in *Second Life* (Linden Lab, 2003), and McKenzie Wark (2007) associates digital and topological through the possibility to access any place from any place around the world. After a characterization of those different acceptations of topological spaces, we will discuss another that draws a line towards landscape and architectural studies.

The concept of “topological space” we wish to highlight can also refer to “landscape space”. It draws from phenomenology, more specifically the philosophy of Maurice Merleau-Ponty and the aesthetics of Rudolph Arnheim, but also on the interpretation of Deleuze and Guattari. One origin of the term can be found in the work of Jean Piaget and the perception of space by small children, which is according to his studies first topological. The topological space is an idea that can be in this sense opposed to the “geometrical space” and is tight to perception and experience of spaces. Arnheim specifically talks about “seeing in relation”, a “relation” that can be understood in a social sense, but that is primarily spatial: “Physically, space is defined by the extension of material bodies or fields bordering on each other, e.g., a landscape of earth and stones adjoining bodies of water and air.” (Arnheim, 1977). Finally, topological space as landscape is experienced through movement, and walking can be considered a privileged form of movement in this sense. Video games images, as for them, are defined by their manipulation by a player and the movement that result. Those movements and the 3D space they form have often been described as movement along one or more axes (x, y, z: Wolf, 1997; Fernández-Vara et al., 2005). On the contrary, thinking spaces as topological implies thinking a relation with the space that has nothing to do with coordinates or distances, but with proximity, density, depth (close and far), openness and closeness, but also limits and notions of thresholds. We shall then follow Elsa Boyer’s comment that while the static perspective of painting can be understood as a geometrical space, the mobility of the video game’s perspective “fall within the topological field of places” (2012).

As the concept of “landscape space” drawn from Merleau-Ponty describes primarily 3D spaces – the dimension of *profondeur* is of importance, this research concentrates on 3D “first person” or “third person” games. The presentation shall then develop an analysis of few case studies – *Proteus* (Ed Key, David Kanaga 2013), *The Witness* (Thekla Inc. 2016) and *Death Stranding* (Kojima Productions 2020), while mentioning other references, such as *The Legend of Zelda: Breath of the Wild* (Nintendo 2017). These games are particularly interesting to study in the light of topological relation to space as they have a way to let the player orient themselves in their game environments that doesn’t rely on coordinates but on how places are designed and linked. *The Witness* (Thekla Inc. 2016)’ environment, for example, is composed of different blending landscapes that can be smoothly traversed. The relation between the places and between the player and the game space could in this sense be understood as relying on proximity and depth.

This concept of topological relation to space will be discussed along other terms, such as “free roaming” (Bonner, 2021). As the idea of a *landscape space* yet refers to a mode of engaging with space from the point of perception of a body, “zero-point” of the perception of the world, we will bring together studies on game spaces and literature on avatar (Klevjer, 2012 and Delbouille, 2019). We shall then underline a possibility to understand certain game spaces in a topological sense used in landscape and architecture research. Speaking of topological spaces in the eye of architectural and landscape phenomenology aims to shine a new light on the way players understand and engage with the game space, but also how game space is conceived by them. The

presentation aims to add to the understanding of game architectures and landscapes experiences, and draw hypotheses on the influence of this perception on architectural experience nowadays.

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