Editorial: Technology Won't Save Us – A Call for Technoskepticism in Social Studies

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In schools and society, technology has often been viewed as a vehicle for social progress. However, the authors argue that technologies are not neutral and neither are the societies to which they are introduced. Social studies teacher educators should, therefore, prepare teachers and teacher candidates to inquire into technologies with an informed skepticism that can confront problems of democracy within and beyond schools. The editors of the journal call for theoretical and empirical scholarship and responses grounded in, or attending to, media ecology and critical theories so the field might consider impacts on schools, society, and democracy.

We live in perilous times, and our relationships with technologies are intertwined with contemporary crises. In 2020, technologies amplify problems of democracy, including fractured media ecosystems, rising authoritarianism, a spreading global pandemic, rapid climate change, and continued systemic inequalities. Technologies are often promoted as solutions to these social problems.

Green technologies are marketed as commercial and political solutions to climate change, but this framing obscures the need for human and institutional behavioral shifts (Latremouille, 2018). Risk assessment algorithms are proposed as objective means for sentencing and parole, but models built upon years of biased data have resulted in unjust racial disparities (Israni, 2017). Remote learning was implemented as a way to maintain academic productivity during the COVID-19 pandemic without fully accounting for how dependence on technology only exacerbated unequal access and social inequities (Nasr, 2020).

Similarly in schools, technologies sold as educational solutions often amplify surveillance of and data extraction from students, silo and profile students into "personalized" learning tracks, and siphon public funding away from other needs (Watters, 2019). Technological changes are occurring at a rapid speed, whereby ideas move from Silicon Valley and "disrupt" citizens' lives with few questions or regulations to protect them from harm.

Schools and society continue to suffer from a crisis of perception, whereby technology is viewed as progress without considering more long-term consequences. This tendency is also present in social studies and educational technology scholarship (Mason, 2018a). Technology will not save us; technology does not singularly improve our lives. Instead, as Neil Postman (1992) said, "Technology giveth and technology taketh away" (p. 5).

In our editorial call, we briefly review discourses in the field, offer directions for technoskeptical scholarship in social studies teacher education, and invite submissions that confront the contemporary issues. The topic of technology in education is ripe for social studies work. The journal has — like the field of educational technology — typically centered on teaching *with* technologies (i.e., technology integration). We believe the social studies offers an opportunity to also teach *about* technologies and their disparate and inconspicuous effects on democracy — within and beyond schools.

Consider Google as an example, as their search engine, learning management system (i.e., Google Classroom), and products (e.g., Chromebooks) are used widely in the schools in which teacher candidates will complete their field experiences. They are even more likely to use these products during the COVID-19 pandemic, when more instruction might be completed online. Educators overwhelmingly focus on how they can teach *with* Google tools to transform learning, and their underlying assumption is that technology improves learning (Papert, 1988). While Google can offer educational benefits, little focus has been placed on teaching *about* Google: how it changes individuals and what it takes from us.

Google changes individuals by diminishing, controlling, and surveilling information (Vaidhyanathan, 2011). We have regularly heard educator influencers exclaim, "Why teach what students can Google?" Without deep knowledge of a topic, however, people will not know what to Google for or how to interpret search results.

Google extracts students' personal data for corporate profit and behavioral modification (Singer, 2017; Zuboff, 2019); shares pictures of backyards on Google Earth for all — even those who intend harm — to see; and suggests oppressive results on their search engine (Noble, 2018). When Dylann Roof Googled "black on white crime," the search engine returned racist and inaccurate results that

deepened his White supremacist convictions (Noble, 2017). If social studies teacher educators interrogated Google, what results might be returned?

Historical and contemporary technologies are often intertwined with social problems in ways social studies educators and students should unpack. As John Culkin (1967) said, "We shape our tools and thereafter our tools shape us" (p. 70). While technologies and media are often treated as neutral tools or positive innovations (e.g., Mason & Metzger, 2012), the effects of technologies are more complex, problematic, and misunderstood.

Social studies teacher educators, in particular, should have been concerned that the digital citizenship curriculum adopted by schools is often stripped of any connections to democratic citizenship. Instead, the standards and lessons predominantly focus on individual responsibility and safety at the expense of emphasizing the common good, democratic participation, and justice (Choi, 2016; Heath, 2018; Krutka & Carpenter, 2017).

