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Recommended Citation

Hayes, Elisabeth R. (2005). "An Extra Life: Living and Learning in Virtual Worlds," *Adult Education Research Conference*. <https://newprairiepress.org/aerc/2005/papers/39>

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An Extra Life: Living and Learning in Virtual Worlds

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Abstract: *Four themes in the literature on virtual worlds are identified and discussed: situated learning in virtual spaces and places; composing a (second) life; virtual worlds, real people; and fostering ecologies of learning.*

Purpose

Your experiences in cyberspace are as real as your everyday experience, just of a different kind. You have a new life, an extra life – Indra Sinha, author of Cybergypsies

The purpose of this paper is to explore the nature of “virtual worlds” and adults’ experiences in these worlds, particularly experiences associated with various types of learning, and implications for adult learning theory and educational practice. The prevalence of participation in online and offline virtual environments has stimulated considerable debate over the virtues and vices of virtual “living.” A growing body of literature addresses various aspects of people’s participation in virtual spaces such as chat rooms and listservs, videogames, multiuser domains (MUDs) and massive multiplayer online role playing games (MMPORPGs). Researchers have examined, among other subjects, the construction of identities, forms of virtual social interaction and communication, the organization and culture of virtual communities, and even the significance of virtual economies. Studies also have begun to explore the effects of such participation on social relationships and other aspects of life in the “real world.”

Scholarship in adult education primarily has been concerned with the use of digital technologies and online communities within the realm of formal education, such as in the design of online courses, rather than examining how adults are engaged in living and learning in other sorts of digital spaces. Understanding of adults’ participation in virtual worlds can be useful to adult educators in a number of ways. Topics such as knowledge creation and distribution through virtual spaces, identity construction in virtual worlds, virtual community development and change, all have obvious connections to the interests of adult educators. This literature can be a starting point for rethinking aspects of adult learning theories, including our understanding of how learning in virtual worlds is similar or different to learning in the “real world,” and how adult learners are redefining the distinctions between real and virtual in their own lives and learning. This understanding can inform the design of virtual worlds that are deliberately intended to encourage various types of learning, as well as to better support learners in living and learning in other virtual worlds, including how they can design such worlds for various purposes.

The rapid rise of digital technologies has provoked some rather extreme reactions, from advocates who prophesy empowerment and global community, to those who warn of greater isolation and a digital divide. In my discussion, I hope to tread a middle ground, identifying what we currently know about the possible benefits as well as risks of “becoming virtual.”

Mapping Virtual Worlds: Disciplinary Perspectives

The literature on virtual environments is vast, and beyond the scope of any one paper. In this discussion, I restrict my analyses to what I describe as “graphical virtual worlds.” I have adopted Bartle’s (2004) characterization of a virtual world as a self-contained environment (not just a tool or information source) that has (a) underlying automated rules that enable participants

to effect change to it [the world], (b) characters or “avatars” that represent individual participants in the world, (c) real-time interactions, (d) a shared social space, and (e) some degree of persistence. Bartle’s definition does not include single participant virtual spaces in his definition of virtual worlds, since his criterion of a “shared social space” requires more than one “real” participant. In contrast, I discuss both single participant and multiparticipant virtual worlds, to tease out the distinctive attributes of experiences involving “real” people as compared to entities animated by artificial intelligence (who often seem very real to participants).

A graphical virtual world creates a sense of space and place through graphics rather than text alone. I did not review the considerable literature on text-based chat rooms, listservs, blogs, and multiuser domains (or MUDS), except for a few particularly influential studies. Graphical virtual worlds offer some distinctive affordances as well as challenges for learning. As one example, since they are not solely text-based, these worlds offer opportunities for learning through a wider range of modalities, including visual, auditory, and even kinesthetic modes, and rely less on verbal (i.e., reading and writing) skills for participation. These varied modalities may encourage or require different forms of identity construction, meaning-making, and social interaction. The most common examples of such virtual worlds are video games, ranging from simulation-type games such as *The Sims*, to roleplaying games such as *Morrowwind* and *Fable*, as well as MMORPGs, such as *Everquest*, *Lineage*, and *World of Warcraft*. An increasing number of virtual worlds are intended for more “serious” pursuits, such as open-ended social interaction (*Second Life*, *There*), public relations and marketing (*America’s Army*), political awareness (*The Political Machine*), and even spiritual growth (*Church of Fools*).

The paper is based on a review, synthesis, and critique of key theoretical and empirically based literature drawn from (a) game theory and design, (b) psychology and sociology, (c) literary theory and cultural studies, and (d) the emerging field of game studies. I have paid particular attention to literature that addresses learning within and associated with these virtual worlds. The literature on virtual worlds is replete with personal narratives, and throughout the paper presentation, I will incorporate brief case studies of individual and collective experiences in selected virtual worlds. Two limitations of this discussion should be noted. First, most of the literature in this review is based on studies and perspectives from the United States, and thus implicitly, if not explicitly, reflects the concerns and values of an individualistic, capitalist society. Secondly, the ongoing development of new technologies may affect the relevance or significance of certain aspects of this discussion.

