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ON THE TECHNOLOGY FETISH IN EDUCATION:  
ELLUL, BAUDRILLARD, AND THE END OF HUMANITY

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Schools continue to purchase and install machines and practices from the world of communications technology. In turn, students and teachers are purported to be more “connected,” and this connectivity is widely viewed as having a positive influence on teaching and learning. In this essay, however, we argue that not only are these claims about better teaching and learning specious, but that the largely unreflective and zealous pursuit of new technologies by schools amounts to an acceptance of technological determinism and an adoption of a set of non-neutral ontological assumptions. Human interaction is always interpreted, but the mitigation of technology raises important questions about the assumed neutrality of “technological innovation.”

Evan Williams, a founder of Twitter, recently claimed that “the internet is broken.”<sup>1</sup> His chief concerns include the degree to which Facebook livestreams suicides, Twitter trolls attack people with abandon, and “news links” lead to falsehoods. The assault on truth, we argue, is a direct result of one of Williams’s other inventions: the blog. Blogs allowed narcissistic posting of virtually anything, resulting, on Williams’s own admission, in a culture of “extremes.” The solution, for Williams, is not to reposition humanity as central to deliberation, but to shift reality to a consumer-pay model for content access. As he puts it:

Ad-driven systems can only reward attention. They can’t reward the right answer. Consumer-paid systems can. They can reward value. The inevitable solution: People will have to pay for quality content.<sup>2</sup>

Per Liam Mitchell, the preponderance of new communications technology has as a central belief the confluence of capitalism, collectivism, and technological determinism.<sup>3</sup> Facebook’s Mark Zuckerberg said in 2013 that “The real goal is to connect everyone in the world and help people map out everything that there is.” According to Mitchell, “At best, this ideology is naïve. At worst, it is helping to create a transnational, colonial, capitalist subject who is alienated from the

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<sup>1</sup> Quoted in David Streitfeld, “The Internet is Broken,” *New York Times*, May 21, 2017.

<sup>2</sup> *Ibid.*

<sup>3</sup> Liam Mitchell, “Life on Automatic: Facebook’s Archival Subject,” *First Monday: Peer-Reviewed Journal on the Internet* 19, no. 2 (2014).

product of their production/consumption, disillusioned with their mode of self-representation, and ironically disconnected from their friends.”<sup>4</sup> More recently, in a twist on Mitchell’s concern, *The New York Times* highlighted a North Dakota teacher, Kayla Delzer, who enacts Silicon Valley’s penchant for all things techno-education.<sup>5</sup> She is a “teacher-influencer” who has her own brand and financially benefits from referrals to high-tech firms and education entrepreneurs.

Education start-ups like Seesaw give her their premium classroom technology as well as swag like T-shirts or freebies for the teachers who attend her workshops. She agrees to use their products in her classroom and give the companies feedback. And she recommends their wares to thousands of teachers who follow her on social media.<sup>6</sup>

As she puts it, “I will embed it [new technologies] in my brand every day.” The commercial and ethical issues this raises are only indicative of the (logical?) consequences that follow from technophilia run amok.

While it would be easy for us to critique the mercantile elements pervading technological “innovations,” they are not the focus of this paper. Instead, we utilize Williams’s assumptions and Zuckerberg’s ontology as indicative of the most recent instantiation of what Jacques Ellul called “technique”<sup>7</sup> and what Jean Baudrillard considered simulated communication and the death of the real.<sup>8</sup>

The paper proceeds in three parts: 1) elucidating Ellul’s seven necessary conditions of and for “technique;” 2) reconsidering Baudrillard’s simulation theory; and 3) positioning both theorists’ arguments in a revised claim about the role of humanity in a world of ubiquitous technology. Implications for a more critical understanding of education are explored to develop counternarratives to challenge the overwhelming influence of technique and simulation.

