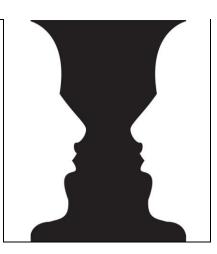
JOURNAL OF COMPARATIVE RESEARCH IN ANTHROPOLOGY AND SOCIOLOGY

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A dive into copresence and presence literature

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Abstract

This paper reviews the origins and definitions of copresence and social presence in the writings of Heidegger, Goffman, Short, Zhao, among other significant authors. It distinguishes the types of copresence and social presence while examining their meanings and implications. In the existing discussions about the extensive presence of technology into human activities, the concept of copresence is strongly connected with the concept of social presence. In some researches, they are presented as synonyms, while in others they are exposed as related concepts. Taking into consideration the researches of Short (1976) and Zhao (2003), I highlight that the concept of social presence represents a sense of copresence (Zhao, 2002) and I argue the importance of this perspective might be helpful for explaining the complicated realms of existing technological situations and social experiences. Recent literature combines copresence and social presence under the concept of social copresence, that expands the previous definitions for enabling the research of smart devices.

Keywords

Copresence; social presence; social copresence; new technologies; social experiences;

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Introduction

The new technologies have changed the ways people interact daily and have complicated the questions of "being there" and "being together" determining the appearance of new social experiences. Scholars from psychology, philosophy, anthropology, sociology, education, informatics, cognitive science, and media studies, are studying to understand how computer-mediated communication, virtual environments, artificial intelligence, human-computer interaction, online education, and online therapy are changing what we knew about copresence and social presence.

The study of copresence and social presence it's very promising, but it is still in the incipient stage as Swinth and Blascovich have observed: "[a]fter nearly 30 years of theorizing and research, it appears that no one is clear about what social presence or copresence are, let alone whether or not they contribute to our understanding of technology-mediated social interaction" (2002, p.8). Eriksson shows that copresence and social presence were popular in the first half of the last decade, but the interest dramatically decreased (2016, p.14). In the existing context in which new technologies are widespread, these two concepts – copresence and social presence – have entered again the scientific spotlight. The new electronic communication has complicated the picture of what it means to be "there" and "somewhere" since the appearance of the telephone as Meyrowitz highlighted: "electronic communication technologies bring the difference between physical and social 'location' to the forefront" (Meyrowitz apud Eriksson, 2016, pag. 26). In the same note, Zhao stresses that "the main task of copresence and social presence will be to understand their etiology and formation and to find out how the sense of being with others can be affected or created technologically through copresence and social presence design" (Zhao, 2002, pp.450-451).

Copresence

Drawing on the research of Mead (1934), Cooley (1956), and Goffman (1966), Zhao defines copresence as being a "sociological concept that describes the conditions in which human individuals interact with one another in face-to-face or computer-mediated situations" (Zhao, 2003, pp. 445). Campos-Castillo and Hitlin, while studying how copresence definition evolved in time, highlight that the concept was formulated based early interaction theories: "the study of social interaction traces its roots to Triplett's (1898) research on how individual action is influenced by the contemporaneous physical presence of others or, to use Goffman's (1966) term, copresence (...) Over the next 40 years, researchers worked to specify the outcomes of copresence at the microlevel for individuals and its relationship to macrostructures" (Campos-Castillo and Hitlin, 2013, pp. 168).

Developing more on Goffman's perspective on human interaction, we can state that location or better said proximity is an important factor in the human interaction: "persons must sense that they are close enough to be perceived in whatever they are doing, including their experiencing of others, and close enough to be perceived in this

sensing of being perceived" (1966, pp.17). More than this, he considers that copresence enables individuals to be "uniquely accessible, available, and subject to one another" (1966, p.22).

In the same direction, Heidegger identified two modes of being, "Being In" and "Being With": "Being In" is used to emphasize a relationship based on proximity that enables us to treat others as "some corporeal thing (such as a human body)" (1927, pp.80); "Being In" might be considered an equivalent of colocation. On the other side through "Being With" he wants to emphasize an existing relationship, but not based on proximity "by reason of this with-like being-in-the-world, the world is always the one that I share with others" (1927, pp.155); "Being With might be considered an equivalent of copresence. In Heidegger's view the subject and the object can be simultaneously in a colocation and copresence situation because their worlds are connected (1927).