Key Themes and Implications

Research and theory on virtual worlds has shifted over the last two decades, reflecting in part the rapid transformation in the sophistication and capacities of digital technologies and increasing access to various forms of these technologies. There has been a noticeable shift, for example, from the application of psychological and cognitive theories to theories drawn from sociology and anthropology, from a simple application of existing theory to the expansion or generation of new theories, and from viewing virtual worlds as “separate spheres” to considering how people’s experiences in virtual worlds (VWs) and “real” worlds (RWs) are interrelated (Wellman & Haythornthwaite, 2002). I have drawn primarily from such more recent perspectives in my review. Rather than summarize results of specific studies, I have organized key ideas into four general themes, briefly described below. Due to lack of space, I have cited only a selective number of representative sources.

Situated Learning in Virtual Spaces and Places

VWs have been characterized as "placeless spaces" (Rheingold, 2002, p.24) due to their lack of ties to physical locations. However, VWs are experienced not as abstractions, but as durable though mutable "places" that anchor experience and activity. Learning is situated in such spaces or places in ways that are similar and different to learning in RL. Levy (2001) and other scholars (Fischer, 2002; Seely Brown, 2000; Shaffer & Kaput, 1999) argue that VWs are new forms of knowledge representation. The privileging of abstract knowledge systems is giving way to knowledge transmitted by living human collectives in more concrete and particular forms, such as image databases, electronic forums, and perhaps most importantly, interactive simulations:

Simulation plays a central role among the new modes of understanding made possible by cyberculture. Simulation is an intellectual technology that enhances individual imagination (augmented intelligence) and enables groups to share, negotiate, and refine shared mental models, regardless of their complexity (augmented collective intelligence)... (Levy, 2001, p. 145)

A key attribute of learning in such worlds is that "thinking" becomes visible, concrete, and collective. Learning is situated in action: individuals act on the VW and move through the world to gain knowledge. Intelligence is distributed across the environment in distinctive ways, and the world frequently "talks back" in response to participants' actions; for example, information can be accessed with a mouse click, and "intelligent" virtual characters adjust their actions to human users' abilities and goals. Learning in VWs depends on knowing how to "read" a world that is multimodal, nonlinear, and that offers different affordances for learning according to the user's position within it (Kress & van Leeuwen, 1996). The learner must take a proactive role in finding her way, which includes identifying the overall pattern of how resources are organized, locating resources, and evaluating information in terms of its utility for immediate action, what Seely Brown (2000, p. 14), drawing on Levy-Strauss, describes as "bricolage."

Embodiment in virtual worlds is a particularly intriguing phenomenon. While "life on the screen" (Turkle, 1995) might seem far removed from bodily experience, people frequently use spatial metaphors in describing their virtual experiences, and embodied learning is manifested in how participants make meaning of their actions and environments. Scholarship that challenges the dualism of mind-body is being fruitfully applied to understanding embodiment in VWs (Johnson, 1987; Williams & Bendelow, 1998). Embodiment in virtual worlds can be characterized as metaphorical (Penny, 2004); such worlds use symbols associated with space and place to recruit our existing ways of thinking and interacting with the world. However, as Clark (2003) has argued, our brains can readily project feeling and sensation beyond the biological body. Any tool, from the most simple to the most complex, can be experienced as extensions of the bodily capacities, ranging from a hammer or a tennis racket in RL to an avatar in a VW. Representations in VWs are not just inert pictures, but can be controlled, at least partially by the learner, and in turn this interactivity can have a profound effect on our own capacities for thinking and doing (Clark, 2003; Penny, 2004).

Composing a (Second) Life

Narrative theories of learning and development have particular relevance for understanding the construction of identities in VWs. These theories need to be expanded and revised to incorporate issues related to the construction of multiple identities across and within virtual worlds, as well as the intersections of VW and RL identities (Gergen, 1991; McDonough, 1999; Turkle, 1995).

A dominant rhetoric of fluid identity creation and enactment online has been giving way to the recognition that online identities are constrained by sociocultural constructions of identities that are possible and desirable. Designers of VWs exercise some power over users' abilities to represent themselves and interact in virtual worlds through the design of avatars, their capacities, and the overall structure of the virtual environment – designs which reflect a set of assumptions about the potential users of the world and the kinds of identities they will find attractive (McDonaugh, 1999). Avatars, while sometimes considered trivial aspects of virtual worlds, can be central to users' experiences. Their appearance and actions serve as complex symbolic referents for various "selves," and can simultaneously expand and constrain the range of available identities (Taylor, 2003). In turn, users' virtual identities are tied to "a sense of entitlement or disentitlement to the particular spaces, relationships, activities, and forms of expression that together make up indices of identity" (Holland, Lachicotte, Skinner, & Cain, 1998, p. 44). The interaction between identities on and off-line offers potentially significant opportunities for learning (Gee, 2003).