Since citizens increasingly encounter news and participate in politics through online spaces, the social studies is a critical safeguard against mis- and disinformation online (Journell, 2019; Krutka, 2020; McGrew et al., 2018; Tufekci, 2017). The Social Studies Education section of *CITE Journal* can offer a space for scholars and teacher educators to theorize and trouble emergent technologies like facial recognition, deep fakes, and social media algorithms or accepted technologies like the printing press, cotton gin, and automobile (see Video 1).

https://www.youtube.com/watch?v=db07Wm9xHM0

Video 1. *Technology editorial for the Social Studies Education section of CITE Journal.*

Discourses in CITE - Social Studies

The Social Studies Education section of *CITE Journal* is a collaboration between two teacher education organizations. The educational technology focus derives from the Society for Information Technology and Teacher Education (SITE). The social studies focus comes from the College and University Faculty Assembly (CUFA) of the National Council of the Social Studies (NCSS). This latter organization — and the social studies field more broadly — is well suited to examine the social implications of technologies. Both educators and researchers have demonstrated ways technologies can contribute to educational learning experiences.

We appreciate the lineage of research in the Social Studies Education section of *CITE Journal*, which wove together the complexities and nuances of pedagogy, technology, and the social studies (e.g., Gaudelli & Taylor, 2011; Salinas, Bellows, & Liaw, 2011; Stoddard, 2009). Many of these articles follow in line with Martorella's (1997) call to awaken "the sleeping giant" of technology in social studies, which was revisited in this journal by Manfra (2014) and colleagues. While Martorella's call addressed technology as a "...dynamic and forceful agent for change in the social studies curriculum," (p. 512) we are more interested in his concern with "the need for a dialogue centered around the profound social consequences of technology trends both for our nation and the world" (p. 512).

When we reviewed the publications in the Social Studies Education section of this journal, a large majority of articles focused on technology integration, with less focus on social, ethical, or as we see it, *social studies* issues (Heath, Krutka, & Staudt-Willet, in progress). We found exceptions, as some authors foregrounded critical topics such as school-corporate partnerships (Schrum, 2002), multicultural education and the digital divide (Marri, 2005), digital image manipulation and propaganda (Hofer & Swan, 2005), cybersafety (Berson et al, 2008), teacher networked activism (Krutka, Tutaleni, & Haslewood, 2018), technological metaphors (Mason, 2018a), and critical digital citizenship and social media (Durham, 2019). We would like to extend past editors Lee and Hicks' (2006) call for varied discourses about social studies and technology, but we are specifically interested in technoskeptical scholarship that attends to media ecology and critical theories.

Technoskepticism in Social Studies

By employing a technoskeptical approach, teacher educators and scholars direct their attention to the downsides, constraints, or cultural characteristics that technologies extend, amplify, or create. Only after addressing the possible harms and unintended consequences of technology should we consider benefits. Technologies, media forms, and learning technologies are not neutral and neither are the societies into which they are introduced.

First, technologies facilitate particular behaviors and experiences, rendering them inherently *not* neutral. Teacher educators should challenge the narratives often present in standards and textbooks that simply sees transportation developments from railroads to cars as part of a technology-as-progress narrative. Instead, teacher educators might challenge education students to see how in the late 19th century railroads facilitated movement of people and goods, but also allowed concentration of power and wealth on a new scale (Carey, 1989).

In the early 20th century automobiles offered unmatched convenience for both businesses and individuals by making travel faster and easier. However, cities were subsequently redesigned for sprawl, and individuals were born into communities that required the purchase and upkeep of this 3,000-pound appendage to access community resources (Duany, Plater-Zyberk, & Speck, 2001). This technological "innovation" harmed health, as biking and walking have declined; racial equality as White flight, redlining, and highway design increased segregation; local economies as drive-thru franchises replaced local shops; and ecologies as pollution rose and concrete invaded animal habitats.

Motors vehicles also encapsulated users in a private, enclosed space perfect for media marketing through the radio, another invention that proliferated alongside the advancement of the automobile. Additional advances such as air conditioning, satellite radio, and music playback devices only furthered the privatizing nature of the automobile, as they encouraged drivers to become habituated to longer, isolated daily commutes.

Humans created inventions like cars, and then they changed us. Teachers and teacher candidates should consider how the habits engendered by these privatizing technologies have affected our perceptions of citizenship and democracy, particularly in a neoliberal era in which conceptions of the privatized individual prevail while notions of the public are consistently under assault.

The relationship between privatization and technology continued throughout the 20th century and into the 21st with media technologies, in particular. Mobile digital devices have provided incredible convenience in communication and information yet have also changed how people see themselves and how they relate to friends and strangers. These devices have even altered political engagement.

