Consequences of Virtuality: Philosophical Issues in Online Experience

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Abstract
In this paper, we draw on applied research conducted in the course of technology development to explore five issues in modern networked computing systems that pose interesting and often overlooked philosophical questions. Online, networked computing (such as the Internet) has created new structures of virtual experience that have received great attention at a high-order behavioral level but little attention for the structural implications that are of philosophical interest. Five philosophical themes related to virtual experience are loss of goals, loss of time, loss of place and body, loss of ethical agency, and loss of the integrated other. We consider the consequences of these phenomena for the development of technology and discuss data from ethnographic explorations of technology usage in the US, France, and China that demonstrate possible directions for the future. We hope to encourage further exploration of the philosophical issues highlighted by the five themes and their implications for technology.

Technology and the Loss of Goals

Prevailing accounts of technology usage presume a cognitivist model where computer users have conscious goals that they wish to achieve and engage in directed tasks in order to achieve those goals. For instance, one well-known computer scientist describes computer interaction design as follows:

> … design starts with understanding the task. That task includes the universe of real-world objects with which users work to accomplish their intentions and the actions that they apply to those objects…. Once there is agreement on the task objects and actions and their decomposition, the designer can create the metaphoric representations of the interface objects and actions…. Finally, the designer must make the interface actions visible to users, so that users can decompose their plan into a series of intermediate actions, such as opening a dialog box, all the way down to a series of detailed keystrokes and clicks. (Shneiderman 1998, pp. 61-62)

Chapman (2001) argued that this model is increasingly inappropriate for understanding computer usage, much of which has no apparent real-world goal apart from occupying time (e.g., watching videos,

playing online games). A better explanation may be provided by a phenomenological account that takes notice of how people are embedded in virtual worlds that provide tools for interacting with one another (cf. Winograd, 1992; Winograd & Flores, 1987). In such a view, technology is not a static object through which people express a specific goal or intention. Rather, it expresses at least two features: it is a tool that not only accomplishes some desired effect but also serves to orient and shape its user (Heidegger, 1927, 1954), and, at least in complex cases, it provides an environment through which people can interact in ways that are not possible in the real world[1] (Turkle, 1995).

The primary implication of this shift away from a single user/task centered approach is to underscore that rational or goal-oriented accounts of such activity are not only inadequate to explain real behavior with technology but also may be structurally deficient as models of behavioral explanation in general. Computer technology provides us with a kind of laboratory in which we can better understand the nature and importance of such aspects of life as being grounded in a physical or quasi-physical world, interacting with others through language, emotional cues, and the like. Technology systems too often may neglect those factors in systems theory and design, but the human aspects ineluctably arise again and can be observed as people interact with the systems.

Loss of Time

Unlike non-computer amusements, the virtual world is timeless; there is no setting sun or other external environmental indication of the progress of time. Increasingly then, people are living in a timeless environment at opposition to bodily reality; virtuality presents no natural sequencing of events.

[1] We follow the imprecise but conventional usage where "real world," as the totality of interactions and behavior that are not mediated by computers, is distinguished from the "virtual world" consisting of such computer-mediated interaction. Both are, of course, "real" in the sense of existing physically, providing definable intersubjective references, and so forth. The "virtual world" is also not strictly limited to mediation through traditionally defined computers; it could be accomplished through other electronic media as well.

Borgmann describes how clocks structured the experience of time in interchangeable, measurable units, just as coordinate systems structure the grid of space (2000, Chap. 7).

Information technologies afford measurable progress in terms of speeding up operations, thus establishing a basis for ever-increasing demands for productivity. It is often taken for granted that measured time should form a fundamental aspect of evaluating interaction with computers. Shneiderman, for instance, proposes that "precise measurable objectives guide the designer, evaluator, purchaser, or manager [of a computer system or program]. These five measurable human factors are central to evaluation: (1) Time to learn … (2) Speed of performance … (3) Rate of errors by users … (4) Retention over time … (5) Subjective satisfaction …" (Shneiderman, 1998, p. 15)

In terms of real experience, however, the timeless quality of virtual experience can also work in opposition to time-based industrial social structures. People are subjected to computerized "multitasking" that claims attention – but which, because of its decreased cognitive efficiency, is inherently opposed to the presumed goal of using computers, i.e., productivity. Thus, the timeless nature of computing undermines its own functioning in time. We see this clearly in such experiences as those of the programmer who loses track of time as she works for hours to solve a problem, or the gamer who stays awake all night in an online game.

