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Cyborg Identity, Trauma, and Online Learning

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ABSTRACT

The integration of technology into the individual's sense of self has changed our identity. The cultural shift to a digital landscape of learning has not lived up to its original expectations as a space where everyone is free to learn without the racial, gender, and socioeconomic identities that are tied to cultural trauma. The utopian view has given way to the knowledge that algorithms are coded with bias, and discussion posts are responded to with the same bias we find in traditional classrooms. Faculty are becoming, and resisting, being experts in the integration of technology into representations of self. The cyborg approach to learning encourages each of us to ask new questions about learning in environments that free us from the need to be physically present but can imitate markers of identity that replicate societal trauma.

Keywords: digital identity, cyborg, trauma, race, online learning

Anthropologist Amy Chase suggests that "technology won't propagate until it fulfills a social need" (Chase, 2012, p. 1). With 89% of four-year public colleges and universities offering online classes and 60% of four-year private schools offering online education (Parker et al., 2021), it is clear that online learning fulfills the social need for accessing education with the least disruption to a busy life. The hope that online education will fulfill important social needs is reflective of its origins, in which the online environment was positioned as an unregulated space of educational freedom where students and faculty were free to connect with new ideas, thoughts, and creations unrestricted by the violence of hegemony. Philosopher John Barlow (1996) articulated a view of the internet as a space where individuals could be free from the governmental forces that exercise control over our bodies. Donna Haraway built on these views, defining the online world as a space in which "freedom and justice, skill, wealth and knowledge are variously reconstituted" (Allen, 1998, p. 33). Idealistic visions of the internet and online learning fostered a sense that technology

would inevitably enhance our personal lives and the human condition; the collective traumas of racism, classism, ableism and hegemony left far behind.

Educators did not anticipate the extent of cultural and technological changes that enabled the government and private companies to build detailed – and exceptionally profitable – profiles of individual computer users resulting in what is commonly known as surveillance capitalism (Doherty, 2021; Visser, 2022). For the most part, participants in the United States of America have accepted social policies and practices of mass surveillance such as the Patriot Act and the 2015 USA Freedom Act, which have resulted in greater oversight of their lives (Warwick, 2005). Participants in China experience "tech-enabled authoritarianism" that ranges from removal of internet content to finding citizens that are critical of the government (Khalil, 2020).

The dream of the internet as an unregulated space of learning and freedom has slowly been replaced with frequent oversight by administrators (Khalil, 2020; Thurab-Nkhosi, 2018), automated assessments (Auvinen, 2015) and computerized systems that seek to improve faculty compliance for best educational practices (Manthey et al., 2008; Pete, 2016; Rusa et al., 2009). Academic administrators are increasingly encouraged to integrate patterns of surveillance in an attempt to ensure quality in online courses (Hope, 2018; Wang & Gebhart, 2020), which raises significant concerns around the role of privacy. Individuals within educational institutions struggle to balance cultural stability (e.g., academic rigor, significance of faculty and the traditions of higher education) with the innovation required to succeed in the competitive landscape of online learning.

Online learning may be able to reclaim its original promise as a place of equity, experimentation, and the mutual exploration of new ideas. To move towards the promise of online education, faculty and administrators can design online spaces where students are encouraged to bring their authentic self and explore the construction of their own ideas. For example, online faculty can investigate the ways in which organized societal violence is inadvertently replicated in the classroom, reducing productivity. Online learning can move beyond bonds of affinity (e.g., class, location, ethnicity, religion), which can serve as "poverty traps" (Hoff & Sen, 2006, p. 4), or spaces which reinforce a student's identity with actions, ideas and ideologies that prevent them from taking opportunities and accessing resources. As the critical postcolonial scholar Homi Bhabha (2006) states, cultural identity is created at the contested and in-between spaces, the spaces where who one has been and is collides with what one is becoming and can do.

Faculty members who teach online serve numerous roles: content creator, facilitator, technician, student and technical support, coach, editor, classroom designer, and even graphic designer (Gómez-Rey et al., 2018). While faculty serve these very practical roles, they are also cultural brokers who assist students in understanding the digital landscape. For example, faculty can design the online classroom as a space in which rewards are given for taking intellectual risks and exploring solutions to societal problems. This could be as simple as adding risk-taking to the rubric of their midterm assignment. Faculty can offer guidance on how to reclaim the power inherent in digital learning by moving beyond content expertise

that is freely available online, and designing spaces in which students come together to co-create solutions in their field of expertise.