#### ELLUL, TECHNIQUE, AND TECHNOLOGY

We begin this part of the paper by quoting the French sociologist Jacques Ellul from his *The Technological Society*. Originally written in 1954 (and not translated into English until 1964), Ellul’s treatise is, we think, underappreciated (or unused) in education technology debates. Technique/technology “has fashioned an omnivorous world which obeys its own law and which has renounced all tradition,” claims Ellul.<sup>9</sup> He also writes that we should not

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<sup>4</sup> Ibid.

<sup>5</sup> Natasha Singer, “Silicon Valley Courts Brand-Name Teachers, Raising Ethics Issues,” *New York Times*, September 2, 2017, <https://nyti.ms/2xEUhg0>.

<sup>6</sup> Ibid.

<sup>7</sup> Jacques Ellul, *The Technological Society* (New York: Alfred A. Knopf, 1954/1964).

<sup>8</sup> Jean Baudrillard, *The Perfect Crime* (New York: Verso, 1996).

<sup>9</sup> Ellul, *The Technological Society*, 14. See further discussion in endnote.

conflate technology with machinery alone because “technique” is the imposed ritualism we enact daily. Have you checked your phone in the last ten minutes? Of course you have. And you have demonstrated Ellul’s primary concern: that technique is taking over and subjugating humanity. It is replacing human interaction and altering what it means *to be*. By extension, technology in education is replacing teaching and altering what it means *to learn and to know*.<sup>10</sup>

Ellul details seven key features of technique: rationality, artificiality, automatism, self-augmentation, wholeness, universalism, and autonomy.<sup>11†</sup> While each of these features can be explored within the specific field of education, we focus primarily on automatism and self-augmentation to critique the current state of technology in education. Automatism is the process of technical means asserting themselves according to mathematical standards of efficiency. Self-augmentation is the process of technical “advances” multiplying at a growing rate and building on each other while the number of technicians also increases. Specifically, regarding education and technology, Ellul argues that the imposed ubiquity of technique in education exists “to furnish administrators for the state and managers for the economy, in conformity with social needs and tendencies, [and that this all-encompassing goal] has become world-wide in its extent. [Accordingly], education no longer has a humanist end or any value in itself; it has only one goal, to create technicians.”<sup>12</sup> From coding camps to iCollege, from hybrids to flipped classrooms, contemporary illustrations abound.

Relationships that used to be recognized, if not valued, as fundamentally messy, human, and unquantifiable are regimented, sanitized, and surveilled. The myriad ways in which both professors and students are “held accountable” first and foremost *not* to each other as human beings engaged in authentic relationships, but rather to the online platform that subsumes the “instructor of record,” whom students may well never actually meet, are illustrative of the power of automatism in current schooling. The systems of surveillance, from counting the number of “posts,” to online tracking of student work activity—iCollege has a tab literally called “Panoptic”—to the “customer satisfaction surveys” students are asked to fill out at the conclusion of a semester, are all processed, data-mined, and archived by bureaucrats who have no relationship whatsoever with the people represented in their data, but only ever execute mechanistic, rote operations in exerting their distanced and impersonal control over the rest of the school or university system.<sup>13</sup> This point is less about

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<sup>10</sup> Here we are gesturing toward C.A. Bowers’ critique that technology in education ignores the cultural ecology of intergenerational relationships. See Bowers, *Let Them Eat Data: How Computers Affect Education, Cultural Diversity, and the Prospects of Ecological Sustainability* (Athens, GA: The University of Georgia Press, 2000), 150.

<sup>11</sup> See explanation of these features in endnote.

<sup>12</sup> Ellul, *The Technological Society*, 348.

<sup>13</sup> See, for example, Jamie Costley and Christopher Lange, “The Effects of Instructor Control of Online Learning Environments on Satisfaction and Perceived Learning,” *Electronic Journal of e-Learning* 16, no. 3 (2016): 169–80; and Retha Price, Tammy

indicting bureaucrats and more about illustrating the ways in which the current systems of technique and the authority that follows from it structurally isolate individuals from one another, sanitize human relationships, and make deviations from the established lines of power and change nearly impossible. It is this process of technical means asserting themselves as necessary and sufficient conditions of efficiency that Ellul found so problematic.

