

## Being online: social presence as subjectivity in online learning

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This article discusses the relationship between social presence and subjectivity in online learning environments. Drawing from views of subjectivity synthesised by de Sousa and an exploratory study into online social presence (by Kehrwald), the presentation identifies the links between various forms of subjectivity and the operation of social presence. The conclusions highlight the benefits of explicitly associating subjectivity with social presence in online learning and some of the key implications for online learning practice.

**Keywords:** online learning; social presence; subjectivity; e-learning

### Introduction

Amongst the most persistent questions in e-learning are those which deal with users' experiences of technology-mediated (e.g., online, networked, virtual) environments. Of particular interest are issues involving participants' experiences of one another in these environments, including experiences of interpersonal interaction and social processes. At the heart of these questions of mediated experience and interaction is the concept of *social presence* and related notions of telepresence (i.e., 'being there') and co-presence (i.e., 'being there with another') (Biocca et al. 2001; Biocca, Harms, and Burgoon 2003; Biocca, Harms, and Gregg 2001).

Social presence is considered an essential element of online learning (Gunawardena and Zittle 1996) because it operates to enable and promote social activity in technology-mediated (online) learning environments. Contemporary views of social presence emphasise its role in allowing users of online environments to (a) demonstrate 'being' in online environments by projecting an online presence; and (b) cultivate awareness of the presence of others in these environments to promote a sense of 'being there together' (Caspi and Blau 2008; Rourke et al. 2001; Biocca, Harms, and Gregg 2001).

As highlighted by Floridi (2005), enmeshed in these questions of presence are long-standing philosophical questions of the subject and subjectivity: the mind/body problem, identity in different contexts, the tension between reality and 'mere' appearance and notions of action-at-a-distance. This paper seeks to contribute to understandings of the relationship between subjectivity and social presence in online learning environments. Using a version of the framework for understanding subjectivity posited by de Sousa (2002), the paper draws upon the results of an exploratory study into the nature, role and function of social presence to explicate the link between subjectivity and social presence and highlight potential benefits of further exploration of social presence as a form of subjectivity.

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## Background

### *Mediated experience and presence*

E-learning employs a variety of media to overcome the limitations of physical and temporal distance in order to create the illusion of direct experience (Biocca et al. 2001). The media cut across time and space to allow individuals to experience phenomena as simple as basic textual communication via email and as complex as multi-user 3-D immersive environments in ways which would not be possible otherwise. Because such experiences are, by definition, *mediated*, understanding (a) the distinction between mediated and direct experience; and (b) the illusion of direct experience in mediated situations is a critical part of e-learning practice.

The study of mediated experience is the study of *presence* (Floridi 2005; Pares and Pares 2006; Sas and O'Hare 2003). Presence operates to narrow the difference between direct and mediated experience. More particularly, 'presence theory focuses on the effects of mediation on experience especially as our awareness of the mediation oscillates, flickers and sometimes fades' (Biocca et al. 2001, 1). The implied goal of presence is to move beyond the mediated experience of 'being there' to the illusory sense of simply 'being' in mediated environments or situations (Biocca et al. 2001).

The broad view of presence is commonly broken down into three main types of presence: First, *telepresence* refers to the notion of 'being there' in a mediated environment or situation. It creates the sense of being able to experience a technology-mediated place, space, or situation as though the experience were not mediated. Second, *co-presence* refers to the notion of 'being there together', i.e., in a particular 'place' with others. It creates the possibility for social activity in mediated situations. *Social presence* extends co-presence to emphasise the experience of being there with another salient social actor whose presence creates the opportunity for meaningful interaction and related social processes (Nowak and Biocca 2001).

