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## EVOLVING IDENTITY ECONOMIES IN SOCIAL VIRTUAL WORLDS

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### **How have the cultures, economies and expectations of virtual worlds influenced users' assumptions of privacy and the ability to express identity in immersive virtual worlds?**

It is only in the past few years that the public has had much access to embodied, immersive, social virtual worlds through consumer virtual reality hardware. While these new experiences, such as VRChat, AltSpaceVR, Sansar and Facebook Horizon are still restricted to those who can access the proper equipment and have sufficient network connectivity, these virtual worlds are now the sites of busy research activity. Academics and others have rushed to explore and explain them (Moustafa & Steed, 2018; Steed, Frlston, Lopez, Drummond, Pan & Swapp, 2016), put them in the context of lab experiments on social virtual reality (Oh, Bailenson, Weisz, & Zaki, 2016), categorize them by design (McVeigh-Schultz, Márquez Segura, Merrill, & Isbister, 2018; Jonas, Said, Yu, Aiello, Furlo & Zytka, 2019) and use classic sociological theories (Schwartz & Steptoe, 2018) to better understand and predict how users will experience them.

A rich history of academic research scaffolds our understanding of what the experience of embodiment in an avatar brings to social experiences in immersive virtual reality (Biocca, 1997; Schroeder, 2007; Kilteni, Groten, & Slater, 2012). However, properly understanding how users experience embodiment in social VR will also require a deep understanding of the history of social virtual worlds such as the now 17-year-old Second Life. Users' previous experiences with media will inform their interactions in virtual environments even when they have never had a completely embodied immersive experience before. And, the design of current immersive virtual worlds will be influenced

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by the less-immersive digital environments from which many of them sprang. The *platforms'* determination of how users are allowed to be embodied, and transform their embodiment, and the *users'* decisions about the kinds of embodied experiences they expect and accept will both be determined by the culture and economic architecture of the virtual worlds, which grew from and were informed by the history of previous virtual worlds.

In this paper, we discuss previous work on what have become “legacy” online social virtual worlds. Before immersive virtual environments (IVEs), the advent of the internet created opportunity for social connection en masse. Early on, these were often anonymous, but often highly engaged, community boards and text-based multi-user domains. In these online communities, one could meet people with common interests. These platforms were akin to the black and white world of Dorothy’s Kansas, while later social platforms featuring virtual content including avatars who could interact in and with virtual environments in real time held the same awe as the colorful land of Oz. We have now entered another dimension of virtual worlds, where users can immerse their physical bodies into the virtual environments through the one-to-one tracking made available by consumer virtual reality platforms.

A qualitative descriptive case study analysis reveals how legacy worlds can be references that help us traverse this territory. Norms, values, aesthetics, and traditions are likely to arise from the culture of the parent world, and not simply as a result of the affordances of the virtual world or the constraints created by the host. However, just as in a real environment, the culture will be influenced by these factors, and will influence users’ expectations about identity, privacy, and even the capabilities of the physical interface. Thus, the self will be transformed differently depending on what virtual world is being visited, and what experiences, as well as assets, the user brings with them. This can help predict the constraints on identity that users will expect, as well as help explain what some researchers have identified as a concerning lack of privacy concerns (Bailenson, 2018).

In this paper, we use Goffman’s theory of self presentation in combination with uses and gratifications to predict how users will choose to be embodied in virtual worlds. We will discuss how a historical understanding of legacy screen-based less-immersive virtual worlds can inform this theoretical understanding by examining the relationship between legacy, non-immersive virtual worlds and their immersive descendants. Finally, we propose a new model, that of the “identity economy,” to explain how the experience of embodiment is influenced by the economic models that underpin these virtual worlds. To illustrate, we discuss two cases of embodied virtual reality worlds. One model is illustrated by the virtual worlds which evolved from a much-studied earlier virtual world, Second Life (Yee, Bailenson, Urbanek, Chang & Merget, 2007; Boellstorff, 2008). The second model is illustrated by the social virtual reality platforms linked to Facebook through the acquisition of Oculus. While these are two specific cases, their trajectories allow us to make some predictions which extend to games and other social platforms. In addition, discussing these two specific environments using the metaphor of geography allows us to reflect on how virtual worlds are actual places with a history, a geography,

a currency, shared governance, and a language. We propose that this framing will help us to better understand how virtual worlds have evolved and are experienced now; how they may be studied, and how they may continue to evolve in the future as VR technologies create new experiences, affordances and limitations.

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