

Make Education Not Culture War

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Abstract: The so-called “culture war” is resulting in a radical and disturbing transformation of socialization patterns. Ideas, values, and memes created for the purposes of profit, strategic disinformation, and political agitation/manipulation are taken up by young minds and integrated into identity structures. Because children have no choice but to engage culture as *education*, there should be an immediate ceasefire among those who view culture as *war*. Today, the adults conduct a “culture war” while their children are caught in the crossfire, unable to escape the dangerous ecosystems of meaning in which they are socialized. The result is a growing rift in the fabric of intergenerational transmission—a generational gap—as the culture at large increasingly relinquishes its educative function, having been reduced to commodities and weaponry. Two trends in particular are noted in this essay: 1) *algorithmically directed human development* in which the user (i.e., child) is on the receiving end of scientifically engineered “cultural weaponry,” including AI enabled surveillance and psychometrics that are used to optimize and customize meme delivery (this happens on YouTube, Facebook, and other platforms); 2) the strategic destruction of truth as a cultural signifier, creating a *crisis of socialization in the absence of legitimate teacherly authority* (this happens in the schools, colleges, and public culture). There is no possible future for humans in which culture becomes reduced to an arena of strategic and exploitative agency—reduced to war. Our children have nowhere else to become educated but within the cultures we create. I recommend approaches in which culture can be freed to assume its educative function.

Cultural warfare: eclipse of education

While it is true that throughout history children have grown up in physically dangerous war zones, they have done so in the context of relatively coherent cultures. What is novel today is a generation growing up in relative physical safety who are nevertheless endangered in the crossfire of a *culture war*. The obvious difference between what has historically been called “war” and what is now called “culture war” concerns the presence or absence of physical violence. Culture wars are fought with ideas and memes; actual wars are fought with guns and bombs. Whereas war involves physical violence, culture war involves *educational violence*. To the degree that we engage culture as warfare, we must strategically manipulate the function of culture as education. This creates a situation in which there are incentives to systematically distort the educational dynamics of culture itself for strategic advantage. The results are all around us today: politicalization of everything, total advertisement-saturation, and the disappearance from culture of communication aimed at reaching mutual understanding.

In this paper I will discuss some of the *educational contradictions* that occur when culture is repurposed as a theater of war. The situation today is one where the most powerful educational technologies in history (networked computers) are contradicting their own educational potentials because they have been coopted as weaponry in a culture war. The way out is to fundamentally reimagine the institutions of education, beyond schooling. The aim should be to reimagine them enough that the dynamics of digital technology can be changed from extractive surveillance in the interest of capital to educative scaffolds in the interest of human development. If this redesign of culture as education is not accomplished, and the condition of totalized culture war continues, then humanity faces what may be the most profound educational crisis in its history.

But what does it really mean to have a war without physical violence, to have a *culture war*? It means simply that the drivers (motivations, generators, incentives) of cultural production and innovation are made akin to those of warfare, where dynamics of force and power override

action oriented towards mutual understanding and cooperation. It is interesting to note that when I remove physical violence from the equation, it appears that the remaining deep structure of “war” is something like *a competitive social situation of pure strategic interaction in which the motive for optimizing personal advantage is primary because the costs of failure are catastrophic*. War without violence boils down to the reduction of social interaction to a kind of austere *zero-sum game theory*. Me (or Us [but mostly *me*]) in competition with You (or Them), with winner-take-all stakes. This is why the structures and practices of many capitalist enterprises amount to essentially war without the violence: conquest, extraction, and profit (Harvey, 2016). Therefore, by my definition, we are embroiled in culture war today because, in effect, “everywhere is war!” (Marley, 1976). The social world of late-capitalism, sometimes called “postmodern” (Jameson, 1992), is a world in which the logics of war and capital have been conflated, generalized, and normalized. Culture has always involved a certain amount of competition and strategy, but it has seldom (if ever) collapsed entirely into the logic of war. That is, *until now*. The very structure of cultural production involves “harvesting attention,” and “converting views to dollars”—all proxies for conquest, extraction, and profit. At its core the culture war has to do with the ongoing capture of the means of cultural production, and the use of education as a means to extraction and profit (Zuboff, 2019).