### *Social presence*

A variety of understandings of social presence have emerged over the last three decades. First, social presence is viewed by some as a *property of media* used in communicative exchanges (Daft and Lengel 1986; Short, Williams, and Christie 1976) and so the demonstration of social presence is explicitly linked to media choices. Second, social presence is linked to the experience of *being there together*, related to telepresence, co-presence (Collins and Murphy 1997) and the notion of co-location in particular places or spaces (McLeod, Baron, and Marti 1997). Third, social presence is described as self-projection into a group (Caspi and Blau 2008; Garrison 2007; Rourke et al. 2001), which emphasises the potential for social activity in amongst distributed and virtual communities. Fourth, and related to the previous, social presence is linked to the *recognition of the potential for two-way communication* and psychological involvement, including a sense of perceived access to another human mind (Nowak and Biocca 2001) and as a promoter both of salient interpersonal relationships (Gunawardena and Zittle 1996; Short, Williams, and Christie 1976; Shin 2002) and of mutual understanding (Biocca, Harms, and Gregg 2001). Notably, whilst a consensus position on the nature, role and function of social presence has not emerged, each of these notions has been shown to have merit in understanding either the nature or the function of social presence and can be included in broad views of this concept. Moreover, these views can be placed on a continuum of social presence from a complete lack of presence through notions of telepresence, co-presence and co-location, to views involving psychological engagement and finally to views involving complex behavioural engagement (see Biocca et al. 2001). (Figure 1) below illustrates the continuum of social presence.

This continuum highlights that social presence exists 'in degrees' (Kehrwald 2008). An individual is not simply *present* or *absent*, but is present in degrees with increasing involvement in



Table 1. Variations of subjectivity.

Perspective	Subjectivity related to the point-of-view of an individual located in at a particular point in space-time and the accumulated experiences of our collected points-of-view over time
Agency	Subjectivity related to decisions making and the power to make choices
Titularity	Subjectivity of experiencing my actions as mine and mine alone. No one can experience my actions (or choices) in the way that I do.
Privileged access	Subjectivity of unique access to my mental states and activity, including affect and cognitive states
Seeing As	Subjectivity of 'fixing' of identities and seeing things in particular ways according to my intent.
Projection	Subjectivity of ascription of characteristics which do not exist.
Incorrigibility of Experience	Subjectivity in which my own subjective apprehension has authority over all other forms of truth and reality.
Intersubjectivity	Subjectivity which develops via an interplay of subjects.

each subject's apprehension of the world in a way which may be different from any other point of view. Our current position has a great affect on our definitions of self and identity. The subject I am today is not the one I was yesterday or, more easily seen, is not the one I was five years ago. This ever-evolving subjectivity is due to changes in my perspective related to my position in space/time. Moreover, as individuals moving within space-time, we each follow a path which is unique to us. This path affords us particular views and experiences which accumulate and are accessible to us to inform our apprehension of the world at this particular point in space-time (i.e., 'here' and 'now').

### *Subjectivity as agency*

The second main type of subjectivity is agency. As a human subject, one has the power to make choices: to think and act in ways which are particular to a subject. This form of subjectivity is a freedom of will that I experience myself as deciding to do this and not that: to eat a cheese sandwich instead of a salad, to watch sport instead of the news, to pay for my bus ride with silver coins instead of gold ones. The subjectivity of agency manifests in a number of different variations.

There is a form of agency which de Sousa (2002) refers to as *titularity* in which my actions are mine and mine alone. No other subject can own my actions, my mental attributes and my experiences in the way that I can. No other can experience my choices and actions the way that I do. Moreover, the uniqueness of my actions marks them as 'mine'; it identifies them with the subject who is 'me'.

Next, as a human subject, I have *privileged access* to my own mental states and activity (de Sousa 2002). This is another form of subjectivity related to agency. My affect (e.g., moods and emotions) and cognitive states (e.g. anticipation, wonder) are mine in a way that they cannot be 'owned' by another other. You or any other subject cannot feel my joy, my sorrow, my disgust or my surprise in the way that I feel them and you cannot access those things in the way that I do. It is possible that I might grant you access to those feelings or other mental states, but they are mine in a way which is unique to me.

Another form of agency is the ability to see *something as* one thing and not another thing. When we gaze up into the sky at passing clouds, you might see a tractor while I might see a rhinoceros. It is a conscious function of subjectivity to fix the identity of what is seen in order

to act accordingly. This seeing is intentional and so 'seeing as' is a form of agency. The hunter sees the pattern in the foliage as his/her prey (or not). The doctor sees the mole as cancerous (or not). The gardener sees the fruit as ripe (or not). Each of the subjects sees these things in a way which is particular to her/him.

The notion of 'seeing as' leads to the notion of *projection*, which is the ascription of characteristics to other subjects which do not actually exist. While projection can be viewed as a pathology, in the context of mediated experiences, it is a positive, as in when projection is used to fill in the gaps in our understanding and ascribe characteristics to things we perceive, but do not fully understand. For example, in simulated situations, individuals fill in information gaps by ascribing characteristics to other actors to enrich the simulated experience.