Consequently, perhaps necessarily contemporaneously, self-augmentation results. We cannot keep up with the relentless rollouts of new technologies. PowerPoints are not enough; we must dazzle and dizzy ourselves with “Prezis.” We do not mean this point flippantly. Consistent with Ellul, Prezis are not simply hyped PowerPoints. They have multiplied and built on themselves such that the mini-economy of the product is sub-marketed: Prezi Classic, Prezi Business, and Prezi for Education are but three iterations of Ellul’s self-augmentation. They are clearly not alone. Blackboards become whiteboards, then “smart” boards, and “Promethean” boards. More is better; the newest is best. This is self-augmentation, and we believe the degree to which is evidenced (i.e., rampant) is the degree to which humanity is both diminished and imperiled.

Taken together, Ellul’s automatism and self-augmentation are but a small part of his overall critique. They provide, however, a clear indication of the degree to which technique in education is altering what it means to be a teacher, a student, and a human. In summing up the general point we are making, Kenneth Benne is worth quoting at length. Writing in 1975, Benne is prescient regarding Ellul’s automatism and self-regulation:

Whatever the media, however, the big selling point is often the extent to which these instructional devices are teacher proof. They are advertised as enabling the student to proceed with his own learning at his own individual pace, and they are designed to relegate teachers to the role of technicians implementing a *prescribed* learning program . . . Students can proceed to learn through interaction with their materials without any necessity of messy, subjective, and unpredictable dialogue with either their teachers or their fellow students. Such materials are urged as a technological solution to problems of large numbers of students and a paucity of well-prepared teachers. They are urged also as an efficient way of individualizing instruction, usually without awareness of the irony involved—that “individualization” in this usage seems to be equivalent to further “depersonalization” of the instructional process.<sup>14</sup>

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Arthur, and Kevin Pauli, “A Comparison of Factors Affecting Student Performance and Satisfaction in Online, Hybrid, and Traditional Courses,” *Business Education Innovation Journal* 8, no. 2 (December 2016): 32–40.

<sup>14</sup> Kenneth D. Benne, “Technology and Community: Conflicting Bases of Educational Authority,” in *Work, Technology, and Education: Dissenting Essays in the Intellectual*

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Benne's ultimate point is to make sense of what happens to humanity when technology becomes the over-riding superstructure of our lives. He refers to this as a form of ludicrousness and offers the following:

A limerick which went the rounds recently shows, in exaggerated fashion to be sure, the absurdity that has been reached in the reliance upon educational technology as a substitute for the freely chosen action and suffering of human experience.

The news is now out, clear and clean,  
That by aid of a teaching machine,  
King Oedipus Rex  
Has learned all about sex  
Without ever touching the queen.<sup>15</sup>

#### SIMULATED COMMUNICATION—A BAUDRILLARDIAN CRITIQUE

It can be argued that Jean Baudrillard's entire body of work rose out of a critique of what he saw as the loss of symbolic exchange in modernity and after. Here the symbolic refers to that which is outside of the capitalist code and outside of representation. By this he meant that the symbolic is a "privileging of an immediately actualized, collective mode of relations and its transformative experience and communication."<sup>16</sup> Or, in other words, it is a mode of relations that seems to be fading from our daily existence if not entirely from our memory. Of course the erosion of this kind of immediately actualized relation has come in stages (e.g., the telephone) but the ubiquity of "social media" is a clear sign that it is in the process of disappearing. That is, sociality now explicitly announces itself as mediated. Baudrillard thought that throughout the course of modernity there was an increase of what he called "cool" or detached forms of interaction free from the potential messiness of the proximal "hot" forms of symbolic exchange, but also without their inherent rewards and meaning. "Our media [technology] operates today to simulate in a safe form that lost sociality and shared meaning functioning, along with consumption, as a means of social control," says William Merrin.<sup>17</sup> This same idea can certainly apply not only to media technology but specifically to new communications technology. Communication is a modern invention, according to Baudrillard. "Whoever had the idea of 'communicating' in ancient societies, in tribes, in villages, in

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*Foundations of American Education*, eds. Walter Feinberg and Henry Rosemont, Jr. (Urbana, IL: University of Illinois Press, 1975): 154. Benne was a founding member of PES, initiated ground-breaking work in laboratory method and change theory, and was inducted into the International Adult Continuing Education Hall of Fame.