Several questions are posed by conflict inherent in the computerized experience of time. How do we understand the changes that occur in people's experience using technology, as they grow, learn, and age? Are there better ways to relate the real-world experience of time in a more natural way to technology? For instance, most computer systems evolve and change only through discrete events (adding an application, updating an operating system, purchasing a new computer, etc.), and thus present users with the experience of tools that change in radical, punctuated, unnatural ways (cf. Chapman, 2001). How do we understand the projection of our experience forward in such an alien system? Heidegger discusses the importance of temporality in human existence, in which the subject

constantly understands its situation on the basis of a fundamental projection into the future and relationship with the past. “Only because Da-sein is determined as temporality does it make possible for itself the authentic potentiality-of-being-a-whole of anticipatory resoluteness … the phenomenon at which we arrived by considering resoluteness [authentic care, i.e., engagement with life] must itself only present a modality of temporality, which makes care possible in general” (1927, pp. 326-327). In order to ground more authentic experience, technology systems need to present more experiential, rather than clock-based, engagement with time (cf. Heidegger, 1927, division II.VI).

Loss of Place and Body

The virtual world is placeless and non-corporeal, which can lead to difficulty to manage interpersonal distance, as is witnessed by common behaviors such as email flaming and usage of emoticons. However, a variety of means have arisen through which people attempt to regain a sense of place, such as personalization of their virtual spaces (such as background images), engagement in quasi-spatial digital environments such as games and virtual environments (e.g., World of Warcraft, Second Life), and in the increasing mobility of devices which allows adoption of physical spaces that present increased interactivity and vitality (e.g., writing in a coffeehouse). This poses the question of the importance of understanding physical embeddedness for accounts of cognition.

Putnam (1981) argues that the experience of a body is necessary for certain kinds of cognition, such as understanding one’s own physicality and referring to objects. This is not because physicality is necessary in order to ground references and concepts, but rather – in Putnam’s account – because physical experience is necessary in order to have the ability to use concepts in a proper way and to be understood by others. But what is a body?

One may distinguish several ways to understand the body. One account that is specifically relevant for technology is provided by Ihde (2002), who presents a partial scheme that nears collapse

under his detailed observations of experience. “Body one” is the perception one has of being embodied; “body two” is the symbolic, socially constructed understanding of embodiment; a “real body” exists in the real world; the “lived body” constitutes the experiential embodiment of the person; a “virtual body” occurs in virtual worlds, in varying “degrees” of virtuality, i.e., complexity or verisimilitude; an “image body” is the representation of a body to others; “my body” is a conceptual, linguistic notion; the “here body” is the real world locus of embodied action; and there are various other symbolic cases such as “male body,” “cultural body,” “experienced body,” and relationships among these kinds of bodies, such as the “embodiment relation” between body one and body two (Ihde, 2002, pp. xi, 3, 5, 7, 8, 16, 17).

One might take issue with many parts of such an account; for instance, there may need to be additional kinds of introjective understanding, such as the understanding of one’s body related to oneself as the subject imagined on the basis of one’s interactions with others (e.g., Lacan, 1966, pp. 104-105, 207-213), as well as incorporation of fact that experiences of bodies one and two are likely to be fragmentary and complex, not unitary. However, the most important aspect that we understand from such an account is this: the concepts of place and body, which have never been perfectly clear, become even more problematic as we reflect on experience mediated by technology.

Loss of Ethical Agency

Traditional ethical theories implicitly assume that another person can be apprehended (at least mentally, and in principle, physically). When we say that someone should or must do something, we assume that there is an actor and that the actor is stable and identifiable (e.g., in order to consider some consequence to that actor in the case of prohibited behavior). Each of these assumptions is challenged in networked computing: identities may be hidden, transient, or other than we expect, and agents may have structures other than those of individual agents (for instance, they may be corporate or non-human).

Prevailing accounts of ethics in technology focus principally on moral issues, such as whether there are duties to engage in or refrain from some kind of behavior with technology. Such questions rely upon traditional structures of ethical theory. For instance, such structures presume that there are actors engaged in behavior, that the actors can be identified, that the behavior can be revealed or uncovered, that behavior can be assessed in terms of harm or benefit, and so forth.

The projection of such assumptions into virtual worlds might seem to be straightforward. However, when actual online behavior is examined, the issues become quite complex. For example, Powers (2003) considers a case of virtual assault reported by Dibbell (1993), in which some characters in an online virtual community were co-opted by another character and described as participating in sexual acts. One might claim that no "real world" harm was done to the victims in this case, whose characters very well may have been completely fictional and whose online behaviors could be said to be a form of play. Powers argues for a moral realism that recognizes that the effects of such behavior have real world psychological consequences for the participants; thus the behavior can be evaluated morally. Chapman (2002, 2006) argued that the behavioral complexity of at least some such online systems is sufficient to establish the phenomenological requirements of an ethical system: there is interpersonal behavior, harm or benefit can occur, responsibility for such harm and benefit can be attributed to agents, the system affords capability to evolve community rules, and so forth.