Social media, like other media forms before it, have redefined what words like *politics*, *information*, and *debates* mean. Political sound bites reduced in time across the television era and clips that are now posted on social media are often completely disconnected from the context of the events where they occurred.

As one example, in the spring of 2020 Democratic presidential primary candidate Mike Bloomberg released a video on his Twitter account claiming that he was the only candidate to start a business (Kessler, 2020). The statement was followed by cricket noises and images of his opponents staring into the distance. However, the clips of his opponents were cut from different parts of the debate. The effect was that Bloomberg supporters who already view his business background positively retweeted and shared this clip via what psychologists call motivated reasoning.

Our media environment has shifted from journalists determining what is newsworthy — in shorter clips over time — to candidates and supporters seeking to determine what is newsworthy — via decontextualized or edited clips. US politics is increasingly about reacting to spectacle and identifying with like-minded groups rather than learning about what is worth knowing, and these changing sociopolitical dynamics cannot be understood independently of changes in media technologies (Postman, 1985/2003).

Second, the societies in which technologies are introduced are not neutral either. If a society or school is racist, sexist, or ableist, supposedly neutral technologies can amplify those bigotries. Remixing Michelle Alexander's *New Jim Crow* (2010/2020), Ruha Benjamin (2019) described the *New Jim Code* as "the employment of new technologies that reflect and reproduce existing inequities but that are promoted and perceived as more objective or progressive than the discriminatory systems of a previous era" (pp. 5-6). This critical lens can help educators interrogate the ways in which expanding surveillance through Amazon Ring cameras, biased facial recognition, and reverse location search warrants (i.e., geofencing) of Google GPS data can all disproportionately impact minoritized communities (Gilliard, n.d.).

Moreover, teacher educators might be more skeptical of technologies like Class Dojo, a behavior tracking and social media platform widely used in schools, which can datafy behavior into seemingly objective data (Manolev, Sullivan, & Slee, 2019; Williamson, 2017). This supposedly neutral technology is grounded in behaviorist and modernist traditions. In a local school district in Dan Krutka's area, students in the "red" are sent to a "lonely island" that can reinforce the discriminatory exclusion of students of color under the guise of "objective behavioral data" (Losen & Gillespie, 2012).

The practice of surveilling students' digital communications for their safety may out LGBTQ+ students to parents or administrators who may not support them, thus causing psychological or physical harm. Anti-school shooter software, predictive analytics, and automated essay grading all are recent technological "innovations" that may be perceived as objective, but maintain or amplify discrimination nonetheless (Watters, 2019).

Teacher educators should understand that the development of technologies cannot be separated from the capitalist economic system in which they arose. A more balanced society might have more carefully weighed the costs and benefits of new technologies such as the automobile or smartphone before introducing them and building infrastructure to accommodate them.

Under a primacy of a market ethos which emphasizes better, faster communication, and more convenience for the atomized individual, however, such considerations are an afterthought. In most cases, individuals, families, and communities are left to mitigate the negative social effects without the support that undergirds the implementation of new technologies.

Under the industrial and post-industrial capitalist model, the profits of new inventions that are undergirded by public infrastructure are privatized. However, companies generally bear little of the social costs, which come in various forms, including psychological ailments from the anomie of modern life and physiological diseases associated with pollution and poor diets. These dynamics have only accelerated under the model of neoliberal corporate capitalism that began in the late 20th century, which is evidenced by disinvestment in the public realm, the ever increasing number of public-private partnerships, and public subsidies for private investments in communities.

A Call for Submissions

As editors, we encourage authors to consider a technoskeptical stance that attends to the nonneutrality of technology and society. We invite scholarship that weighs affordances and constraints of what technology can do and undo, views technologies as extensions and amputations, and understands technologies as tools or weapons.

Researchers, and particularly those studying educational technologies, have a tendency to tell victory narratives that frame their project and the technology as successful (Kirshner, 2015). However, if scholars do not share the challenges, shortcomings, and failures inherent in their work, then educators can end up frustrated when things do not go so smoothly for them.

We encourage authors to demonstrate clarity and congruity in their terms and epistemological commitments (Mason, 2018b) and consider how systemic inequities influence the impacts of technologies differently and disproportionately. We will accept works both grounded in the social studies, but also works that are more broadly "social studies" in their attention to social, ethical, and democratic issues. Moreover, we seek articles that confront both historical topics and contemporary, emerging issues (e.g., LMS student data, facial recognition, and deep fakes) that impact teacher education programs and K-12 schools. We commit to timely reviews of manuscripts the emerging issues submitted are still contemporary by publication.