<sup>15</sup> *Ibid.*, 154–55.

<sup>16</sup> William Merrin, *Baudrillard and the Media: A Critical Introduction* (Boston: Polity, 2006), 12.

<sup>17</sup> *Ibid.*, 26.

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families?” he asks. “People don’t need to communicate because they just speak to one another.”<sup>18</sup> When technically mediated “communication” comes on the scene in modernity and especially later in its 20<sup>th</sup> Century manifestations, we see the precipitous decline of that which resembles symbolic exchange.

Yet, in contemporary times we seem to have so thoroughly embraced this loss of the symbolic and the cool forms of exchange that have replaced it that we now find it appropriate and perhaps even necessary to employ the latest mediating technology in our educational endeavors. The institutional reverence for technology in education is one location of the confluence Merrin describes above—technology and consumption together forming a means of social control as it attempts to recover, but only simulates, sociality. Current popular claims that the internet, smartphones, social media applications, etc. “bring us closer together” or “make communicating more efficient” have been swallowed whole by discourse on education (here we are thinking of the *fait accompli* of “online education,” which is perhaps the quintessential example). These claims, though, are spurious in light of Baudrillard’s theory of simulation. Perhaps these gadgets and technologies *seem* to be increasing our interactivity but Baudrillard argued that they are in fact replacing proximal human relations with simulated ones.

We might say that the wider unreflective zealotry with which educational institutions revere and pursue all kinds of technological equipment and gadgetry is susceptible to this same Baudrillardian critique. That is, at best, the technology that is revered in educational institutions produces or enables a *simulation* of what it promises. Technology is lauded as integral to student-centered learning environments and student engagement such as the creation of social webs (e.g., blogs, videos, games) and semantic webs (i.e., knowledge generation and representation, and personalization of the gathered knowledge).<sup>19</sup> But just as in the case of simulated proximal relations, this use of technology cannot deliver on its promises to improve or increase interactivity. While it does deliver an increase, it is not in human interaction or meaning, but rather, an increase in heavily mediated and simulated human proximity and interactivity. As noted above, Liam Mitchell understands this kind of replacement of real human interactivity with simulation and mediation to ultimately result in human *disconnection*.

In order to further consider both this disconnection and Ellul’s self-augmentation it is useful to closely examine perhaps the most wide-ranging technological development in the age of the internet and its underlying

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<sup>18</sup> David B. Clarke, Marcus Doel, William Merrin, and Richard G. Smith, eds., *Jean Baudrillard: Fatal Theories* (New York: Routledge, 2008), 16.

<sup>19</sup> Michael J. Hannafin and Susan M. Land, “Technology and Student-Centered Learning in Higher Education: Issues and Practices,” *Journal of Computing in Higher Education* 12, no. 1 (2000): 3–30; Sergio Martin, Gabriel Diaz, Elio Sancristobal, Rosario Gil, Manuel Castro, and Juan Peire, “New Technology Trends in Education: Seven Years of Forecasts and Convergence,” *Computers & Education* 57 (2011): 1893–1906.

