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The meaning of virtual entrepreneurship in social virtual worlds

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ABSTRACT

In order to expand our understanding of user innovation and entrepreneurship in emerging Web environments, this study examines users' entrepreneurial cognition in virtual space. We explore this topic in the social virtual world of Second Life, where user-to-user sales of virtual goods have spurred new entrepreneurial ventures and a burgeoning in-world economy. Although users' consumption of virtual goods has been examined in several studies, user entrepreneurship, or the creation/sales of virtual goods, has received scant attention. The study elicits the social representations of 'virtual entrepreneurship' of entrepreneurs in those worlds. To understand the meanings of virtual entrepreneurship we conducted interviews with 24 virtual entrepreneurs. Using core-periphery analysis, we identified a structure of the representation of virtual entrepreneurship consisting of 3 core conceptual components (Self-supporting, Widespread virtual business, and Social nature of business) and 12 peripheral concepts. This exploratory research contributes initial insights into the cognitive underpinnings of entrepreneurship in the emerging virtual economy.

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Wealth is no longer vested in physical capital but rather in human imagination and creativity.

[Jeremy Rifkin (2000)]

1. Introduction

Technology users have been shown to be a powerful source of innovation (Chesbrough, 2003; von Hippel, 2005). Users have contributed to advancements, for example, in printed circuit CAD software (Urban and von Hippel, 1988), Apache OS server security (Franke and von Hippel, 2003), snowboarding (Franke and Shah, 2003) and software for music composition (Jeppesen and Frederiksen, 2006). A recent development that has facilitated user innovation is the emergence of a new class of user-tailorable information technologies (ITs) specifically designed to provide users with the capability to modify and extend the technology in the context of use (Germonprez et al., 2007). User-tailorable IT provides users with a wide range of options for configuration, modes of use, mix-and-match integration of functions and the creation of new objects. For example, smartphone users can develop a variety of smartphone applications for themselves or download applications developed by other users. By enabling users' co-formation of technological environments, user-tailorability facilitates user

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innovation. With the advent of this class of information technologies, the topic of user innovation is gaining importance and attracting increased attention from scholars and practitioners. The purpose of the study presented in this paper is to add to this stream of research by providing insights into sensemaking by user innovators engaged in business activities that leverage the capabilities of the user-empowered environment of social virtual worlds (SVWs).

Social virtual worlds represent the extreme case of user-tailorability. The infrastructure of these cyberspaces provides users with the ability populate the world with virtual objects of their design and the freedom to direct their virtual experiences in the world. The number of SVWs has increased dramatically over the past decade, and examples include *Second Life*, *Habbo Hotel*, and *Entropia Universe*. *Habbo Hotel*, regarded as the largest teen virtual world, has reached 200 million registrations (Slulake, 2013); *Second Life* climbed to 27 million registered users at its peak (Messinger et al., 2009) and has induced the creation of new social virtual worlds such as *ReactionGrid*, *OpenLife*, and *Blue Mars*. The economic infrastructure of SVWs includes internal transactional systems (i.e., virtual currency, internal virtual markets) and intellectual property rights that allow users to own virtual objects. The activities of SVW users are thus extended to economic activities, that is, consuming and producing virtual goods. This internal economic system which simulates aspects of a real-world economy is called a *virtual economy*. As in the real world, user innovation is stimulated through entrepreneurial initiatives in a virtual economy.

Research to date on users' economic behavior in SVWs has primarily focused on the consumption of virtual goods: why users buy virtual goods or what factors affect their purchase of virtual goods (e.g., Animesh et al., 2011; Guo and Barnes, 2011; Jung and Kang, 2010). In contrast, minimal attention has yet been given to the investigation of users' entrepreneurial roles as producers and/or sellers of virtual goods, which is also an essential component of the virtual economy. SVWs are providing new opportunities to launch businesses and create and sell goods and services – from outfitting avatars, to developing virtual real estate, to the virtual promotion of real-world products (Papagiannidis et al., 2008). Although this is a burgeoning and rapidly evolving arena for user behavior in cyberspace, little is known about virtual entrepreneurship. Exploratory research is beginning, however, as evidenced by studies such as Papagiannidis et al. (2008) exploring business opportunities and challenges in virtual worlds and Chandra and Leenders (2012) examining the factors and processes that influence user innovation and entrepreneurship in virtual worlds. The exploratory study described in this paper adds to these initial works by investigating virtual entrepreneurship from a social cognition perspective by examining *how virtual entrepreneurs understand entrepreneurship within a virtual economy*. In particular, we investigate the shared meanings of virtual entrepreneurship from the perspective of social representations theory and methods (Moscovici, 1984). Given that entrepreneurial decisions and behavior can be influenced by collective beliefs (Cooper et al., 2001), the exploration of shared meanings can provide a better understanding of virtual entrepreneurship.

In the following section, we first introduce economic systems and the entrepreneurial phenomenon in SVWs. Drawing from social representations theory, we then describe the core-periphery structural view of social representations used in the study. Next, we describe the methodology to elicit and analyze data for the study to produce the core-periphery structure of the social representation of virtual entrepreneurship. Lastly, we discuss the findings and contributions of the study and suggest directions for future research.

2. Theoretical background

2.1. Entrepreneurial behavior in the virtual economy

The term virtual world (VW), defined as a computer-simulated spatial environment, was initially used to indicate *gaming virtual worlds* (GVWs; e.g., *World of Warcraft*, *Everquest*), which have a pre-defined theme and plot and define users' performance levels (e.g., level-ups). Since the early 2000s, another distinctive type of virtual world has emerged where users create their own experiences and have diverse social interactions. For the purposes of this research, we label these VWs *social virtual worlds* (SVWs).

SVWs typically have an economy-like system which simulates aspects of a real-world economy. This internal economic system of a SVW is called a virtual economy. Similar to a real-world economy, a virtual economy consists primarily of virtual property, virtual currency, a virtual market, and participants (Lehtiniemi, 2008). A virtual economy evolves through users' collective input or involvement in creation of virtual objects or goods (e.g., virtual clothes, accessories, buildings). 3D objects are created using basic shapes (e.g., squares, triangles, cubes) and chunks of code called script. To promote user contributions, SVW providers endow users with intellectual-property (IP) rights over their creations. In addition to spontaneous or intrinsic motivation, the financial reward from their creative labor has led to user entrepreneurship in SVWs (Chandra and Leenders, 2012). Users' businesses in a SVW are a quite similar to real-world ones. For example, users make money by developing and selling virtual property, such as clothing, houses and vehicles, or do service businesses, such as a night club, an art museum, or a conference center in a SVW. Some users have successfully generated financial profits, sometimes substantial profits, by utilizing their IP rights (e.g., Anshe Chung, who is regarded as the first millionaire (in real dollars) in *Second Life* (Sloan, 2005); Jon Jacobs, who sold a nightclub named NeverDie in the Swedish virtual world *Entropia Universe* for $635,000 (Bates, 2010)). In addition to users' IP rights, other formal aspects of the environment, such as SVW providers' support for in-world markets, entrepreneur centers and education programs, and technological support for transactions, have also stimulated users' entrepreneurial behavior in SVWs. It is reported that at one time 30% of the users were conducting business in *Second Life* (Market Truths, 2007), and user-to-user trading of virtual goods reached $3.2B in the Web-based marketplace for virtual goods in 2010 (Linden Lab, 2011).

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