## **Ghosts in the Machine?**On the Limits of Narrative Identity in Cyberspace

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#### **ABSTRACT**

In keeping with the theme of this special journal issue, the crosspollination discussed here includes technologies of cyberspace and the internet, psychological sub-disciplines concerned with personality and identity-formation, philosophy, and the neurosciences. Ordinarily, "crosspollination" connotes the emergence of something positive: a new birth, for instance, or an interesting hybrid. However, contrary to a rosy outlook, this article reflects concern about the effects of cyberspace technologies on personality and identity. "Progress" is an extremely powerful metaphor, or mental frame, and once new social media platforms, and virtual reality and augmented reality technologies are equated with progress, it is extremely difficult to contemplate their possible disadvantages. Nevertheless, glancing-backwards, one can readily concede that eager receptivity for the prospective benefits of new technologies should have been matched with sobriety about unforeseen or unintended consequences.

#### **KEYWORDS**

Adolescence, Aiken, Autobiography, Cyberspace, Frames, Identity, Internet, Lakoff, McAdam, Narratives, Neural-bindings, Persons, Self-esteem, Twenge, Well-being

Cyberbullying, child pornography, and online predation—now each well-known—were not adequately foreseen, although they should have been; nor was the plague of Net-facilitated criminal identity theft. Today we also live with the compromising and damaging effects of online profit-driven manipulation, government surveillance over the Net, politically motivated hacking by foreign governments, hate group and terrorist sites and blogs, and even the advent of cyber-terrorism and cyberwarfare. Stating the obvious, Michael Seto, who identifies himself as a clinical psychologist, avers that "we are not giving enough attention to how human behavior is being changed in cyberspace." He adds that we are now living through "the largest unregulated social experiment of all time" (Quoted in Aiken, 2016, p. 3). Most people are oblivious of the "secret economics of the media" and the Internet, namely how the spread of information on algorithm-driven social media platforms through clicks, "likes," and sharing, equals income for producers and advertisers, and can change political communication and political outcomes (Jazynka, 2017, p. 26).

Apps such as Blippar's new facial recognition features allow people to identify others through their smartphones. Simply point your smartphone at someone and Blippar will search its database for the correct "Augmented Real Face Profile," with 99% accuracy. Not only that, but Blippar and other face-recognition apps will upload the person's biography, including photos, social activities, and

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preferences, as well as displaying on the screen icons for the target's social networks (Perez, 2016). The advantages of facial recognition technology for business and commerce are highly touted, but insofar as concern has been raised, it focuses on privacy issues (e.g. will one have to opt out?) and the ways totalitarian regimes might use the technology. Concerns about psychological consequences, and especially identity-formation, have yet to emerge.

In 2016, Pokémon Go, now with tens of millions of users worldwide, introduced so-called "augmented reality" apps in online gaming, enabling people to chase around after digital creatures seen through their smartphone screens. Whereas virtual reality (VR) replaces the real-world environment with a simulated one (or superimposes artificial images), augmented reality (AR) alters one's current perception of a real-world environment. Coinciding with the opening of the 2018 Winter Olympics at PyoengChang, the *New York Times* advertised its new AR app enabling users to experience the immersive "reality" of having world-class athletes in their own living rooms (2018). Soon it will be possible to interact with AR "objects" in real time and in places of one's choosing. Apple devices, in connection with AMC's *The Walking Dead*, is creating "zombies" who will be experienced "alongside real people," and available for gamesters to shoot (*The Week*, 2017).

It is now passé to speak of high school and college students as living in the Internet, or "Selfie" Age, having grown up with Internet and cyberspace technologies. Pew Center research shows that the percentage of American teens who own smartphones jumped from 37 percent in 2012 to 73 percent in 2015, while 88 percent have access to smartphones. Even 91 percent of families living below the poverty line have an Internet connection at home (Bahrampour, 2018). On average, by 2014 students were checking their mobile devices 1,500 times a week, or about 212 times a day (Woollaston, 2014, para 3). Teenagers spend more time on the Net—roughly 9 hours a day and 27 hours a week—than they do in meaningful face-to-face interactions outside of cyberspace, either with family members or school teachers (Wallace, 2015, para 2). Yet, changes accelerate without opportunities to reflect about the consequences for identity and personality. Says Dr. Allen Yang of the Center for Augmented Cognition at the University of California, Berkeley: "in 10 to 20 years, we might have an entirely new generation of young people who will be born into the world assuming AR/VR capabilities are as natural as turning on [the] TV today" (Metcalf, 2017, para. 2). Dr. Hao Li, a computer scientist at the University of Southern California, and CEO of startup Pinscreen adds: "Just like Pokémon go, the most important applications will be ones that make people adopt the technology and push its advancement" (Metcalf, 2017).

In direct opposition to the enthusiasm of Yang and Li, clinical psychologist Michael Seto believes the outcome of such experiments will be disastrous. Seto claims we are being turned by "cyber effects" into beings who are "more mentally disordered, anxious, obsessive, narcissistic, exhibitionistic, body-dysmorhic, psychopathic [and] schizophrenic." Reading "cyberpsychologist" Mary Aiken's *The Cyber Effect* (2017), one might expect that these cyber-scourges will unleash a "surge in deviant, criminal, and abnormal behavior in the general population" (Ronson, 2016, para 4). This paper does not subscribe to such alarmism, nor does it reflect a Luddite antipathy toward technology, nor deny the many benefits ushered in by the Internet Age or the onslaught of AR. Nevertheless, the misuses, or abuses, of Internet technology have had negative consequences, such as those mentioned briefly above, and more effort needs to be invested in efforts to foresee and guard against unsuspected, but potentially serious effects.

The specific subject of this paper is with the possible effects for individuals of "Internet mediated identity formation" (IMI). IMI concerns the ways immersion in cyberspace can affect the development of personal identity—who we become, with whom we interact and why, and how we understand ourselves. We do not yet have a concept for the way human persons exist in the midst of technological interactions. Hence, although cyberspace is typically understood as a "computer network represented as a three-dimensional model through which a virtual-reality user can move" (Collins English Dictionary, 2012), for present purposes, I co-opt the term. Here "cyberspace" refers to the real space and time in which interactive software and hardware is employed by individuals to

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