Zhao and Elsher consider that copresence enables not only proximity, but also reciprocity, accessibility, and availability to each other (2008, pp.571). In their view "in the offline world, copresence is a face-to-face situation that occurs in social gatherings, like one-to-one talks, small group meetings, games and parties. In the online world copresence can be seen as a 'face-to-interface' situation where people make themselves available for contact through a communication device, such as a desktop, a webphone (such as a Blackberry), or a mobile phone. Unlike face-to-face copresence that requires interlocutors to be present in the same place at the same time, face-to-interface copresence enables interlocutors to be present in different places at different times" (2008, pp.571).

Following the same direction, Campos-Castillo and Hitlin indicate that "the physical presence of other actors is neither necessary nor sufficient for copresence" (2013, pp.169). The two scholars highlight that the recent studies moved their focus from studying people in a remote physical environment to studying people in the technology-generated environment in order to determine and understand the dynamics of humans and technological agents interactions (2013, pp. 170).

Trying to analyze the concept of copresence in offline and online worlds, Zhao distinguished two forms and three conditions of copresence. In order to explain the two forms of copresence, Zhao draws on the theories of McLuhan (1964) and Dertouzos (1998) and uses two dichotomies "proximal" and "distance" to explain and expand the understanding of distance and presence. From his perspective, "proximal distance is an area within range of the naked or normal sense perceptions of both individuals, and remote distance is an area outside the range of the individuals' naked sense perceptions but within reach of the extended sense perceptions of the individuals" (2003, pp.447).

For explaining the three conditions of copresence, Zhao looks at different scenarios that involves the presence of both human and technological agents: "both individuals are corporeally present at the site; one individual is corporeally present at the site but the other individual is only virtually present at the site through an interactive representational device; and both individuals are virtually present at the site, with each being represented by an interactive device. Interactive representational devices are automated or robotic entities, in either physical (steel, plastic, and rubber) or digital

(software agents) form, that are capable of communicating with other people on behalf of the individuals who are themselves not corporeally present at the site" (2003, pp.447).

Following these classifications, Zhao obtains a taxonomy of copresence that showcases six types of copresence: "corporeal presence, virtual copresence, hypervirtual copresence, corporeal telecopresence, virtual telecopresence, and hypervirtual telecopresence" (2003, p.447). In order to better understand what each copresence type represents we are going to group them in three categories – corporeal, virtual, and hypervirtual. The corporeal types refer either to how individuals can be present at their sites while being in each other's "physical proximity" – "corporeal presence" (2003, pp. 447) or "electronic proximity" (2003, pp. 447) – "corporeal telecopresence".

The virtual types indicate different types of proximities and presence representations – "both individuals are in each other's physical proximity, but one is present in person at the site and the other is present through an interactive physical representation" – "virtual copresence" (2003, pp. 448) and "both individuals are in each other's electronic proximity, but one is present in person at the site and the other is present through digital representation" – "virtual telecopresence" (2003, pp. 448). For explaining physical representations Zhao introduces the notion of "social robots" (2003, pp. 448) and for elaborating on digital representations the notion of "software agents" (2003, pp. 448).

The hypervirtual highlights different individuals that can be present through different representations - "individuals on both sides are virtually present at the site through physical representations that are positioned in each other's physical proximity" – "hypervirtual copresence" (2003, pp. 449) and "individuals on both sides are virtually present at the site through digital representations that are in each other's electronic proximity" – "hypervirtual telecopresence" (2003, pp. 449).

As we can see Zhao's taxonomy reveals different conditions of copresence, that can create a sense of copresence or social presence. Zhao's perspective about the sense of copresence takes us back to Goffman and point out that these two concepts, copresence and social presence, are strongly related: "persons must sense that they are close enough to be perceived in whatever they are doing, including their experiencing of others, and close enough to be perceived in this sensing of being perceived" (Goffman, 1963, p.17). Zhao (2003) explains that the relation between copresence and social presence is not only on a semantic level but also on a conceptual level.