Note that my definition of “culture war” contains more than the notion as it was first coined in the 1990s by neoliberal conservatives (Hunter, 1991). The term was coined to draw attention to the increasing polarization of public discourse in the United States (and other industrialized nations), which began to erode the once stable foundations of civil public life. According to this view, we fight with words instead of guns. Content producers stand for ideals and seek to win over the hearts and minds of the nation. You fight a culture war as a preamble to an election or as part of mobilization for an actual war. Using this frame, I am at war whether I like it or not simply because I am an author. There is an assumed sense of the good guys from the bad guys and the agreed upon stakes and maneuvers. It is not about truth and quality; it is

about the question, “what side are you on?” If I mention arguments in favor of green energy and social justice, then I am on “that side.” If I offer facts on the differences between men and women, or about the benefits of two-parent households, then I am on “that side.” The validity of what I write is less consequential than where readers place me in their map of the many battlefields embroiled in the culture war. Is my writing useful ammunition for their cause, or dangerous incoming fire from an enemy? Because of this ongoing war of words, authors change the way they write. Everyone making and contributing to the culture begins to change their words and gestures. This is a war at the level of cultural production, a war of words, a war of ideas (Rodgers, 2011).

I am suggesting the situation has escalated. A total reframing of culture as war is now possible, I believe, because during the decline of modernity, as global capitalism strains under its own externalities, the planet has been interconnected for the first time through digital technologies (Bard & Söderqvist, 2018; Bratton, 2015). This is a simple story in which we become one world for better and for worse. The inevitability of planetization has been demonstrated; humanity will close in upon itself as it encircles the globe, eventually reaching an epochal crescendo of incredible intimacy in the throes of planetary catastrophe and emergence (Aurobindo, 1944; West, 2018). This is one way of understanding the narratives and theories classed as “metamodern” (Freinacht, 2017). They all come as a response to this new situation, after postmodernity, in a digitally refigured lifeworld of planetary scope. Metamodern cultural creators are working in profound anticipation and concern, actively caught up in the dynamics of the ongoing “digital tsunami” that is the culture war. The metamodern epoch is the late-capitalist endgame, involving the emergence of a planetary networked society. In this context there is a *transformation and expansion of war* from being about land and energy to being also about data and human consciousness. This transformation is the root cause of the seemingly interminable culture war that is upon us.

My argument here hinges on the insight that underneath this obvious war over the content of culture there is another less obvious war, a more sinister one, which is fought over who controls and defines *the means of cultural production*. Technological innovators are also driven by the frame that culture is war, but they don't create content; they create what allows you to create and consume content. The technology that structures your news feed exerts more influence on you than the content of the news feed (McLuhan & McLuhan, 1988). The technology by which you view and make culture is in fact the main theater of conquest, extraction, and profit. These technologies conquer and capture your attention, extract personal information and data about you, and then use this to make profits (Zuboff, 2019). The culture war is not only about what people are doing on social media applications; it is also (and I think primarily) about what these applications are doing to people.

An explicit public argument between polarized political viewpoints on social media appears to be where the battles are fought. The question appears to be, "Who will win the war of words (memes)?" However, this is only a minor theater in the broader culture war, where deep in the digital meshwork your every key stroke and gesture are tracked, your attention is systematically harvested, and your habits of mind and body are formed (*Ibid*). On the surface, the culture war has us arguing about ideology on social media—as if we might educate each other somehow through the all caps shouting—but, remember: at its core the culture war has to do with the ongoing colonization of the means of cultural production for the purposes of extraction and profit. The better question, therefore, is, "Who will win the war of behavioral algorithms (that structures the war of words [memes])?"

"Data is the new oil." This is now a mantra. The conquest, extraction, and profit centers of the capitalist world-system have moved beyond the mines and factories to become occluded behind screens, sensors, and algorithms (Bridle, 2019). It has been estimated that approximately one fifth (1/5) of all "discussions" on social media during the lead up to the 2016 presidential election involved data-guzzling AI-bots (*ibid*). The entirety of the online advertising

during those years was delivered based on data-intensive psychological profiles lifted from the analysis of individual website-use habits (Bridle, 2019). The means for producing and consuming culture now involve ubiquitous surveillance and data extraction for the sake of strategic advantage and profit, and it is only getting more sophisticated. This is culture war on a massive scale; but it has nothing to do with shouting moral ideology across politically polarized divides. This deeper culture war is played out in the bowels of server farms where ideological divides disappear into a single sea of value—follow the (meta)data! The spoils of the culture war are not won by those on the battlefield. Indeed, the so-called “ideological battles” are often beside the point, literally, as the war for harvesting your attention has already been won by the customized advertisement next to what you were intending to read.