Gender swapping has received a massive amount of attention in the literature on online identities, and serves as an intriguing example of the persistent influence of sociocultural norms across real and virtual worlds. Turkle (1995) shows how playing with gender in cyberspace can shape and be shaped by a person's real-life understanding of gender. Studies suggest that men are more likely than women to "gender swap" online, while more females tend to retain a female identity or if possible, mask their identity completely. The reasons for gender swapping or concealment are varied, and frequently issues of power are cited; some males express a wish to attract sexual attention or more assistance as females, while women may assume androgynous identities to avoid sexual attention or aggression (Cherney & Wise, 1996; Ray, 2004). The prevalence of sexually oriented behavior in virtual worlds, ranging from flirting to outright sexual harassment, is intriguing, considering that a user's RL identity is often not certain. The power of such existing cultural scripts on virtual interactions and identities is an important focal point for further study (Cassell & Jenkins, 1998; O'Brien, 1999).

The desire to become a member of online communities of practice also drives identity construction online. Users adopt various persona that conform to the norms of VWs, or to groups within those worlds. For example, guilds in MMORGs typically adopt names and emblems that convey certain images, plan activities to strengthen group identification, and create their own sets of norms and expectations for group membership and behavior. A significant type of learning in VWs is gaining an understanding of social norms and how to become a valued member of the virtual community.

Virtual Worlds, Real People

Virtual worlds are a rich source of social relationships within and beyond the parameters of the world itself. These relationships are often based on new social protocols and means of judging authenticity and credibility, which play a significant role in learning with and from others.

The potential anonymity of participation in virtual worlds, or at least, the invisibility of RL identity markers, may have both positive and negative effects on virtual social relationships. From a more positive stance, power and status differentials are less attached to a user's gender, race, or age. Social influence in VWs tends to be more associated with knowledge of the VW and how it works, making friends and collaborating with others, and sharing expertise (Rheingold, 2000), a sort of intellectual, cultural, and social capital that is less dependent on economic or educational levels and more dependent on resources such as time, experience, and

persistence. Teenagers collaborate and compete on equal footing with adults; businessmen join groups led by secretaries, and factory workers teach professors the social norms of online chats.

From a more negative perspective, virtual worlds have been characterized as free from social constraints on potentially destructive behavior. There certainly is evidence of harmful behavior towards others in virtual worlds, such as “flaming.” However, users of virtual worlds typically construct new sets of social norms to manage and control such behaviors, and the influence of RL norms for socially appropriate behavior can be significant influence on VW actions (O'Brien, 1999; Reid, 1999). Some norms relate specifically to the construction of online identities, such as whether users are expected to disclose information about their RL identities or stay within the roles of their online personas. O'Brien (1999) suggests that VWs need to establish clear frames for social interactions, in particular signaling whether online interactions are means of "performing" potentially fabricated roles or forms of communication between real people (or both). In many VWs, a collective learning task is devising the social norms that will facilitate individual and group experience.

Fostering Ecologies of Learning

In an ideal sense, virtual worlds can be designed as “learning ecologies” (Seely Brown, 2000); complex systems comprised of dynamic, interdependent elements that represent domains of knowledge and practice, and that are responsive to learners’ actions and demands. In such learning ecologies, learners can be producers of knowledge and affect change in the ecology itself, using it in ways that might never have been originally imagined by the original designers. The goal, from this perspective, is to utilize the interactive capacities of digital technologies for allowing people to be not simply consumers of information, but to be active contributors to, or “designers” of virtual worlds (Fischer, 2002).

Of course, the need for and desirability of such learner involvement will vary according to the purpose of the learning activity and the goals of particular learners. Questions remain about how virtual worlds can be designed to motivate learners to invest time and effort to become knowledgeable enough to act as designers in such environments. For answers to such questions, it can be useful to examine people’s participation in virtual worlds associated with video gaming, worlds that are successful in recruiting thousands of players. Many players devote hundreds of hours not only to game play, but to writing detailed guides for other players, creating “mods,” managing guilds, and otherwise developing expertise comparable to that of any specialist. These examples suggest the significance of multiple rewards, beyond simple “entertainment.” These rewards range from feelings of mastery and control, to achieving status with the game community and satisfaction from collaborating with and assisting other players.

Concluding Comments

Evidence suggests that we have moved beyond debates over the superiority of “reality” and the inferiority of virtuality, to questions about how to design cases of "brilliant virtuality" (Sutton-Smith, 1997, p. 54) – intellectually, emotionally, socially compelling VWs that are yet another extension of human capacity and culture:

Human life is inexplicable without our human abilities to figure worlds, play at them, act them out, and then make them socially, culturally, and thus materially consequential. This ability to take imaginary worlds seriously - the sort of fetishization that makes certain pieces of paper over into ‘money’ - is the magic that anthropologists as well as others have tried to capture in the concept of culture (Holland et al., 1998, p. 280).

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