Central to the faculty's responsibility in helping students think about their personal relationship with technology is the role of exploring their own identity as cyborgs. Donna Haraway (1991) defined a cyborg as a "hybrid of machine and organism, a creature of social reality as well as fiction," one who is unafraid of and interested in their deep kinship with machines (p. 315). A cyborg sees themself as operating in the in-between creative spaces, where identity is questioned, content is manipulated in a playful way, and assumptions are challenged. Challenging presumptions is important in an era in which racial tensions, gender inequality, and cultural responses to traumas such as the #MeToo movement and Black Lives Matter seek to uproot dominant ideologies (Douglass et al., 2022). Yet many activists inadvertently position the individual who has experienced trauma as a victim with little power to change complex socio-cultural realities. The online classroom can be designed as a place that challenges students and faculty alike to explore the replication of familiar power dynamics and explore methods to change them (Freire, 2006; Giroux, 2005; Mohanty, 2006). A cyborg approach looks beyond typical descriptors of identity and more towards how a student integrates technology into their identity, and works within a field of constantly shifting clouds available over the internet (Biocca, 1997). For the cyborg educator, learning is not fixed; it is fluid and ever changing – exactly like the internet.

Faculty are well-poised to assist students and administrators in understanding how our new identity as cyborgs raises critical questions about the way issues of power, identity, and equity intersect with technology and may inadvertently replicate trauma. Repetition compulsion occurs when a person who has experienced a trauma unconsciously repeats the painful event or its circumstances over and over again (Russel, 1998). For example, a student who has been abandoned by their parents in childhood may handle this loss by developing an avoidant attachment style. The pattern of avoidance may make its way into their relationships (Ogden et al., 2006), their professional work, or their learning spaces and may be a key reason for the student to avoid contacting an instructor despite not understanding the material in an online class.

A cyborg approach to working with students who have experienced trauma can be as simple as the professor reaching out and engaging with their social presence. "In the context of online learning, social presence is described as the ability of learners to project themselves socially and emotionally as well as their ability to perceive other learners as 'real people'" (Lingle et al., 2021, p. 68). Cyborg faculty need to resist the impulse to perceive the digital avatars they are interacting with as artificial intelligence or chat bots. The digital classroom contains real students, themselves cyborgs. The reality is that students, like faculty, succumb to the pressure to be disengaged when they are not seen as real people. Bringing clarity to how we understand, enact, and express ourselves through technology is critical to our capacity to shape the online learning environment in a way that recognizes that learning is inherently social (Leblanc & Ramirez, 2020; van Leeuwen et al., 2018; Young, 2008).

THE BIASED CYBORG

Initially, the online classroom was idealized as a space consisting of "networked communication that allows all participants to act as knowledge producers, granting women and people of color the ability to speak authoritatively" (Jones, 2013, p. iii). As late as 2019, the hope was still that "the cyborg hybridity of machine and organism [would] expose, shift, and destroy the boundaries [humans] have created throughout history meant to separate one another along lines of race, class, gender and sexuality" (Schrader, 2019, p. 821). Designing spaces for equitable learning is difficult. Unless faculty are conscious of how they are integrating technology into their teaching, it may unconsciously reproduce the social traumas that they sought to remedy. Massive Open Online Courses (MOOCs) were first designed with the thought of bringing equity to education by removing barriers to entry, and providing equal access to Ivy League professors; yet, these courses struggled with high drop-out rates (Casey & Jaquet-Chiffelle, 2019) largely due to unmet expectations, isolation, difficulty finding work-life balance (Budiman, 2018), and the low social interaction built into most online courses (Yılmaz & Karataş, 2022).