We offer the following schools of thought to assist authors who seek to trouble the nonneutrality of technology which we outlined in this manuscript:

Media Ecology

As demonstrated by our previous example of cars, media technologies are introduced into a culture based largely upon the assumptions and desires of that culture. Once introduced, they do more than simply perform a designated function, they affect the entire social infrastructure (McLuhan, 1964), including the ways people relate to one another, how they see themselves, and how they perceive events. As Postman (1985/2003) stated, "A major new medium changes the structure of discourse; it does so by encouraging certain uses of the intellect, by favoring certain definitions of intelligence and wisdom, and by demanding a certain kind of content" (p. 27).

Social studies teacher educators might consider how politics have changed after the introduction of new media technologies, or how students receive or come to understand political or social issues differently as new media technologies become pervasive. Scholars and educators should also explore the ways social media design and designers nudge individuals and bend societies to their own interests in antidemocratic ways (Vaidhyanathan, 2018). See also Video 2.

https://soundcloud.com/visionsofed/episode-117-media-literacy-through-media-ecology-with-lance-mason

Video 2. *Media Literacy Through Media Ecology with Lance Mason.*

Technoethics

Bunge (1975) argued for an interdisciplinary focus on technoethics particularly for those who design technologies. Amrute (2019) argued that "techno-ethics can be revitalised through techno-*affects*" that consider whose bodies matter (i.e., corporality), who decides (i.e., sovereignty), and who the system is for (i.e., glitches) (p. 57). She added that technoethics should center those who are most harmed by technical-human decisions (e.g., targets of drones in war or Black women who receive substandard medical care) and seek affective, rule-of-thumb attunements over top-down, fixed rules to move toward just change. As it concerns educational technology, we have argued that teacher educators should foreground technoethics before introducing technologies in our classes by asking, "Is this technology ethical?" (Krutka, Heath, & Staudt Willet, 2019).

Because society is also not neutral we seek scholarship grounded in lenses including the following:

Social Studies

The primary purpose of social studies education is to help students grow as democratic citizens. A social studies lens requires authors to ask critical questions about the means and ends of democracy, and which groups benefit and suffer from particular structures. Moreover, social science lenses including historical thinking, geospatial reasoning, economic thinking, and political science theory all inform people's understanding of technologies of the past, present, and future.

Technologies and their associated issues and affects have, for example, longer histories than their current iteration.

Youth and Participatory Perspectives

Young people often experience technologies and media in and out of schools in ways that adults often do not understand (boyd, 2014). Youth participatory action research (YPAR) supports young people investigating the injustices and inequities in their own lives and empowers them in finding and implementing solutions. It honors the knowledge of young people while helping develop civic practices that enact social change (Cammarota & Fine, 2010). Scholars should seek out youth perspectives and collaborations in research projects to ensure education and research is more democratic.

Critical Theory

"Social studies should be a natural home for critical theory and critical pedagogy" (Crowley & King, 2018, p. 14), but that has often not been the case (Shear, 2016). Critical theory confronts structural inequalities by interrogating systems of oppression and power and centering the perspectives, experiences, and voices of oppressed and minoritized groups. While there has been substantial work on the intersections of technology and oppression (Benjamin, 2019; Gilliard, n.d.; Noble, 2018; Zuboff, 2019), little work has been done in technology and teacher education that foregrounds critical work.

We would like to see scholars build on critical work in the social studies from Critical Race Theory (An, 2016; Busey & Walker, 2017; Ladson-Billings, 2003; Rodríguez, 2018) to indigenous studies (Sabzalian, 2019) to intersectional feminist theory (Vickery, 2017) and many other critical theories, which should inform the ways the disproportionate design and effects of technologies in schools and society are interrogated. Similarly, we hope scholars take up issues from intersectional and justice-oriented perspectives to take up issues such as climate change, data privacy, and student surveillance.

Technologies are not neutral, and the ways they are employed in schools and society requires critical response. We believe teacher educators in the social studies should approach technology in their classrooms and research from a position of skepticism and activism. We aim to be thoughtful, fair, and responsive in our role as editors. We would like to conclude by thanking those who have already edited and shaped the journal, authored articles and responses, and served as reviewers. We seek to build on this scholarship. Only with a community of scholars and educators can we move toward the visions of democracy and justice that address the challenges of these perilous times.

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