Strip-mining the side of a mountain for metal ore is obvious enough to be visible from space and, therefore, often clearly appears as problematic (i.e., erosion and emissions can also be seen from space). But the strip-mining of data from human behaviors taking place through vast social media and sensor networks is basically invisible, at least at first. Once this data is processed, it is fed back into the data extraction machine as fuel. The more it learns about you, the better it gets at learning about you, the more it knows how to get your attention and influence you to do things. Data informs the design of better data extraction techniques and related behavior-modification regimes that make data collection easier. After a few iterations, it becomes all too clear that harvesting and using data from humans is not a neutral or benevolent activity. The result is a drastic alteration of cultural forms, such as I have discussed elsewhere (Stein, 2018); the current cultural and educational crisis—the so-called *culture war*—is predicated on the following accelerating trends in the new communications technologies ecosystems:

- 1) the inability to distinguish non-commercially motivated from commercially motivated information;
- 2) the related inability to distinguish honest information from intentional misinformation that is spread for strategic advantage;
- 3) decreased message length, increased message frequency, and inability to track all message sources (i.e., information overload);
- 4) the absence of shared overarching meta-narrative that could potentially reconcile conflicting information and perspectives;
- 5) escalating emotional intensity of information (due to factors 1-4);
- 6) normalization of weaponized language (i.e., lies, slander, censorship, politicization, due to factor 4).

These trends reflect an informational ecosystem optimized for harvesting data and manipulating users for the purposes of advertising. That is in fact why it was built, if you look at it carefully (White, 2016). The near total capture and exploitation of the means of cultural production is a new and extremely problematic extension of extractive and conquest practices that have dominated the world-system for the past 400 years of capitalism (Zuboff, 2020). Whereas strip-mining destroys the natural beauty of the mountains and eventually destabilizes ecosystems, data extraction practices destroy cultures and eventually destabilize individual identity structures. This is what happens when culture war has escalated beyond words.

There has been a technological arms-race ongoing for at least two decades as part of the culture war. Like all arms races, it is certainly farther along than anyone in the general public really knows; there has been a proliferation of secret weapons programs. From the perspective of educational theory, the situation is something like the Manhattan Project—a vast covert effort

to develop basic technologies that will change life forever—only now the goal is change the realms of culture, consciousness, and education. The culture war has created its equivalent of “the bomb,” and it has already been dropped on millions of civilians. *The technologically enabled destruction of the very notion of truth is the “atomic” option that is now being exercised at the level of culture.* Social media platforms, YouTube, and aspects of mainstream news outlets have all become fundamentally disruptive to culture, at a basic (in the sense of foundational) epistemological level. The years after 2016 have seen a kind of “winter” or “fallout” circulating around the planet from the nuking of American culture during that election cycle. Just as there is no going back to a time before we split the atom and held all human life in our hands, we are now forever stewarding that vast cosmic power. Today, we cannot return to a time before we split the atom of “truth” into its constituent social and technological particles (Woolley, 2020). The idea of “truth” can be defined in categorical terms as “the communicative presupposition of a shared objective reality” (Habermas, 1984), i.e., the idea that “truth” exists is part of the background consensus of the lifeworld, allowing us to communicate and recognize each other as persons. We now have the power to destroy human notions of truth entirely and will thus forever be stewards of this immense power and essential cultural resource.

Today the task of de-weaponizing and then redesigning culture —*as education*, not war—is a complex technological, political, and economic problem. It is a problem implicating the capacities and consciousness of people, including especially children, their self-understandings, identities, fears, hopes, and the most intimate notions about the meaning of human existence. If this seems extreme to some, then they are unaware of the extent to which screens mediate identity formation in contemporary culture (Carr, 2011). Research into the dynamics of current digital socialization patterns cannot keep pace with changes in technology use among children and adolescents, but the preliminary results are complex, and on the whole disturbing (Sheldon *et al*, 2019). The implication is an historically unprecedented possibility for identity formation largely outside the bounds of normal reality testing and yet within the bounds of high technology.

We face an impending rift in the intergenerational fabric of the lifeworld that would be catastrophic for the continuity of civilization (Stein, 2019). To be irrevocably cut off from functioning cultural notions of truth is an untenable situation in the context of climate chaos, impending economic disaster, and a near exponential increase in technological capacities, including in the domains of weapons and biotechnologies. Humans need to be able to convene conversations and make decisions about what is true—in public, over time—and in the context of some minimal cultural coherence. Indeed, a culture that can come together beyond difference to learn about what is universally true for everyone is probably the definition of a coherent and healthy culture.