By now it is well documented that online learning environments are not free from the social trauma of racial bias (Jenkins, 2002). In 2016, Google was criticized for algorithms that reinforced racial stereotyping of Black people as criminals and White people as beautiful (Guarino, 2016; Noble, 2018), further illustrating how technological design replicates racial trauma rather than being a space of freedom. In 2018, Baker et al. released a study confirming that even when professors had no indicators of ethnicity, White males were 94% more likely to be responded to in online discussion forums than women and individuals of other ethnic backgrounds. The challenge of bias in the online environment has become so great that scholar Safiya Noble asserted that racism is now "part of the architecture and language of technology" (2018, p. 9). In a relatively short period of time, the optimism of online learning as a free environment has succumbed to the reality of online learning replicating social traumas and reinforcing the realities of structural oppression.

Socio-cultural markers displayed through the body, such as race and gender, were once thought to be hidden in online learning. These markers have re-surfaced in what is called progressive embodiment, or the process of the body becoming present in the digital world of the online classroom as an expressive communication device (Biocca, 1997). Cyborgs, however, expect that digital spaces "disrupt what students do and how they interact while embedded in complex material worlds… Digital technology can challenge power structures and offer equality through collaboration and access to information, but it can also manifest harassment towards minorities" (Hilli, 2019, p. 163). For some cyborgs, erasing racial identity is not a wanted experience as race is an integral component of their sense of strength and resilience (DeCook, 2021). For the cyborg, the online classroom is a space of limitless possibilities, where our identities can be reknit to our liking; students and faculty alike can choose the markers by which they wish to be identified. Culture, after all, is always a series of negotiations (Bhabha, 2006; Brunton, 2022).

Faculty are not new to teaching about structural oppression and institutionalized trauma. Intellectuals have a long history of helping students to break free of the confines of their identity and explore their sense of self within and without the simplistic boundaries of race, gender, ableist, and heteronormative values (Freire,

2006; Giroux, 2005; Heyes, 2007; hooks, 1994). Education aids students in understanding the culture in which they reside, and can encourage them to reinvent a world in which institutional violence is recognized and not replicated. Within this context, expectations for online faculty are high. Most faculty are content experts. Increasingly, administrators expect them to also be well-versed in utilizing technological tools. Faculty are expected to be expert at designing an online classroom that ensures the social structures, content, and projects are educationally valuable without reproducing social trauma. For example, they are expected to confirm that discussion forums are being responded to equitably in light of gender, race, and class. While educators are calling for new ways to "design, implement, and evaluate… online learning environments that are effective in promoting equitable forms of engagement" (Baker et al., 2018, p. 25), there is a paucity of effective solutions available.

One proposed solution to racialized institutional trauma is for faculty to take a brief online implicit bias survey to raise awareness of unintentional approaches to responses in the classroom (Sabin et al., 2022). While studies on the effectiveness of implicit bias training on faculty development are relatively new, there is some promising evidence that such training is perceived as helpful by faculty (Gonzalez et al., 2018; Okorie-Awé et al., 2021; Sukhera et al., 2020). Another suggestion to mitigate racialized institutional trauma is to use computer algorithms to determine the implicit bias of faculty and alert them to their response trends early enough that they can ensure all students are responded to equally (Baker et al., 2018). This seemingly elegant resolution may be thought of as a seamless integration of technology into our identity, with the computer algorithms as the meditator between students and faculty – but could potentially contain algorithmic bias. Auditing for algorithmic bias may become a critical feature of assessment to ensure equity in the online classroom.

Conversations on cultural competence, either online or in person, enhance an individual's capacity for empathy, self-efficacy, and self-awareness (Hutchins & Goldstein Hode, 2021). Yet, a cyborg cannot embrace dialogue that rehashes the past. "The cyborg hybridity of machine and organism is meant to expose, shift, and destroy the boundaries we have created throughout history meant to separate one another along lines of race, class, gender, and sexuality" (Schrader, 2019, p. 821). The cyborg seeks only to understand social traumas in order to subvert them and create new lines of communication and identity that thrive without violence. For the cyborg, memory is dangerous because "those in power attempt to manage memories" (Schrader, 2019, p. 830) to replicate power imbalances that have previously existed. Managed memories often refuse to acknowledge the power, breadth, and beauty of those who have long been made invisible due to the experience of trauma. The emphasis on victimhood belittles the qualities of resiliency, strength, and the power that were required to survive. Focusing on compassion and resiliency has been shown to help individuals coping with trauma (Munroe et al., 2022), yet much of the current research on trauma tends to focus on the victimhood of those who experience racial, gender, and other forms of systemic oppression (Douglass et al., 2022). A cyborg approach recognizes that it is the predators who have a lack of resiliency, and their suffering is best addressed with the same humanistic approach applied to victims (Gutierrez & Gutierrez, 2019; Oudshoorn, 2016). The cyborg draws "pleasure in the

confusion of boundaries and for the responsibility in their construction" (Haraway, 1991 as cited in Gough, 2003, p. 35).

