Chapter 8
Musings on Co-designing Identity Aware Realities in Virtual Learning

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ABSTRACT

Virtual learning in the third dimension presents many opportunities for meaningful learning to occur. Learning in which the learner's self and the collective self immerse in the co-creation of authentic experiences. The virtues of these 3D environments are best appreciated holistically through the visual and the spatial perspectives. For meaningful learning many variables interact; however, of great importance is the role selfhood plays. Today's computing power affords original and imaginative rich experiences in which the learner is at the center of the event. The following chapter presents an exploratory journey on the self and holistic design considerations for learning in virtual environments.

PREAMBLE

In the Rogerian humanistic approach, the learner is at the center of the experience. The virtual worlds we have come to know or hear about offer unique and powerful opportunities in the design and facilitation of learning for its empowerment of self-discovery and self-appropriation throughout the various experiences. Essentially, these 3D worlds allow for the learner's self to emerge. To do so, participating learners, designers, and facilitators have the capabilities to control the visual, spatial, and emotional aspects of immersive 3D virtual worlds.

The tendencies in literature and common perception on 3D virtual worlds have overly focused on the visual aspect. Of equal weight are the spatial and emotional aspects as these three aspects interact in the formation of meaningful learner-centered experiences. The learner's self and the communities in which this learner belong immerse and co-create their experiences. Some of these experiences extend the physical into the virtual or vice versa.

Furthermore, one would be remiss to ignore the current computational power at our disposal to create enriching virtual experiences with defining impact on our identities as individuals and as a society.

Virtual environments especially in their most recent forms and techne give us the power to provide highly immersive virtual learning experiences at higher degrees of fidelity and complexity not possible before. Grady Booch (2011) insightfully states the matter of computing the human experience best;

... we have created a technology that has the power to extend us, to transform us, to define us, perhaps even to destroy us. Just think about it: there is practically nothing you see or do in your daily life that is NOT created, supported, delivered or impacted by computing.

If today we have the power to compute the human experience which will only increase with the technological advances in the years to come, what are the design considerations for integrating the individual and social selves in virtual learning? How do we facilitate meaning making both in the physical and imagined realities? What are the value propositions of both the physical and virtual environments? How do we improve alignment to deliver beneficial learning experiences along the value chain proposed by both the physical and virtual? These questions are some of the prompts guiding the contemplations that will follow.

VIRTUAL WORLD, VIRTUAL ENVIRONMENT, OR VIRTUAL REALITY?

Although similar in essence and used interchangeably, throughout the literature the definition of the terms virtual worlds (VW), virtual environments (VE), and virtual reality (VR) are slightly different; also, some definitions reflect the technological evolution this media form has undergone since its inception. Peachey and Childs (2011, p. 1) define virtual worlds as "computer-generated environments in which participants adopt an avatar to interact with each other and with the virtual environment around them." Fox, Arena, and Bailenson (2009, p. 1) define virtual environments as "a digital space in which a user's movements are tracked and his or her surroundings rendered, or digitally composed and displayed to the senses, in accordance with those movements." Schroeder (2011, p. 4) defines virtual reality technology as "a computer-generated display that allows or compels the user (or users) to have a feeling of being present in an environment other than the one that they are actually in and to interact with that environment." In this chapter the terms virtual worlds, virtual environments, and virtual reality will be used interchangeably.

Many types of virtual worlds exist. Some of them have predetermined common goals while other worlds give its inhabitants the freedom to pursue and share their interests and purpose. The inhabitants' imagination is the limit in the latter type of worlds. These virtual worlds are persistent, always on for its inhabitants to participate and create shared experiences. Like the man-made imagined realities in the form of economic and political systems (Harari, 2015) we live and breathe in our physical worlds, we have the power to imagine and create learning experiences that blend our physical and virtual realities.

To gauge the capabilities the self can leverage in these 3D virtual worlds, Stephen Ellis' breakdown of virtual environments lends a helpful foundation. According to Ellis (1996), three main elements compose the virtual world or environment:

1. Content which consists of the objects with which the learner interacts and the actor which in our case is the learner,

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