Children in the crossfire of the culture wars

At the airport for necessary travel I see children on smart phones and tablets, mostly watching YouTube. I am not trying to look, but it is crowded, and I am directly behind a group of kids as I try to read. They are constantly touching the screens to load new videos, probably once every 3 or 4 minutes. Cartoon voices are audible through their headphones even in the airport, which means the volumes are loud. I find that the presence of the screen in my visual field makes it hard to read, and I keep unconsciously glancing over to catch a moment of cartoon distraction. I am basically forced by the screen to stop reading because of the working memory demands of trying so hard to not be distracted (and then being distracted and looking).

Screens are not passive things that just sit there while you look at them. Although it appears like an inert tool or piece of furniture (like a chalk board or painting), the screen is far from passive. That screen in the airport was actively capturing my attention and the attention of the kids. The device was also actively capturing all kinds of information about the children using it (*it was watching them, in a sense*). The screen uses its observations of the children to structure the options and videos it plays. It knows what they click, and thus what they like and, therefore, also what they are likely to want to see more of. It can tell how old they are and what

gender, race, nationality, religion, and neighborhood (it knows where these kids live, and often their exact current GPS location) (Bridle, 2019). The kids were holding something literally designed to be endlessly fascinating and thus intensely addictive. This became obvious when the mother of one of the children suggested they had watched enough. I got up to leave to find another place to read as the mother was forced to pry the iPad from the loudly protesting child, now crying.

When I was a child (in the early 1980s), there was one screen in the house and only a few options for things to view on it. Nobody knew what I was watching but my parents and me (sometimes just me). Not a single advertising or technology company had any information about me at all. Today, children are in a very different situation, which has not gone unnoticed (Pariser, 2011; Alter 2017). But it is not only a matter of the number of screens, the time spent watching them, and the overwhelming variety of the content. If screens today were as simple as a TV with endless channels, things would be, in essence, about the same as they were when I was a kid. Nor is the difference advertisement-generated revenue, which has always been the bedrock of children's TV. Looking back, I think the example of *Sesame Street* needs to be considered carefully as a case of research-based culture design for educating kids, initially free from the demands of profit and extraction and fully actualizing certain educational potentials within TV (Davis, 2009). Disney, on the other hand, was one of the first to move in the direction of harvesting children's attention and desires for profit, thus resulting in the now rampant *contradictions* of TV as an educational medium (Giroux, 1999).

The difference today is that *the screen watches the child as much as the child watches the screen*. It's not just YouTube. Regardless of the website, application, or operating system, digital technologies are uploading shocking amounts of data about those who use them, and it takes being a computer security expert to have it be otherwise (Zoboff, 2020). When you say, "let the kid watch the iPad," what you also mean is, "let the iPad watch the kid." When I watched the TV in the 1980s, it did not systemically surveil me, learning about my habits, and then

organize my viewing options for me accordingly. In any given viewing session on YouTube, the sequence of videos watched is not the sequence that would most benefit the child in terms of their learning, or even their happiness and health (and it *could* be designed that way). The child sees a sequence of videos that is deemed most profitable for YouTube and its operating channel partners and subsidiaries. Videos are being produced to generate financial transactions that generate substantial income when videos go above the hundreds and thousands of views. Importantly, there are now AI-based approaches to creating content that has an optimal chance of being viewed and, thus, that yield maximal profit from selling ads via harvested attention (Bridle, 2019; Alter, 2017).

This can be easy to misunderstand so I will be clear: there are channels on YouTube for children (with millions of views) that consist of computer-generated cartoons that are created by computers based on automated processes for analyzing the data of user behaviors on YouTube. If videos of a certain cartoon character are becoming popular, then a knock-off video can be generated by computer and posted automatically, listing the same or similar title to the original video that started the trend. This new “fake” video catches some percentage of people looking for the original video, who now end up watching a video created by a machine only to sell the ad that plays before it or flashes next to it. The shorter the video, the more pages load and re-load during a viewing session, and, thus, the more advertisements are displayed and revenue generated; this strategy incentivizes short, fragmented clips. Kids can spend hours moving between snippets of videos on channels run like this on YouTube, as described by Bridle in horrific detail. This is the worst kind of “educational” experience: too complex, confusing, and *created with some other intention than the benefit of the child.*

The difference from TV cannot be stressed enough. Culture has always been used to make money for as long as making money was seen as important, which is to say forever. In modern times, advertisements and broadcast news defined the TV era, where a relatively homogeneous culture poured out into living rooms, designed to influence purchasing habits and

beliefs *en masse*. Today is different: huge numbers of people (supposedly “everyone”) are making, consuming, and curating cultural content. Multitudinous peer-to-peer narrowcast cultural creation was understood as the holy grail of the internet age. It worked. Everyone and her mother now has a “social media following” or is an “influencer,” i.e., has conquered and extracted profits from winning the war for your attention. But as the pundits and talking heads multiplied, each became less impactful. And as I have said, the deeper culture war went below ground, behind the layer of content production and into the technical conditions that make the new digital culture possible in the first place. While content producers proliferated and their feuds and arguments heated up, new methods of extraction and profit were being rolled out behind their backs, built into the means of cultural production and consumption themselves.