Oh, Bailenson, Welch draw on the theories of Short *et al.* (1976) and Lee *et al.* (2006a) and define social presence in relation with copresence - "social presence requires a co-present entity that appears to be sentient" (Short et al. *apud* Oh, Bailenson, Welch, 2018) – but also as a quality of the medium - "social presence is an integral part of virtual environments that mediate people, without it, the mediated other is merely experienced as an artificial entity and not as a social being" (Lee at al. *apud* Oh, Bailenson, Welch, 2018). In the following pages, I will review some theories about social presence to better understand what this concept represents.

Social presence

Social presence is a concept utilized by sociologists, communication theorists, and cognitive scientists to explain what "being there together" means (Eriksson, 2016, pp.26). Eriksson states that "social presence is concerned with what it means to be "somewhere together at the same time as the use of electronic and digital communication technologies complicate the picture of this somewhere" (2016, pp. 26). Lowenthal drawing on the theories of Biocca, Harms, and Burgoon defines social presence as simply a "sense of being with another, whether that other is human or artificial" (2003, pp.456).

Gunawardena argued that we discuss about social presence as "the degree to which a person is perceived as a 'real person' in mediated communication" (1995, pp.151), while Garrison *et al.* defined social presence "as the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people (i.e. their full personality), through the medium of communication being used" (2000, pp.94). Tu and McIsaac definition of social presence is "the degree of feeling, perception, and reaction of being connected by computer-mediated-communication to another intellectual entity through a text-based encounter" (2002, pp.140).

Erikssen considers that there are three perspectives on social presence: the first perspective, based on computer-mediated-communication theories like those formulated by Daft & Lengel 1984; Daft *et al.*, 1987, Short *et al.*, 1976, Rice, 1993, stress out that "social presence is a property of the medium, or, more precisely, is the medium's ability to convey social cues" (2016, pp.56). The second perspective using social cues theories, like those formulated by Swinth & Blascovich 2002, Heeter 1992; Schroeder 2006; Ijsstelsteijn, van Baren, van Lanen 2003; Mennecke *et al.* 2010, indicate that "social presence is the observability of self and others in a digitally mediated environment" (2016, pp.56), while the third perspective addressing theories about the medium quality, like those formulated by Short *et al.* 1976, Tu 2000, Schroeder 2002a, indicate that "social presence is described as a response to the medium in itself (...) social presence is a form of illusory experience of what is going on in the mediated environment, where the actor is led to believe that what his experiences are 'unmediated' "(2016, pp.60).

As we can observe, there are multiple perspectives about the meanings of social presence. From Lowenthal point of view social presence theories are organized in two categories. One category focuses on the perceptions of a person's being or existence, on whether one projects themselves into the environment or if other people can recognize them and another category focuses on whether or not there is a positive interaction or emotional connection between the communicators (2009). Other researchers, like Gunawardena (1995), argue that social presence explains how we form relationships based on how social presence affects our perceptions of others.

Lowenthal points out "that nearly everyone who writes about social presence seems to define it just a little differently" (2012, pp.31), this being the reason why there is no agreed-upon definition of social presence. Lowenthal argues that "the differences in how researchers define social presence might seem minor but they are important because the way researchers define social presence influences how they measure it and

the conclusions they draw" (2012, pp. 32). On trying to determine how scholars are defining social presence, Oh, Bailenson, and Welch (2018) underwent archival research reviewing journals with a focus on virtual environments and have identified four different definitions and ways of measuring social presence. The first one defines and measures social presence (or the synonymous concept of copresence) as a standalone concept; the second one separates social presence from copresence, defining and measuring them as distinct concepts; the third and the fourth define and measure social presence as a standalone concept, but by assessing predictors through experimental manipulations, questionnaire items or quantitative analysis.

Fägersten considers that the various definitions of social presence indicate the evolution of the concept and suggest it's semantically wideness (2010, p.177). Drawing on the theories of Short *et al.* (1976), Rice (1992), Biocca and Harms (2002), Fägersten (2010), Zhao suggests that copresence being called social presence may be instead a question of a conflation of terms (2010, p.177) and that the concept of social presence should be separated from copresence. Fägersten emphasizes the work of Biocca *et al.* (2003), Nowak (2001), Nowak and Biocca (2003) that have tried to separate the two concepts with the intention of keeping the initial conceptualization formulated by Short *et al.* (1976).