Finally, there is an *in corrigibility of appearance* related to subjective apprehension. My own subjective apprehension has an authority which subordinates all other sources of truth and reality. de Sousa (2002) points out the distinction between appearance (as related to apprehension) and objective reality. Appearance is literally 'mere' appearance and changes from subject to subject as per some of the notions of subjectivity identified above, including perspective. Objective reality, is, on the other hand, more than meets the eye. It is unchanging in the face of perspective. In this way, the incorrigibility of appearance asserts agency as a form of subjectivity.

#### *The subjectivity in intersubjectivity*

A third major form of subjectivity is evident in the interplay between subjectivity and intersubjectivity. Subjectivity is, in part, informed by interaction with others. In this view of subjectivity, I compare myself to others as part of an ongoing developmental interplay between the subjective and the intersubjective.

### **Posing the questions**

Returning to the point that current understandings of social presence are essentially subjective, and in consideration of the preceding discussion of subjectivity, a set of questions regarding the relationship between social presence and subjectivity emerges:

- (1) How does explicating the links between social presence and subjectivity inform our understanding of the role and function of social presence in online learning environments?
- (2) How do the notions of (a) perspective (b) agency and (c) intersubjectivity contribute to understandings of the role and function of social presence?
- (3) How can the resultant understandings be used to inform practice in technology-enhanced environments, particularly e-learning?

### **Approach**

The study which informs this discussion of social presence and subjectivity was a theory generative study into learner experiences with social presence and mediated social processes. It was a collective case study in which general conclusions about particular issues are drawn through understanding respective cases or instances of the issues (Stake 2003). In this study, each of the four constituent cases was a single instance of a wholly online postgraduate course within online postgraduate programmes at one Australian university. The phenomena of interest were learners' experiences with the nature, role and function of social presence in text-based online learning environments. Courses were chosen based on the extent to which they fit the model of contemporary (networked) online learning (see Steeples, Jones, and Goodyear 2002) and were likely to produce learners with experiences of the phenomena in question.

The experiences of online learners within those courses was accessed through a dialogical process in which respondents accessed, explicated and reflected on their experiences as online learners as part of an extended conversation with the researcher and other respondents (see Frank 2005). This process consisted of a questionnaire, an initial interview, a focus group discussion, a second interview and a summary group discussion. The result of this process was a rich set of qualitative data which gave the researcher access to learner experiences of social presence and its operation within mediated social processes.

In total, 20 respondents participated across the four cases, with groups of between three and six respondents per case. All respondents were volunteers. Those with experience over several terms of study in several different courses were considered ideal because of the richness of their personal experience and their accumulated knowledge with the phenomena in question.

The data were analysed thematically both within the dialogical process (after each phase) and at the conclusion of the process to establish tentative conclusions which were reflected back to respondents for confirmation or amendment. The findings from this process were wide-ranging and link to broad understandings of the nature, role and function of social presence in online learning environments. Those findings are used here to inform the discussion of social presence as a form of subjectivity.

## **Selected findings: the operation of social presence**

### ***The development of social presence***

Findings from the study highlight that social presence develops in a two-part process involving (a) the establishment of social presence as a sense of 'being there with others' in an online environment; and (b) ongoing demonstrations of social presence which create a sense of social presence that has continuity (see also Kehrwald 2008). The sense of continuity means that social presence operates over time to affect an individual's sense of connection with another and so influences interpersonal interaction and other social processes. Nested within this brief description are three key features of social presence.

First, social presence is *demonstrative*. It is predicated on an individual's ability to project her/himself into the environment through observable demonstration of his/her presence. These demonstrations include activity such as posting messages in discussion forums, making changes to course wikis, commenting on peers' blogs or other manipulations of the online environment.

Some participants have posted very 'minimalist' messages on the Discussion Boards... In this CMC medium, you can only get to know people to the extent that they are willing to communicate openly in online discussions. (Julie, Case 2)

Some learners who have had little presence in the discussions have been very hard to get to know and therefore difficult to strike up a meaningful conversation with. (Don, Case 1)

While it is possible for an individual to be 'present' and indeed active without being observable (sometimes called 'lurking'), this does not fit the definitions of social presence posited above. For example, it is possible that an online learner visits an online learning environment, reads the information posted there, but leaves without making any contribution to the online activities. In this example, the subject is present to her/himself and himself alone while she/he is in the environment. It is not a *social* presence because others are not aware of her/him. Others may be socially present to him due to their contributions to course activities, but the reverse is not true.