While the original TV-set itself was stupid (it just sat there), today’s screens are allegedly “smart,” which makes them more dangerous, even though they appear to just sit there. The feedback loop between two systems that are observing and responding to each other is different from the feedback between two systems where only one is observing and the other is simply “watched.” This is a pattern of differences known in evolutionary biology and actor-based modeling techniques in computer science and game theory. Co-observing, co-responding systems co-evolve; whereas in cases where only one system observes and responds there are no co-evolutionary dynamics. Today, we are in a complex and intimate co-evolutionary dance with our communications technologies, which was not possible with TV.

Moreover, in the case of the child watching (and being watched by) YouTube on a tablet computer, there is asymmetric force and ability on the part of the screen. That is to say, the screen is watching the child with algorithms that cost billions to develop and that can only be run on hardware composed of rare earth minerals involving transnational corporations to create. There is a psychometric backend that is learning about the child and will create a psychological profile about her for sale to advertisers. YouTube itself will be “optimizing” what the child sees based on data about her viewing history in order to keep the child’s eyes on screen. The screen

is evolving faster and smarter than she is in real time. She is just a young girl who can barely read, but she can easily spend hours a day in “dialogue” with this hidden world of algorithmic surveillance used to customize an endless stream of attention-grabbing images.

This process of getting locked into a co-evolutionary dance in which you are out-matched by your screen’s ability to capture your attention is sometimes called *algorithmic radicalization* (Bridle, 2019). I prefer the term *algorithmically directed human development*. The prior more common term points to the tendency for these “click funnels” to send radicals and conspiracy theorists deeper into their self-confirming reality tunnels. The more general phenomena occur whenever the machine has the upper hand in the co-evolutionary dance, which means the drive of the machine to optimize viewing for advertising revenue overrides the drive of the viewer to learn. The person is watching a great deal of content they otherwise would not have even known about had the machine not retrieved it for them. Experience is shaped by the cultural content made available by the machine, which is tasked primarily with optimizing attention-harvesting for profit. Now all of a sudden, you know a great deal about something you never really intended to learn about. Your knowledge and burgeoning personality are now in some measure a side effect of an *algorithmic* selection, rather than your choice making. This is the outcome of the trends described above, which have to do with the optimizing of the current informational ecosystem for harvesting data and manipulating users for the purposes of advertising. The rabbit holes of content that children and adults can be sucked down are the result of using the means of cultural production as a locus for the extraction of attention in the interest of profit.

The question must be asked: “Is this kind of experience with screens a form of culture and thus educational?” I think we have to say “yes,” and then begin to look around at the true state of our “culture.” Contrast the hour the child spends careening through YouTube with an hour spent listening to her grandmother tell a story about childhood in the 1960s. The experience on YouTube appears to be mostly about the manipulation of attention for extraction

of profit through ad revenue, while the experience with grandmother is mostly about acculturation and education. As screens take up more and more attention, algorithms come to shape our cultural experiences in the interest of conquest, extraction, and profit. From this perspective, ideally, grandmother would post her story to her blog, Instagram, and Facebook, so that her educational moment could be repurposed as a means to harvest the attention of people who have been algorithmically determined as susceptible to (i.e., in need of) grandmother stories. Nevertheless, #grandmamoment does not have the same educational value as an actual moment with one's grandmother. This is because #grandmamoment embodies the *educational contradictions* so rampant in the new media environments. The very things we want to trust and learn from have been run through the machinations of the culture war and turned into profit-seeking ventures. Is this #grandmamoment a legitimate authentic moment? To what extent is it something designed to fool me into thinking it is authentic, as a ploy to gain followers? What happens when there is nothing left over from what used to be culture except for #culturewar? This involves looking into what cultures must be and do to assure their own continuity and survival; now we are back to the necessity of maintaining continuity in the dynamics of intergenerational transmission.