A truly cyborg approach to course design might involve designing the online learning environment as a space in which students and faculty come together to define the opportunities and limitations of bias in their community. A well-designed online environment becomes a playground specifically designed to explore the issues relevant to the class; a platform where all participants attempt to solve societal, aesthetic, financial or global issues. The cyborg faculty does not seek correct answers, but instead seeks to be a part of a dynamic interaction with their students where ideas are explored and new points of inquiry can be raised. The result of this process is not content knowledge but rather skills in communication and cultural humility. A cyborg approach puts no burden on the faculty or the student to "fix" the challenge of systemic bias and violence. This freedom allows for new constructs to be developed that no longer replicate tired ideas no longer worth circulating.

As cultural brokers, cyborg faculty have the opportunity to help students think through how the online classroom can serve as a platform to understand how digital spaces use technology to edit, refine, and enhance students' presentation of self to best meet their aims and objectives. Faculty can assist in the creation of innovative platforms in which students experiment with identity in their online classrooms. Identity that was traditionally "rooted in the body" (e.g., videos and profile pictures) can now be replaced with identities that are "customizable and upgradeable" (e.g., avatars and digital image manipulation) (Barfield & Williams, 2017, p. 14). Students can be encouraged to obscure or enhance traditional cultural markers of race, class, and gender as a way to understand the cultural context in which they live. For example, a student could choose avatars that obscure signs of privilege to better experience how socioeconomic status intersects with race, or perhaps play up aspects of their identity that they want to enhance (perhaps their artistic genius, or their financial prowess) as opposed to markers of gender, sexual orientation, and race. For a cyborg, identity is malleable – shifting to enhance the context one is in.

The value of a collaborative cyborg approach to learning was articulated in the 1990s (Haraway, 1991), but the potential of the movement never moved past defining core values. Faculty are in the ideal role to begin designing spaces in which solutions to the challenges our society faces can be explored by asking the kind of questions that help students and their institutions rethink authoritative forms of knowledge that replicate social injustices and explore the need for education that arises to solve problems that exist within the communities it serves. Ideally, the skills students learn in college do more than replicate cultural stability, hegemony, bias, and structured violence. Cyborg faculty can lead students to develop innovations that integrate social networks and technology, develop unexpected methods of learning that uproot the dichotomies that perpetuate social violence and trauma (Campbell & Finegan, 2011).

DISCUSSION

The hope of many faculty who were involved in the early development of online learning was that the pure mind of the learner would be liberated from the body and its need to "be present" in order to learn (Allen, 1998). In this scenario, the professor was free to create an environment in which mastery of content, analysis, processes, and creativity rose to the foreground. The online classroom was supposed to be a playground for learning that connected the student with the ideas of the class, and developed community that spanned across differences and geographic locations. Deep engagement from faculty who are dedicated to redefining the space of online learning is necessary. Without faculty engagement, it is likely that the mundane interests in outsourcing content development, chatbots, and increased surveillance of the online classroom space could continue to be defined as "successes". Each of these elements may have its place in online learning, but what appears to be missing is a robust faculty-led conversation on campus that requires inquiry and collaboration about the way technology is shaping our identity, our relationship with learning, and the ways in which societal injustice and trauma are perpetuated or resolved.

Some of the first online classrooms, MOOCs, were development by Stanford and MIT (Brown, 2013; Kolowich, 2013), leaving small private schools, independent scholars, and instructional designers struggling to catch up. Silently consenting to privileged, elite approaches to online learning may not have led to best practices in learning; indeed, it appears to have merely replicated tired dualities of expert/novice, traditional/online, superior/inferior, and justice/injustice. The capacity for online learning to be emancipatory requires moving towards collaboration and changing our teaching practices for the unique students we encounter. Excellence in online education requires faculty to be knowledgeable about the specific students they teach and their reaction to content, social presence and technology.