Second, social presence is *dynamic*. The sense of an 'other's' social presence fluctuates with time based on the number, frequency and quality of interactions. Interacting with a particular

individual more times, with greater frequency and intensity can promote a sense of the other's social presence.

- Interviewer: What does [the facilitator] do to convey a sense of presence?  
 Marco: Her messages, almost daily, her feedback on what she has learnt from our submissions, the chat forums she organised. She is almost as present as an f2f teacher!  
 Interviewer: That response would indicate that presence is generated 'by volume'... is that correct? More input, more presence?  
 Marco: Not quite the 'volume' but rather the 'thread of communication' that is there every day. It's like she's accompanying us all the time. (Marco, Case 1)

The quality of these interactions is also relevant. Communicative exchanges contain not only topical information, but also relational cues which indicate the state of the relationship between the sender and receiver (Walther 1992). This information includes indications of affect (mood and emotion), cohesion within a group, and the nature of the interaction (formal, informal, task-oriented, social, etc) (see also Rourke et al. 2001). The receiver interprets this information to get a sense of the relationship between the two parties.

The depth and manner of my social presence depends largely on the tone, quality and the extent to which I am responded to by others and the manner, depth and tone of representation of the respondent's social presence in turn. (Kevin, Case 3)

Notably, this can be positive or negative. Terse or abrupt messages can be off-putting and convey a sense of presence which is negative. Moreover, the absence of information, either through not being included in a message or through an absence of messages, can be interpreted and contribute to a sense of social presence.

I think social presence can either be 'positive', 'negative' or 'neutral' (from my experience). This is the only online course where I have witnessed negative social presence among some participants where some postings (whatever the reason) are too vitriolic. I tend to shy away from such discussions either totally or make my presence felt in a minimal way. (Kay, Case 4)

Therefore, over time, dependent on the quantity, frequency and quality of interactions, the sense of an other's social presence is in constant flux.

Third, social presence is *cumulative*. The combination of the continuity of social presence through ongoing demonstrations and the dynamic nature of social presence indicated above promote a sense of social presence which is a product of interactions over time. Through ongoing interaction, a sense of the other's social presence develops which is based on past experiences with an individual. This cumulative sense of social presence contributes to a sense of history develops in the relationship between the parties.

For example, in an online course, participants who have encountered one another in previous courses have an existing sense of the relationships between them based on the social presence of one another that they have experienced. They are 'known' to one another as more or less knowledgeable, productive, friendly or creative. On the other hand, those who have not encountered one another begin 'from scratch'. This sense of history affects individuals' choices of partners for interaction.

I can still remember a few names of people who were very present in previous online courses. I may or may not have worked with them on an assignment, but if I see their names again in another unit, they are the first ones I approach. (Eileen, Case 4)

In summary, social presence operates from the establishment of a telepresence and increases or decreases with the number of interactions, frequency of interactions, cues contained in the messages and the interpretation of those cues by others. The result is a dynamic sense of others and relationships with them in mediated environments.

### **Social presence as subjectivity**

Following the findings regarding the operation of social presence, it can be explicitly linked to the three types of subjectivity identified above. In this section, the three main types of subjectivity identified above are used in conjunction with the continuum of social presence (Figure 1) and description of its operation to unpack some of the key feature of the relationship between subjectivity and social presence.

### **Social presence and perspective**

The subjectivity of perspective is part of the establishment and cultivation of social presence and the particular subjective readings of others' social presence. In the cultivation of social presence, each individual asserts a particular perspective which is related to not only his/her immediate point of view, but also his/her accumulated experiences. While there are explicit, situated demonstrations of particular perspectives in certain messages (e.g., in personal introductions or personal profiles), it is more common for individuals to build up a sense of others' current perspectives based on an increasing number of interactions.

By reading through the information, you have a sense of who the person is – where they are from, what their educational background or area of expertise is, their interests, etc, all of which helps you to identify with them and perhaps feel you share a connection or common interest with. (Nora, Case 4)

Point of view is also relevant in the 'reading' or interpretation of others' presence. Individuals with a particular point of view see and interpret messages in particular ways according to their frame of reference.