Disruptions of intergenerational transmission

Cultures orient individuals participating within them towards explicitly shared contexts of value and reality (Habermas, 1984; Mead, 1970). Cultures are incredibly complex; therefore, some groups of scientists seeking to study cultural evolution have focused on simple but exemplary cases of cultural transmission. Cultural transmission, and more precisely intergenerational transmission, does not mean only preservation and passing on of culture, it also means *evolving* culture. Take for example the cultural transmission of *knots*, such as those used extensively in the ship riggings of seafaring cultures. These kinds of examples of simple cultural transmission and evolution have been studied as a way to understand the basic

minimum facets of human culture (Richardson & Boyd, 2005). Without the ability to intergenerationally transmit an incredibly complex culture of knots, the ships and nets cannot be rigged, and the culture fails. There is a clear framework for “reality-checking” that orients the teaching, discussion, and application of the vast array of knots that have evolved for centuries in certain cultural pockets. An elder teaches a novice how to tie an important knot and discusses those kinds of situations in which it should be used. It is clear to everyone involved in the culture that in certain contexts a well tied knot is good, true, and beautiful: i.e., the appropriate person ties it at the allotted time (“goodness”); the knot works physically (“truth”); the knot is elegant, simple, and strong (“beauty”). Eventually, the novice becomes an expert and begins to innovate and evolve the culture of knots further. This kind of “ratcheting” and cumulative educational transmission is part of the essence of “culture” as a species-specific trait of *homo sapiens* (Tomasello, 1999; 2019).

Culture is everywhere for children; it is the water they swim in. Dinner conversations (or their absence), screens, commodities that structure peer cultures, and the nightly news (or news feed) discussed by grownups—these things are taken in by children without a filter as simply how the world is. Eventually, “grownups” can escape this submersion in culture and begin to deliberately make and change culture. This ability to reflect and act on culture can lead to changing the very technological substrates of cultural production itself, as I have already discussed. This ability to make new culture and change the very nature of culture is one of the gifts that older generations leave to younger generations. Indeed, this ability is part of the aforementioned species-specific trait for “culture” that sets humans apart from even the most advanced primates (*ibid*). This is also an interesting definition of *education*: education is simply culture *in process*, i.e., as it is transformed, reworked, and transmitted to younger generations.

However, when the “grownups” begin to make culture a profit center and this spirals up into deciding that *culture is war* (i.e., a theater of conquest, extraction, and profit), then this ability to transform, rework, and intergenerationally transmit culture takes a dangerous wrong

turn. None of the reality-checking that enables intergenerational transmission remains when we understand ourselves as in a “culture war” — words become weapons instead of reasons. In place of truth, goodness, and beauty as orientations for culture, we find profit, strategic disinformation, and political agitation/manipulation. Returning to the culture of knots studied by Boyd and Richardson, the new scenario would be an elder who is seeking to disrupt the culture of knots to secure political and economic advantage. Perhaps he has a plan to discredit old knots in order to drive business to his new patented rope and techniques. Presumably, he is not the only one disrupting the traditional culture of knots for strategic advantage, which means that the reality-checking virtues that allowed for coherent and cumulative intergenerational transmission are no longer simply assumed. The journeyman novice is now subject to individuals who are purposefully misleading him about the truth, goodness, and beauty of knots. Instead of socially necessary educational relationships, there are advertisements, proprietary techniques, and systematically distorted communication about value and truth.

Technically speaking, from the perspective of the philosophy of language, during a culture war pragmatics and rhetoric come to override syntax and semantics; the *effect* of what is said is more important than its meaning and logical integrity. In a culture war what matters is the *appearance* of truth and goodness in so far as these allow statements to be powerfully weaponized. Thus, simply ruining the *appearance* of truth is as good as actually proving something is wrong. Eventually, the fog of war seeps into everything, and the culture will lose its sense of what is real and valuable. The next generation could then become so miseducated that they are literally unable to tie the knots needed to hold everything together. Ships no longer sail, and nets are no longer cast. The result of all-out culture war is the end of culture.

Of course, cultures involve more than knots. But the same lessons apply to all the various aspects of culture that must necessarily be handed down from generation to generation as part of the process of cultural evolution. Cultural warfare does not result in the same processes of cultural evolution; instead, culture begins to manifest *educational contradictions* as

intergenerational transmission fails. During culture war, the culture *is* changing—and in a very broad sense still evolving—but it is no longer demonstrating the kinds of cumulative learning processes that characterize civilization. Digital technologies are largely contradicting their intended and potential educational possibilities because they are designed primarily to harvest attention for the extraction of profit. Streaming videos algorithmically optimized for profit constitutes a new kind of culture, as do mass produced, highly politicized (illiteracy inducing) postmodern children’s books. This digital culture spawned by surveillance capitalism makes no attempt to educate; it only attempts to “win” at doing something else (i.e., it is made for some reason other than to help children make sense of the world). Truly educational relationships are antithetical to the practices of culture war, which is one of the reasons that cultural warfare induces educational crises that eventually manifest in generational gaps of catastrophic breadth and depth.