Despite the focus on the online space as a venue for collaboration, those that excel in online learning tend to be more independent and rule following. Faculty often describe the ideal online student as one who has the discipline, self-motivation, and organization to produce academic work with very little oversight (Bettinger et al., 2017). These students are likely to excel in any environment. Cyborg faculty might define digital literacy (i.e., having the skills needed to learn and contribute in a society where communication and access to information increasingly rely upon technology) as a basic good that is essential to supporting the critical functions of society. Perhaps most students should experience a dynamic online class as a critical component of being an educated life-long learner within society. Online learning, when enacted with a sense of its worth, exposes students to the digital tools required in their field, allows them to understand the discipline required for remote work, and hopefully is an opportunity for them to experience the support, care, and social presence of their faculty and peers (Buchanan & Chapman, 2014, p. 16).

Online learning has contributed to the creation of emerging forms of identity where technology is the conduit for one's creative and intellectual self. In the online classroom, the learning management platform needs to be seen as more than a proxy or an intermediary for interacting with the "real world." Online education beckons us to define learning as knowledge that is acquired through the medium of technology, in a space that is free from the need to be physically present but that requires social presence (Biocca, 1997; Lingle et al., 2021); a space where we can choose to ignore

or enhance physical markers of social difference – a space where there are choices. Cyborg faculty need time to think through the changing landscape of how content, inquiry, and identity replicate or resolve societal traumas, corporate capitalism, and the idea that surveillance is synonymous with safety.

As faculty rethink their role as cyborgs, it may be helpful to reflect on the typical challenges that most students face: students overestimate their knowledge and strengths (Dunning, 2007); students do not plan, and when they do, they plan poorly (Chi, 2008; Carey et al. 1989); students fail to monitor their own performance (Chi, 2008); and students reflect on their performance, but do not adjust accordingly (Fu & Gray, 2004). A well-designed online class in and of itself will not be able to guide a student through the terrain of learning. Transformational learning theory believes that all learning requires a moment when the student experiences disorienting dilemmas, or challenges to their belief system (Mezirow et al., 2000). Faculty are required to help reorient the student to their newly formed idea. Faculty are also required to create an atmosphere of critical thinking and questioning (hooks, 1994) that often does not happen when faculty disengage from online discussions. Navigating an online environment requires technological proficiency as well as a capacity to harness the creative thinking of cyborg professors to manipulate technology and AI to meet learning objectives, all with the aforementioned typical learning limitations of students in mind. It may be time to listen to educators who have called for online learning to reconnect "adults to what makes them most human – their passions, their emotions, their pleasures, their expectations, their dreams and their daily experience" (Wright, 2013, p. 14).

True online learning will require institutions to stop thinking of their students as consumers, alternate revenue sources or as technologically superior to their professors. Faculty can help students to rethink their own identity as cyborgs within an ever-changing landscape of knowledge production, replication, and even intellectual theft. Learning requires a disruption, a moment of not knowing (Mezirow et al., 2000), bringing us back to the human level of learning that professors are dedicated to navigating. For the time being, learning cannot be replicated by chatbots or other forms of artificial intelligence. Chatbots are unlikely to be able to forge the connections required to unleash students' creative and intellectual potentials within the continuously changing digital landscape of their lives.

As faculty begin to invest time, self, and creative energy into their courses, it becomes critical to think through who owns the content of their courses (Twigg, 2000). Many faculty and administrators have a strong conviction that faculty should own the intellectual content of the courses they teach, much like musicians and artists own their creative work (Loggie et al., 2016; Twigg, 2000). Improving one's teaching can include personal experience, mentoring, designing the learning environment, understanding how one's subject of expertise is influenced by technology, and creating assignments that help shape students' experience with the subject, while being shaped by technology. The goal to empower and develop the students who are at the center of education is creative and original work. Faculty groups can explore intellectual property and how copyright law does and does not protect their courses from endless reproduction.