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ontological assumptions. Facebook's co-founder and current chairman and CEO, Mark Zuckerberg, with the use of his preeminent social media application is attempting to fundamentally change the world by "rewiring" people in a way that aligns with his ontology. What is the Zuckerberg ontology? Mitchell argues that it is constituted by the assumption that "the world is made up of individuals who can be 'connected' with one another into an aggregate of sharable information. Not only that—they *should* be connected."<sup>20</sup> In order to fulfill the mission (and Mitchell refers to Zuckerberg as a missionary) of connecting and mapping the entire world, Zuckerberg has used Facebook to both implement the ideology that fuels his ontological vision and encourage a particular kind of self-augmentation. Or, as Mitchell puts it, with Facebook, "Subjectivity and ontology are modified in tandem."<sup>21</sup> And both the subjective and ontological modifications can be seen in the 2012 development of Facebook's "Timeline" and "News Feed," which have resulted in Facebook's colonization of virtual space, the evolution of the Archival Subject, and the salability of personality tests for voter fraud.

Prior to Facebook's News Feed, it took more effort to keep oneself apprised of the goings on of "friends" because it meant clicking on each individual friend's "Wall." In the earlier iteration of Facebook, one had to take the initiative to *send* information to specific friends. But News Feed's algorithms and Timeline's distinct archival functioning have made it much easier for Facebook users to be more passively engaged with everyone.<sup>22</sup> Beyond this, Facebook now, with the development of News Feed and its concomitant development "Connect," "allows users to log into external Web sites using their Facebook profiles, in a sense taking Facebook with them across the Web."<sup>23</sup>

These are the ways in which a model of simulated communication begins to expand its reach in virtual space and approximate its co-founder's goal of virtually mapping everything and connecting everyone. In this way, Zuckerberg's (and by extension, Facebook's) ontological assumptions lead to Facebook becoming "the map that precedes the territory," in Baudrillard's adaption of the Borges fable.<sup>24</sup> Instead of connecting into Facebook via entrance into virtual space, Zuckerberg is successfully attempting to position Facebook as the platform through which we interact with all other virtual space (and perhaps beyond).

The point for us here is not that the platform of Facebook itself is necessarily a major player in the destruction of the human aspects of institutional education. Rather, the point is that both Facebook's ontological assumptions about the value of total virtual connectedness and their attendant self-

<sup>20</sup> Mitchell, "Life on Automatic."

<sup>21</sup> Ibid.

<sup>22</sup> Cameron Marlow, "Maintained Relationships on Facebook," *Facebook Data Science* (March 9, 2009), [http://www.facebook.com/note.php?note\\_id=55257228858](http://www.facebook.com/note.php?note_id=55257228858).

<sup>23</sup> Mitchell, "Life on Automatic."

<sup>24</sup> Jean Baudrillard, *Simulacra and Simulation* (Ann Arbor: University of Michigan Press, 1994), 1; Mitchell, "Life on Automatic."

augmentation in which humans are converted into virtual, archival subjects can be found, generally speaking, in the fetishization of technology in education.

#### THE END OF HUMANITY?

A question that we are convinced is not asked enough or satisfactorily answered in the pursuit of technology in education is: “What is the benefit?” It is often difficult to find the educational advantage in the adoption of the latest technology whether it is in the form of a gadget or an app or an individualized learning program (ILP) in terms not supplied by those who advance gadgetry, apps, or ILPs. Tech start-ups and established tech manufacturers expand their foothold into educational institutions and benefit accordingly. Recall the *New York Times* article mentioned in the introduction. Here we see that the technology fetish in education can result in teacher-“branding” that mutually benefits educators and tech companies. But of course these are financial benefits, not educational ones. The same article introduces us to Nicholas Provenzano, a teacher in suburban Detroit who, according to the *Times*, “consults for education technology companies, and his basement is chock-full of the electronics they send him to try.” The article goes on to say, “Now, he used a \$1,299 3-D printer sent to him by Dremel, a tool brand for which he is an ambassador, to turn his students’ designs into three-dimensional objects. He printed one student’s design, a gavel, representing the struggle for justice in the novel [*To Kill a Mockingbird*].”<sup>25</sup> With regard to the activity of “representing the struggle for justice” in *To Kill a Mockingbird*, it seems fair to ask what advantages there are in making a gavel out of polycarbonate in a \$1300 3-D printer over making one, say, out of papier-mâché for a few cents.