Growing up a cultural warrior

To this point I have established the notion of culture war and described some of the basic dynamics that are in play, showing what is at stake in the domain of intergenerational transmission. The capture of the means of cultural production for the interests of profit stands out as the most basic underlying process at work, which then spawns a cascade of consequences throughout the many cultural landscapes of the digital. I am arguing that this kind new digital culture is disabling or distorting the dynamics of education and intergenerational transmission in profound ways. What happens when the primary modality of enculturation and education is characterized by strategic action and cultural war? You might think that screens are not the main effect in socialization, and in some homes this is true, but the average 7-9 hours that teens spend on smartphones, tablets, and laptops a day would suggest otherwise. This amounts to being raised in an informational warzone, where everyone you meet is a strategic

actor, where danger and confusion saturate the processes of identity formation. This brings us to Soph, who was in the spring of 2019, one of the fastest rising commodities on YouTube—a right wing, foul-mouthed, hyper-articulate 14-year-old girl (Bernstein, 2019). She serves as a unique object lesson about the effect of the culture war on children.

Soph, as she calls herself, has nearly one million followers. Her content has been attracting attention because it is openly inflammatory and aggressive, filled with expletives and “hate speech,” as well as threats of violence against “social justice warriors,” feminists, and Muslims. Rape and graphic descriptions of violence are discussed for amusement. And it is all coming from the brace-faced grimace of a freshman in high school, who seems way too smart and YouTube-savvy for her (or anyone else’s) good. The production quality and content of her videos suggest someone who has been in the culture wars for years, and this is the case: Soph began engaging like this when she was 9 years old and gained a following and publicity by 13. It would be easy to think these videos are produced and written by adults who are manipulating a child actor, until you see the obviously unscripted interviews where she is just as articulate. She is not a scam or a put-on, but she is also not a typical 14-year-old. In one sense, she is a prodigy in the genre of do-it-yourself alt-right YouTube videos. Soph is aware of her gifts but also believes that she is a child of the incompetence and lack of oversight in the domain: “The fact that I was 11 and could easily follow the [video] commentary formula should have been a sign that the standards for the genre were terribly low,” she said. Indeed, part of her message appears to be that the stupidity and greed of adults has created systems that spawn people like herself, i.e., “She is a problem, she seems to be saying, of YouTube’s own making” (*ibid*).

Soph explicitly reflects, in one of her videos, on the fact that she is part of a generation raised on the internet, without “a centralized source of information that controls what we think” (*ibid*). She argues that her generation is “inoculated to the bullshit” and cannot be brainwashed. The target in many of her videos appear to be adults, as Bernstein explains:

The ultimate target of [Soph's videos] is, finally, adults: people who just don't get why social justice discourse is meaningless and co-optable, why school can't compare to YouTube, why mass murder can be funny.... She's sure that adults are selfish and stupid, that the people with the most power over her life are making it up as they go along, just like she is. When you look at the adults who have gotten rich off the platform that created Soph, she isn't completely wrong. She's been publishing on YouTube for years with no consequence other than becoming famous.

I would normally not quote from a *BuzzFeed* article because this "news" outlet is precisely the kind of click-bate, advertisement-driven media that is part of the problem. However, Bernstein's analysis is apt, and easy enough to double check by going on to YouTube. Watching some of Soph's videos was an uncanny and unnerving experience for me. Some of her videos were not available because they had been removed after being declared "hate speech" (presumably after Bernstein's article, which linked to them). I do not recommend you engage with her videos yourself. As an educator and developmental psychologist, I find the tragedy of her socialization is apparent. She is akin to a gifted child who is neglected and bored in school only to become a drug dealer or criminal mastermind. The delinquency is spawned from the mismatch between her intellect and her environment, only in this case *culture war broadcasting* is the medium in which this adolescent pain and searching finds expression.