However, one significant challenge remains for philosophy: how to construct ethical systems that encompass the fluid models of agency that may be observed in such a system. It is one thing to attribute benefit or harm to a presumed agent, but it is quite another to define exactly who that agent may be in a virtual system. Does moral praise or approbation apply only to a virtual character, or does it, as Powers argues, apply to a real world protagonist who controls that character? What if the character is viewed as explicitly fictional? What if the other participants likewise view it as fictional and wish to be subjected to potential harm online (as in shooter games)? What if the character is controlled by

programming sufficiently complex that its actions could not be fully anticipated by the programmer? It would appear that a radically new account of ethical agency might be needed – perhaps even a deflationary account – to arrive at an answer to the kinds of ethical questions posed by interactive technology.

Loss of the Integrated Other

Direct interaction with other people presents us with integrated experiences in which those people are perceived as whole people. Our perceptions may be incomplete in scope (for instance, we may know little about a work colleague's personal life) or erroneous, but they are nevertheless integrated, rich, and holistic; we simultaneously perceive speech, emotions, appearance, location, and so forth. This is obviously missing in strictly virtual interaction, which may be deliberately inaccurate or deceptive.

What is more interesting is the question that is posed for the construction and experience of oneself, which consists in part of symbolic relationships formed through interaction with others: how does one understand oneself and others, if interaction is increasingly fragmented, rather than integrated? One theoretical model is provided by Lacan and his theory of the symbolic construction of the ego. In Lacan's model, the ego is separate from the subject; the ego is an imaginary understanding of the self, based on the internalization of a supposed view of oneself formed through observations of others (cf. Lacan, 1966, pp. 110-114). The subject, on the other hand, is the implicit actor present in the operations of the unconscious, whose function is observable in such phenomena as parapraxes of language (e.g., slips of the tongue) (cf. Lacan, 1966, pp. 414-420).

As the Lacanian unconscious is "structured like a language," (Lacan, 1973, p. 20), just so, the subject is structurally formed and expressed through linguistic, i.e., symbolic, relationships. To the extent that the subject is integrated, this is based on the integrated nature of experience as presented:

the unity of other people and their behaviors, the consistency of interaction from one time and place to another, the unity of language as an intersubjective space, and so forth.

With regards to technology, this poses a question: to what extent do increasingly disjoint and fragmentary online experiences pose a problem for the structural unity of the subject (and the ego, for that matter)? When one interacts with someone online, the experience may not be of a whole person engaged in a rich stream of material, but instead may be a unidimensional presentation of a person through a single, impoverished mode of communication. The well-known tendency of email to lead to misunderstanding and angry exchanges is one example of such interaction. If online experience accounts for an increasing share of interpersonal interaction, then our symbolic experiences will increasingly involve disconnected sets of people and situations, with decreasing emotional richness. As mirroring of the self occurs through increasingly fragmented interactions, we might expect more fragmented experience and contradictory elements within the self.

Implications and Ethnographic Observations

Each of these differences between virtual experience and so-called real experience presents an inherent problem: the virtual case tends towards cognitive models or structures that do not match those of real experience. Borgmann discusses this in terms of the "fragility" of digital information and experiential structures: digital information can be less permanent than other artifacts, and virtual experience does not present the richness and connectedness of real world experience (Borgmann, 2000, Chap. 7). Another way to think of this is in terms of a mental (or in some cases, an ontological) conflict. We have seen several examples of such conflicts, where virtual experience contrasts real world experience in ethics, time, and experience of the other, or even undermines its own putative foundations in goal-based behavior and time.

There are three general resolutions of this conflict: accept both sides of the conflict, which would lead to more fragmented experience; embrace one type of experience and retreat from the other; or compartmentalize the realms such that the conflict itself becomes structured and manageable. In actual user behavior, we see all three approaches. We hypothesize that the first approach – increasingly fragmented experience – is unstable, and that people will tend either towards embrace/retreat or compartmentalization.

Initial ethnographic research on experience of online social networking in the US, France, and China is consistent with this hypothesis. In each location, we conducted ethnographic interviews and observation with 10 young adults who use social networking sites (MySpace and Facebook in the US; MySpace and SkyBlog in France; QQ in China). In the US, the experience of fragmented structure is immediately evident; for instance, MySpace pages often display incongruous content and conflicting goals (such as seeking a dating relationship while exposing content that diminishes the likelihood of such).

Retreat into more real behavior is also evident, e.g., in the preference of many participants for Facebook, where they often are directly acquainted in the real world with all of their online contacts. Fragmented experience is less apparent in France and China, where users typically include much less personal information on their online pages. Instead, they appear to adopt a strategy of compartmentalization, where contacts and content types are strongly differentiated. It remains to be seen whether the future will incline towards either the US model of fragmentation and retreat, or the France/China model of compartmentalization.

Conclusion

We have described five areas in which online experience poses interesting structural problems for philosophy of technology. At a theoretical level, these problems pose questions about personal

experience with regards to computer technology and challenge underlying assumptions about the structure of interpersonal and intrasubjective relationships. At a practical level, they suggest potential instabilities in the development of technology. Attention to different cultural experiences of technology may be informative both to explicate the philosophical issues and to explore potential social development paths for interaction with technology.

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