Recent definitions of social presence are uniting the two existing concepts of copresence and social presence under the concept of "social copresence" (Kang et. al, 2018). In the light of the new literature, social copresence is therefore defined as the "involvement and engagement through mutual awareness between intelligent beings who have a sense of access to the other being consciously, psychologically, and emotionally, within a mediated environment perceived as capable of supporting social communication" (Kang et al., 2008, pp.2). More than this, social copresence is a product of three aspects of mediated communication: "Copresence, defined as users' sense of being connected with their interaction partners [26]; Social Richness of Medium, defined as the perceived capability of the medium to connect interactants socially; and Interactant Satisfaction, defined as the presence of social attraction and emotional credibility between interactants" (Kang et al., 2008, pp. 3).

Kang et al. (2008) consider that social copresence has better experimental applications than copresence and social presence and showed how social copresence can be used to "measure users' engagement with conversational partners in social interactions that do not involve specific tasks or outcomes" (2008, pp. 1). Exploring how different medium create the impression of presence, they reveled that "this sense of being co-connected is likely to be affected by the addition of a visual element to voice communication, as visuals can provide important nonverbal visual signals that may produce the sense of being jointly present and having access to each other's thoughts" (2008, pp. 1).

As we can observe, most of the social presence definitions take us back to Short *et al.* (1976) and Zhao (2002) that define social presence as being the sense of copresence: "whereas the mode of copresence refers to an individual's actual spatiotemporal

colocation with other people, sense of copresence involves an individual's perceptions and feelings of being with others" (Zhao, 2002, p.450).

Conclusion

The scope of this paper was to review the existing literature about copresence and social presence. The definitions and theories on these concepts are numerous and sometimes contradictory making the process of reviewing them difficult. In the present context of dynamic technological advancements, the need to better understand the implications of using technology becomes even more pressing. Therefore, I tried to bring light on various definitions of copresence and social presence as presented by the scholars that studied them. My review focuses on theories about these concepts, that either expose copresence and social presence as related or as standalone concepts. Understanding the present theoretical dimension of these concepts it's extremely important because it sets the framework for future explorations. As Swinth, Blascovich, Eriksson, and Fägersten observed copresence and social presence have re-entered the scientific spotlight.

Both copresence and social presence have been approached in the works of sociologists, psychologists, anthropologists, communication scientists, and cognitive scientists interested in how people interact with each other in face-to-face and face-to-device situations. One of the most pressing question formulated by Goffman (1966) and Short *et al.* (1976) was how people interact when they are not present in the same location and how they manage to engage and be engaged while not being present in the same space. Other researches, like the one formulated by Zhao and Elsher (2008) revealed that people can interact without being copresent by displaying reciprocity, accessibility, and availability to each other. In order to support this assumption, Zhao (2003) distinguished two forms and three conditions of copresence that helped him formulate six types of copresence and by creating this taxonomy, Zhao helps us better understand the various situations in which copresence manifests and how it connects with social presence.

Drawing on Zhao's perspective, I introduce the concept of social presence. As indicated by Lowenthal (2009), social presence definitions influenced by the numerous technological developments continue to evolve. Up to this moment there is no agreed definition of social presence, the concept being sometimes synonymous with copresence and other times a separate concept, as I mentioned earlier. Lowenthal (2012) points out that the differences in how researchers define social presence are indicators of how the concept it measured and analyzed, and therefore defined.

On this note, Oh, Bailenson, and Welch (2018) revealed in their archival research that there are four different definitions and ways of measuring social presence, while Fägersten discussing the various definitions of social presence indicate that they contribute to its semantical evolution. Fägersten goes even further questioning Zhao's perspective and saying that "social presence as synonym of copresence might be a question of a conflation of terms" that need to be further investigated (2010, p.177).

Recent literature unites the two concepts under the concept of social copresence. According to Kang *et al.* (2008), social copresence represents a product of mediated communication that displays copresence, social connectedness, and interaction satisfaction. Formulating this new approach, that is extremely relevant in the dynamic evolution of smart devices, Kang *et al.* reveal how the sense of being with others is influenced by technology.

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