



## Ethics in Presence and Social Presence Technology

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# PSYCHOLOGY JOURNAL

## The Other Side of Technology

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## Editorial Preface

Recent years have seen an explosion in computer-mediated communication and interaction. Instead of meeting face to face, we use audio- or videoconferencing or instant messaging or email; instead of playing in the same room we use games consoles; we use technology to shop at a distance, learn at a distance, give psychotherapy at a distance. Yet rarely is distance seen as an advantage. In most cases, system and interface designers seek to hide it. What they usually try and create is a sense of “being there” and “being in the same environment with other actors”. Technologies that achieve this effect are Presence and Social Presence technologies. Try interrupting an adolescent in the middle of a videogame or a chat. She’s not in the room with you but somewhere else, in a different space. The ability to create this illusion raises novel ethical issues. It is these issues that we will explore in this special issue of PsychNology.

Some are familiar. Presence research involves experiments with human participants. So we need their informed consent and we have to ensure that the information is real and the consent freely given. We have to protect our participants. For instance, we have to make sure that experimental stimuli do not hurt them, physically or psychologically. To enhance user interactions we may collect and process sensitive information about their location, their activities and mood, or their interactions with other users. We have to protect this data and guarantee user privacy.

Yet these requirements, however important, are not specific to Presence. Informed consent and protection of study participants is essential in any kind of psychological study; threats to privacy are implicit in nearly any use of modern telecommunications. What is specific is the fact that the very coordinates and features of the users’ presence in a certain environment are

largely monitorable and reconfigurable. The purpose may be benign: we can use it to bring distant friends closer together or to flirt or for psychotherapy; it can be malignant, as when designers covertly attempt to manipulate user behavior. More importantly “presence” may have effects which have nothing to do with the designer’s intentions, and that need to be unveiled.

It was to discuss these issues that on October 16, 2008, the Human Technology Lab of University and Xiwrite Srl jointly organized a workshop on “The Ethics of Presence and Social Presence Technologies”. The workshop, which was held in conjunction with Presence 2008, was sponsored by the PASION project, an EU-funded investigation of “Psychologically Augmented Social Interaction over Networks”. The goal of the organizers was to bring together “philosophical” approaches, capable of placing presence in a broad perspective, and the viewpoint of practitioners, often immersed in the details of experimentation or in the design of services and products. In reality, as they had hoped, many of “philosophers” present at the meeting showed a deep interest in technology, and many of the “practitioners” raised new and interesting theoretical issues. In this special issue of PsychNology, we present four papers based on the discussion at the workshop.

The first “Building Character for Artificial Conversational Agents: Ethos, Ethics, Believability, and Credibility” by Sheryl Brahmam, looks at a specific presence technology (“artificial conversational agents”), examines the challenges facing designers wishing to make agents that are “believable” and “credible” and looks at the ethical implications. Brahmam returns to the ancient controversy on rhetoric - seen by some ancient authors as something “implicitly duplicitous and morally suspect” - persuasion by artifice, by

others as a vital tool enabling people to “persuade one another and to clarify their desires and needs”. All this is tied to the concept of ethos, the character and reputation of a speaker, (or virtual agent). Ethos can be a purely linguistic construction, something that makes the speaker appear as credible and trustworthy - or it can be something “developed slowly and painstakingly through habit and virtuous action”. Designers tend to take the former option, using their art to construct “believability” through artificial means. The consequence is the destruction of trust when the true nature of the agent’s ethos is revealed (when the user realizes she is talking to a machine). Yet Brahmam argues that this is by no means inevitable, showing, in the final section of her paper how it might be possible to use non-artistic methods to create a richer, more trustworthy ethos for artificial agents.

How far this is achieved will rely on factors that do not depend exclusively or primarily on the good will of designers. In the meantime, interactions between users and the current generation of virtual agents already provide cause for concern. In our second paper “Ethical implications of verbal disinhibition by conversational agents”, Antonella De Angeli discusses findings that interactions with virtual agents may encourage disinhibited and anti-social behavior (e.g. sexual abuse of attractive, “female” agents). While this kind of behaviour may be apparently harmless, it rapidly acquires ethical significance when agents are deliberately designed to elicit disinhibition (e.g. in purchasing behavior) or stereotyping. When artificial agents are used as sales agents on web sites the risk is obvious, and will only become greater as the technology improves.

The third paper, “Witnessed Presence and the YUPTA framework”, by Caroline Nevejan, suggests some of the ways in which Presence

technologies can disrupt traditional human interaction. The YUPTA framework she proposed makes it possible to represent the respective roles of Time, Place, Action and Relation in different forms of presence. Using the framework, she shows how the technology affects what she calls “witnessed presence” - the experience that one’s actions can be witnessed by many others. “Witnessed presence”, she argues, is an essential ingredient in the negotiation of trust and truth. This is especially important in the formation of democratic public opinion. “Only in natural presence the shared sense of what is good for well-being and survival can be ‘collectively authored’ in such a way that all stakeholders will base their future acts on the ‘collectively authored outcomes’ that have been agreed upon”. The effects of presence technology may be more subtle than we imagine.

The final paper in the special issue, “Cybertherapy: advantages, limitations and ethical issues” by Cristina Botella, Azucena Garcia-Palacios, Rosa M. Baños, and Soledad Quero, discusses an application of presence technology that is already coming into widespread use, namely the application of Virtual and Augmented Reality in clinical psychology (“cybertherapy”). These presence technologies have been successfully used not only for the treatment of specific phobias but also for more severe disorders such as panic disorder, posttraumatic stress disorder, eating disorders and pathological bereavement. More recently, the Internet has made it possible to deliver effective treatment at a distance. It is clear that this raises a number of ethical issues. However the authors show that many of these have been successfully resolved: virtual reality sickness appears to affect only a minority of patients; doubts about children and elderly patients have been addressed; it has been shown that the new therapies work even with severe anxiety or psychotic disorders. The key

issues that remain seem to be tied not so much to the technology itself as to the broader social context in which it is deployed. So there is the risk of patient self-diagnosis, the difficulty of enforcing appropriate treatment protocols at a distance, the problem of establishing the identity of patient and therapist. Here too, as in the other papers in this issue, we discover how even well-designed technologies can have unforeseen consequences.

Which of course it is the designer's role to avoid. All designers know that only designers build trustworthy, non-manipulative presence technologies. Yet they do not operate in a vacuum. Perhaps the central message in all the papers in this issue is that the ethics of presence depends not just on the technologies themselves, but on the broader framework in which they are used. The editors hope that this issue of PsychNology will help to increase awareness and adopt a reflexive approach in designing, studying or using Presence and Social Presence technologies.

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Outside the special issue, the other section of the journal offers one article by Cheryl Campanella Bracken and Paul Skalski, "Telepresence and Video Games: The Impact of Image Quality". The experiment described in the paper represents an advance in the topic to which the authors have already made several distinguished contributions, namely the sense of presence experienced with different media formats, in particular media belonging to everyday household experience. In

this case, they investigate the effect of television image quality.

The article "What could abductive reasoning contribute to human computer interaction? A technology domestication view" by Erkki Patokorpi is a passionate proposal to include abduction in the design of human computer interaction. As the author argue, this kind of process seems particularly close to everyday reasoning and then its implementation would improve the usability of a computer system.

**The Editors-in-Chief**