The information that can be teased out of what people say and how they say it. This can be attitudes, opinions, feelings, etc, etc. Of course you have to be careful that you don't be too simplistic in inferences drawn here. (Don, Case 1)

### **Social presence and agency**

From the establishment of social presence onward, an individual asserts agency by making choices and acting intentionally based on those choices to demonstrate a visible social presence (or not), to construct messages in particular ways, to participate in ongoing interactions with a certain number and frequency of messages and to relate to others in particular ways. In other words, individuals construct a social presence which is intentional and consistent with particular motives. More specifically, demonstrations of subjective agency include examples of seeing as, projections, privileged access and the incorrigibility of experiences as part of the active construction of a presence and the 'reading' of others' social presence.

In making visible demonstrations of presence through the postings of messages, individuals make choices about how to convey their messages. These choices involve granting more or less access to their mental states through expressions of affect or other descriptions of their cognitive states. In doing so, they exercise agency in the form of privileged access to their own subjective mental states, choosing how much access to grant others.

I have felt much more comfortable sharing experiences and comments about my job than I would have if I felt that others reading them were university people – tutors, lecturers, etc. I know very little about that sector so I suppose I hold them in a certain amount of awe.

As a result of feeling more comfortable in this smaller 'schoolies' group, I think my 'personal social presence' or online persona has become more obvious or 'out there'. This is probably through being more willing to make personal comments, jokes or asides. (Andy, Case 1)

Also, in reading and responding to the social presence of others, individuals read social presence cues to identify the other parties according to their needs and other motives.

... if you can get a fair idea of someone's skills, job, interests, work experience, hobbies, etc you can put things into context. Especially in a situation where you need to work as a group and submit results fast, it helps tremendously if you can quickly identify 'the person who is interested in a similar work-based activities as you are', 'the person who has the skills to design a website quickly', 'the persons who will respond to your e-mails/postings quickly and in a positive, supportive manner', 'the person who has a nice style of writing', 'the person who is interested in learning about similar topics or tools as you are', etc. (Eileen, Case 4)

While this conception of social presence cues inevitably involves reading available cues, it also involves filling information gaps to make determinations of how to interact with other parties. There is a degree of projection in the reading of social presence in which online learners ascribe characteristics to others in the development or relations.

I also think you can have a perception of face-value and 'looking beneath the face value' of comments, and therefore extracting the real meaning of comments. Sometimes when I post a comment that somehow doesn't come to grips with the real message I am delivering, someone else looks past clumsy language and picks out the guts of what I am saying. This shows understanding, not just of the words, but of the person who 'said' them. (Tina, Case 1)

Individuals see others as more or less like themselves and so react to those others with empathy, respect, admiration and a sense of connection.

There is also some sense of the incorrigibility of experience. Individuals experience one another in particular ways and interpret the messages of others according to their unique perspective and according to the primacy of first-person experience.

For this assignment I just responded to students who replied to my posts, and I put out the idea of perhaps working together on the assignment. From that, a private email correspondence started happening with a couple of people I felt I 'clicked' with then we talked about what we were supposed to be doing, where did you read that, etc. ... Once we agreed on forming the group, we were a 'team'... I didn't want to be working on a group assignment with anybody who wasn't going to pull their weight... and who I didn't feel an affinity with. (Frank, Case 4)

In summary, regarding social presence as a form of subjective agency, individuals make choices about what sort and how much relational information to convey. In doing so, they retain privileged access to their own subjective mental states whilst granting limited access to the others with whom they interact.

### **Social presence and intersubjectivity**

Notably, the abilities to both convey and read social presence in mediated interaction are learned skills. Novice online learners often do not come to online learning environments with the abilities to either project themselves as salient social actors or to read the social presence cues of other actors. They learn to do these things through interaction with more experienced learners, through seeing and experiencing how others project themselves into the environment, how others interact with one another and how others react to their personal efforts to cultivate a social presence.