Rather than institutions and administrators dictating the relationship faculty have to their courses, cyborg faculty can look at the places of collaboration and clearly define spaces that will be outsourced to corporate partners or AI. Dependence on outsourced external vendors assumes that students in rural America, urban landscapes, and other geographic areas require the same education to succeed. Faculty are the ones who know their students well enough to assess whether a particular external vendor meets their educational needs. A homogenized online environment redefines education as the mere purveyor of content. In practice, most institutions hone their learning culture and the expertise of faculty to serve specific demographics of students.

It is increasingly important that faculty play the pivotal role of assisting administrators to see that online learning requires much more than technical expertise. Faculty can assist administrators to think through some of the questions that will define the next generation of online learning:

- What are the financial and copyright implications for the professor's creative work now that it can be infinitely redistributed? (Loggie et al., 2016).
- What are the constraints for communicating in an online environment? How available should faculty be in the 24-hour online classroom? Which aspects can be handled by chatbots, and which by the professor? (Stapić et al., 2020).
- How do professors handle the range of digital literacies they find in their classrooms? How can the myth that all young students are technologically savvy be better understood and addressed through the teaching profession? How do academic programs balance online content interaction with access to experiential learning to maximize student success?

Faculty can break free from their internalized limitations of merely assisting students with technical proficiency. Instructors who are experts in cyborg approaches to learning can encourage administrators to ask new questions about learning in environments that free us from the need to be physically present yet draw on markers of our identity as creative innovators that free us from replicating trauma. Online learning has a unique role in educating the next generation in a space that is relatively free of trauma, bias, surveillance, and corporate capitalism. Inquiry, as a community, can help improve online learning. Table 1 outlines a set of questions that can be used by faculty to think through their identity as cyborgs.

Table 1: Inquiry for Cyborgs Teaching Online

Cyborg Challenges	**Questions**
Surveillance	How does surveillance serve as proxy for concerns about student satisfaction and safety?
Bias	What are my assumptions about student identity and my own identity? Do I expect race/gender/class to be at the foreground or in the background? How can I

	allow students to have choice in representation of self?
Social Presence	What is the role of social presence in the online class? How do these expectations mirror professional expectations in the field? How does my profession use technology to enhance engagement across geographic barriers? What assignments could exemplify social presence in the field?
Self-direction	Why would students understand technology use in my stated discipline better than I would? How can I introduce the role of being self-directed in the profession and for life satisfaction? How does technology enhance self-direction?
Meta-cognition	How can my online class help students to monitor their progress and adapt to change? How do I encourage students to set goals for themselves through the assessment process?
Identity	How do we integrate technology into who we are as professionals? How does our work happen without and with technology?
Individual development	What is the role of individual work, mindset and growth within my field? How is self-evaluation used, and can that be mirrored in the classroom?
Purpose	What is the purpose for learning online? How can technology enhance this purpose?
Collaboration Skills	How does my discipline collaborate? What technical skills do we need to be proficient? How can these skills be learned online? How can students learn to give each other feedback in ways that are productive, and assume the best of their fellow students?

Faculty and administrators have a choice to enforce the larger hegemonic forces that seek to contain, control, and regulate online learning. Upon inquiry, they may discover methods to engage with students so that they play a critical role in crafting transformational learning environments that enhance student identity within an increasingly technological and traumatic world.

Literature on online learning calls for faculty to learn new technical skills and new pedagogical practices (Roman et al., 2010); it also calls for the cultivation of self-direction, meta-cognition, and collaborative skills (Ho et al., 2010). The space between these two skillsets is where the cyborg faculty just might thrive. Between these two skills sets is technology – not just hardware or software, but the way we engage with technology as humans to solve problems and arrive somewhere new. Cyborgs pose unique challenges to traditional paradigms of teaching and learning by questioning lived experiences, histories, and practices of all those who engage with online learning. Critical to this challenge is exploring what emerges at the intersection

of technology with our unique cultures, history, and location that can create freedom for intellectual discourse.

The cyborg faculty uses inquiry as intervention to help themselves design unique learning environments and to help each new group of students to make meaning of the content and engage in unexpected ways with the material presented. Teaching must be ready to change with shifts in technology. As cyborg faculty, we can encourage the changing minds of students to imagine new destinations and develop new skills in an increasingly technological world.

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