Accordingly, we add a question, borrowing from Neil Postman, in addition to the “what is the benefit?” question.<sup>26</sup> That is, in addition to “what,” we should ask “who benefits most?” from the proliferation of technology in schools. While it is obvious that Apple, Microsoft, Facebook, etc., reap enormous profits, their “success” masks a forced fetishization that has education “consumers” clamoring for more, newer, better, and faster iterations of technology for schools. This seemingly never-ending quest is not only expensive for schools already struggling with under-funding, but it is also perversely and ironically most profitable by the very companies that secure tax breaks for expansions and relocations into areas that need tax funding the most. One implication of this (double) corporate exploitation is that more money is allocated for technology. Teacher salaries not only stagnate, but they also decline when adjusted for inflation. These specific economic issues are only important for our argument in the following way: when teachers and students get reduced to *homo economicus*, it is the *economicus* that minimizes the *homo*. It is indicative, in other words, of the end of humanity.

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<sup>25</sup> Singer, “Brand-Name Teachers.”

<sup>26</sup> See Neil Postman, *Technopoly: The Surrender of Culture to Technology* (New York: Vintage, 1993).

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For Ellul, technology is neither neutral nor “great.” Innovation for the sake of innovation means that, for example, departments buy and replace screens and monitors with regularity. It’s obviously necessary, so we do it without consideration. Ellul wants us to stop it . . . and so do we. The amounts of money wasted on the latest gadgetry could be far better spent in supporting graduate student travel, scholarship not prone to grant writing, and real, versus virtual, classroom interaction. Centrally, however, Ellul wants us to understand the risk of determinism via automatism and self-augmentation. And Baudrillard spent his entire career attempting to defend the real in the face of its increasingly ubiquitous simulated double.<sup>27</sup>

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\* There are, of course, leading theorists who are generally supportive of technology, including online learning. For three of the more balanced and philosophically sound defenses of technology in education, see Leonard J. Waks, *Education 2.0: The Learning Web Revolution and the Transformation of the School* (New York: Routledge, 2013); Nicholas C. Burbules and Thomas A. Callister, Jr., *Watch IT: The Promises and Risks of Information Technologies for Education* (Boulder, Colorado: Westview Press, 2000); and David Blacker, “Allowing Educational Technologies to Reveal: A Deweyan Perspective,” *Educational Theory* 43, no. 2 (1993): 181–94.

For some of the theorists informing our critique of technology, see Nicholas Carr, *The Glass Cage: How Our Computers are Changing Us* (New York: W.W. Norton and Company, 2014); Hubert L. Dreyfus, *On the Internet* (New York: Routledge, 2001); Larry Cuban, *Oversold and Underused: Computers in the Classroom* (Cambridge: Harvard University Press, 2001); Jaron Lanier, *You are Not a Gadget: A Manifesto* (New York: Alfred A. Knopf, 2010); Todd Oppenheimer, *The Flickering Mind: The False Promise of Technology in the Classroom and How Learning Can be Saved* (New York: Random House, 2003); and Sherry Turkle, *Reclaiming Conversation: The Power of Talk in the Digital Age* (New York: Penguin Press, 2015).

† Ellul details seven key features of technique. *Rationality* is the systematization and standardization of technique in society. *Artificiality* is the subjugation and destruction of nature in the name of perpetual innovation. *Automatism* is the process of technical means asserting themselves according to mathematical standards of efficiency. *Self-augmentation* is the process of technical “advances” multiplying at a growing rate and building on each other while the number of technicians also increases. *Wholeness* is the feature of all individual techniques and the various uses sharing a common essence. *Universalism* is the fact that technique and technicians are spreading worldwide. *Autonomy* is the phenomenon of technique as a closed system—a reality unto itself with special laws and its own determinations.

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<sup>27</sup> Rex Butler, *Jean Baudrillard: The Defense of the Real* (Thousand Oaks, CA: Sage Publications, 1999).