I have completed seven subjects online for my masters... I have been involved in DB [discussion board] discussions with each unit... as I gained more experience... I became more aware of the dynamics of SP[social presence]... it really was a light bulb moment. I'm not sure when I first recognised SP... I think it was in my 5th unit... but in my 6th unit I definitely understood the importance and some of the difficulties encountered by students completing online studies. I think that is when I really appreciated SP and why some students do not develop a great SP during a course. (Liz, Case 3)

Just as babies learn to interact with adult through mimicking adult facial expressions, novice online learners learn to convey a social presence by mimicking the social presence cues conveyed by more experienced online learners. In this way, the cultivation of social presence is not only a subjective process, but an intersubjective one in which the interplay between individuals helps define their individual presence and the relation between them. Returning to the continuum of social presence, as the relation between individuals develops from the co-presence and mutuality to psychological engagement and even behavioural engagement, the intersubjective character of subjectivity is increasingly manifest.

I am sometimes (but not always) aware of my own social presence. I think the awareness relies very much on the mirror that is provided by other group members through their responses and communications with me. I think I can only guess at my own presence without this feedback from others. This doesn't mean that without feedback I don't have any presence but that I have less chance of realistically gauging that presence.

When somebody responds in some way that shows they have reacted positively to something I have said online then it acts as reinforcement and I tend to continue to say similar things or at least to be more confident in contributing to discussions. (Don, Case 1)

My take on my own personal social presence is probably based on the nature of the responses I get. If the situation enables it then connecting with others becomes an issue of how usefully and caringly I respond to others and how this is reciprocated. ... Typically I will respond most frequently and as a priority to those I have established some sort of rapport with. The quality, relevance, helpfulness and tone of my response is how I would measure my Social Presence as I do with those who are responding to me. (Kevin, Case 3)

### **Drawing conclusions: putting subjectivity to work in the service of online learning**

While a detailed study of subjectivity or social presence is beyond the scope of this single paper, there are conclusions to be drawn about the relationship between subjectivity and social presence and about the implications of this relationship on online learning.

First, the notion of social presence as a form of subjectivity highlights the roles of human subjects in online learning and helps define the relationship between human subjects and technology. While technology gets much of the attention in online learning, designers, developers and participant-users must not lose sight of the fact that it is people (i.e., human subjects) who make these systems productive. Human subjects bring unique perspectives, exercise agency over the technology and engage in social processes (e.g., interaction, collaboration) which link them with other subjects in ways which would not be possible if they were interacting with 'mere' objects. In this way, social presence acts to 'humanise' the experience of online learning.

Second, the explicit recognition of subjectivity as manifest in social presence and the related recognition of online learning as a distinctly human activity inform approaches to research in online learning. While such a suggestion may not be new, there is a veritable 'gold mine' for researchers wishing to explore subjectivity in technology mediated environments (Floridi 2005). Although the topics of interpersonal interaction, online collaboration and community have been explored over the last ten years, there is opportunity to re-focus on issues of subjectivity in new tools (immersive virtual environments, social networking tools) and the various manifestations of subjectivity (presentations of self, mind/body problems in virtual worlds, issues of agency). It is suggested here that presence and social presence will become important tools for researchers seeking to explore subjectivity in these contexts.

Third, an emphasis on human subjectivity, lends insights into development and use of online learning environments. Returning to the continuum of presence (Figure 1), there is a blueprint for the assertion of subjectivity as social presence in technology mediated environments. From the establishment of telepresence, to co-presence and the various levels of mutuality to

psychological engagement and interdependence, there are a number of conceptual tools within the continuum to inform the design and development of online learning activities. Used in combination with the various forms of subjectivity (Table 1), these tools can be used to help address practical problems experienced by online learners and teachers, including: (a) the transition from face-to-face to mediated interaction; (b) the 'reality' of experience online environments; (c) the development of productive social systems; (d) the interplay between synchronous and asynchronous ways of working; (e) presentations of self in various media; (f) learner agency in learn-centred learning design; (g) the development of social infrastructure to support community; and (h) affective learning in lean-media environments.

In summary, this article draws together information from the literature of social presence, views of subjectivity and results of a recent study into social presence in text-based online learning to inform understandings of the relationship between social presence and subjectivity. The conclusions emphasise the role of human agency in the use of technology for education and learning. They also highlight the potential for research in e-learning which draws from understandings of subjectivity to promote richer understandings of social processes in technology mediated environments. Finally, the discussion suggests further work on the relationship between social presence and subjectivity to address practical problems in e-learning.

### Notes on contributor

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