GUEST EDITORIAL PREFACE

An Introduction:
Exploring Identity, Emotions, and Social Behaviors with Virtual Environments

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There have been many discussions of identity, emotions and perspective taking in and with virtual environments (VEs) (Harley, in press; Harley, Bouchet, & Azevedo, 2013; McCreery, Krach, Schrader & Boone, 2012; McCreery, Schrader, Krach & Boone, 2013; Tettegah, 2009). VEs however are not limited to games and simulated social virtual worlds. VEs also include: email, learning and content management systems, agent-based learning environments, social media sites, chat spaces, blogs, wikis, and other web interfaces. If the environment doesn't exist in the physical world, it can potentially be a virtual environment. For the purpose of this special issue we focus on emotions and identities that are situated in virtual environments within the digital realm, or as stated earlier VEs.

Scholarly representations of identity have included a focus on class, gender, and racial identity to name a few (Ma & Agarwal, 2007; Noble, Sweeney, Austin & McKeever, 2014) while some theoreticians and researchers have

focused on agents and avatars in VEs (Tettegah & Calongne, 2009; Turkle, 1997). It is important to understand identity from multiple perspectives. Our goals in this issue is to bring diverse voices to print and beyond so that we capture narratives from multiple fields or disciplines. In this special issue the goals included examinations of identity manipulations, perspective-taking, and emotional engagement in VEs, broadly speaking.

The articles selected for this issue focuses on many aspects of engagement in VEs and all focused on emotions and behaviors. The diverse approaches presented by the authors in this volume help us to understand the multiple ways in which we can engage scholarship from different fields in psychology, learning sciences, humanities, and computer science. VEs were central to all of the articles in this special issue including an investigation of problems associated with online discrimination and psychosocial adjustment of middle and high school students, a synthesis of emotions in agent-based learn-

ing environments, or games as analytical tools for examining social behavior, that investigate empathy or socio-emotional aspects of bullying and Indie games to understand the role of empathy in VEs (Harley, Bouchet & Azevedo, 2013; Huang & Tettegah, 2010; Tettegah, 2007; Tettegah & Anderson, 2007).

In the first article, *Virtual Environments, Online Racial Discrimination, and Adjustment among a Diverse, School-based Sample of Adolescents*, Tynes et al. examined the relationship between Internet usage, self identified race, online racial discrimination, and offline discrimination on mental health (depressive symptoms and anxiety) and externalizing behavior (e.g., rule breaking) in the first phase of a longitudinal study involving adolescents enrolled in Midwestern high schools. Their results contribute to our understanding of race-related online discrimination by highlighting the negative impact it has on students and, in doing so, reinforcing the need for resources and policies to support and protect vulnerable students. This study also highlights the importance of contextualizing discriminatory experiences in terms of whether they are experienced both online and offline (and from whom) and the time students spend in VEs.

Harley and Azevedo, in the second article, *Toward a Feature-driven Understanding of Students' Emotions during Interactions with Agent-based Learning Environments: A Selective Review,* performed a critical and timely selective review of the emotions student's experienced while interacting with different agent-base learning environments (ABLEs). The authors began with an overall review of six ABLEs (AutoTutor, Crystal Island, Operation ARIES!, MetaTutor, Prime Climb and WayYang Outpost), followed by a brief discussion of emotions. The primary focus of their article was to investigate and determine the efficacy and ability of six ABLEs to facilitate students' experience of adaptive emotions. In their review, the authors discussed differences and similarities in the incidence of discrete emotions (e.g., happiness, sadness, boredom, anger, frustration) between ABLEs by comparing and contrasting the different features of these environments. Findings suggest that making educational content relevant and implementing game-like elements in ABLEs may help foster positive, activating emotions during learners' interactions with them. Conclusions also indicate that boredom is the emotion that should be of the greatest focus for emotional interventions and that more research is needed in the area of neutral emotions in ABLEs in order to better understand and improve the intersection of VEs, emotions and learning.

The third article, *Dream Lucidity: Yume Nikki and Learning the Empathy Dreamscape,* Bommarito and Dunlap observed how players of the Japanese Indie game *Yume Nikki* used and participated in an online community to scaffold both their game progress and understanding of the game's narrative. The narrative and imagery of the game were connected to a social withdrawal disorder known in Japan as hikikomori. The article presents a qualitative exploration of the changes in gamers' perceptions of the players before and after reading the wiki associated with gameplay. The case-study approach employed by Bommarito et al. provides a compelling example of the potential for blogs and their use to enhance player's appreciation of games, in particular, when there are elements, such as cultural, historical, or sociological themes that might be hard for them to identify.

In the fourth and final article entitled *Emotions in Social Computer Games: Relations with Bullying, Aggression, & School Belonging*, Mancilla-Caceres and colleagues provided a thought provoking example of how a simple game can be employed as a data gathering tool to work in conjunction with psychological assessments to better understand how behavior emerges within social situations. Although the data is correlational in nature, their example shows promise for researchers who are interested not only in social behavior but also in examining how individual differences interact with real-world scenarios (i.e., cooperative and competitive tasks) to influence behavioral outcomes.

Our goal for this special issue volume was to provide diversity among multiple scholarly articles that would engage the reader in understanding the range of research for studying identity and social behaviors with all types of virtual environments (VEs). As VE usage increases, it is important that researchers examine the factors that contribute to identity and social behaviors, since many technologies do not afford the assumed communication that often occur in face-to-face physical environments (i.e., gestures and other non-verbal communication). The selected papers help address the need to understand the richness of diverse approaches to research, in this area, and illustrate the fact that physical world identities and emotions are brought into VEs, both good and bad (e.g., racial discrimination, bullying, positive and negative emotions), which provides a compelling reason to advance research in these areas; to create VEs that foster positive emotions, social justice, and equality in learning, both formally and informally.

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