It is hard to find a better example of the looming generational gap and educational crisis stemming from the culture war than Soph. She is a remarkable example of *algorithmically directed human development*, or *algorithmic radicalization*. Although she claims to be from a generation that is not brainwashable, there is no doubt that Soph herself was repeatedly subject to informational "rabbit-holes" of extremely charged content at certain critical periods of her socialization. By her own admission, she grew up watching (and learning how to use) YouTube and not interacting with her parents, teachers, or peers. Her views are certainly not those of the

schools or mainstream media—she has destroyed them as possible sources of teacherly authority. But her views are also not the product of reflective self-directed learning, such as might be undertaken by a mature and sovereign adult. Her views are to some extent the result of YouTube’s algorithms, which are intended *only to maximize “engagement.”* YouTube and related social media platforms became the ecosystem in which she socialized and constituted (by commodifying) her identity, and this ecosystem was structured to maximize views, not to maximize positive outcomes for young people who are smart, creative, alienated, and angry. Soph is a useful, if disturbing, example of the nihilistic crisis of teacherly authority:

YouTube has taken no ownership over what is happening to kids who grow up inhaling its trademark stench of bigotry, conspiracy, and nihilism. Now the kids, or the smart ones anyway, seem to know it. Indeed, YouTube’s own incompetence and lack of quality is one of Soph’s recurring themes; she acknowledges owing her fame to them (*Ibid*).

Indeed, the cynicism and caustic social critique ends up ricocheting or boomeranging back, only to end up damaging the still immature person doing the talking. Soph does not appear inflated or grandiose, nor does she even really appear to be having fun. There is a certain indignity and shame in her performances that I think stems from her (often stated) awareness of the stupidity of the genre in which she herself has found mastery, i.e., she says, in effect, “The culture is terrible; YouTube is a scam!” But in the very act of saying this, she is, in fact, acting so as to “win” at culture by having a massive following on YouTube. This is one of the self-contradictions that is slowly eating away at the most creative minds in a now almost entirely alienated generation of youth. They both hate and resent the culture war they are forced to deal with, even as they themselves are fast becoming its most talented warriors. Instead of culture, Soph was raised on war; and now she has become a talented but soulless fighter in battles she does not really understand.

This is what the future looks like if we fail to create new forms of life that are free from the dictates of culture war. As I explain at length elsewhere (Stein, 2019), *informational environments are not educational environments*. Educational environments include, among other things, shared ideas about reality and truth; non-strategic social interaction; non-commodified forms of communication and identity formation. At this point, the best educational environments still involve immediate (non-mediated) forms of cultural production, i.e., there is no “platform” on which real education is taking place these days; “platforms” are largely manifesting the *educational contradictions* of networked computing. YouTube might conceivably be used as *part* of some educational experiences where the video serves as something like a book—i.e., as content—which is then discussed and put to use, with others, away from the screen. Leaving a child alone with a screen is almost never an educational intervention; it is usually the opposite, because screens are the locus of conquest, extraction, and profit. The screen contradicts its potential and miseducates the child; this will be the case until the culture war is contained and rolled back. Soph is what the future looks like unless we begin to fundamentally rethink the domain of education.

The future of education begins now (during a pandemic)

As I finish this essay, during July of 2020, the context of a global pandemic has revealed the *fragility* of large centralized school systems. This has been shown alongside overwhelming evidence for the *resiliency* of digital educational platforms. The tide was already shifting towards using digital technologies as the basic foundation for new forms of education, and now the tide has turned. The near-term results of this change could be disastrous, as the very foundations of enculturation and learning shift perilously close to chaos. But there is an outside chance that we stand at the threshold of the most profound transformation of education in history.

Society has been in crisis now, explicitly, for the better part of a year. Quarantines, school closers, and massive unemployment combined to trap the atomic family unit at home.

Kitchens, living rooms, and bedrooms became classrooms, offices, and gyms. Information flooded into and out of homes at alarming and unprecedented rates. With school and work miles away, and world historical events unfolding, the main educational effect has been the informational ecology provided by the smart phone and computer. Most family members “working” in one way or another at a screen, then switching chairs to “relax” in front of one. On these screens the cultural war raged, and the pandemic fuels the fires.

Awash in images; between worlds in the midst of crisis, a digital bardo realm was manifest. The totalized capture of attention by digital technologies and social media was achieved. The internet became everything during quarantines and lock downs, saving lives, and allowing us to connect. The value of digital interconnection and the potentials for its use became clearer. And yet the internet as we know it now is an apparatus of conquest, extraction, and profit. So, the pandemic moved us all deeper into the *enclosure* of awareness and communication within digital applications, which are themselves designed to surveille and shape behavior. Views are like cash, which means all matter of enticements to click are put on the table. This internet designed to addict adolescents has won. Schools have lost. It took a crisis to drive home what had long been the case.

There is no future for schools as we have known them. Our world needs a new form of education. Civilization depends upon it. While the days of schools are numbered, educational transformations and innovations are at Renaissance pitch. After schooling, education will remain, to be distributed throughout the many digital information landscapes. In the terrain of these digital landscapes is found the actual future of education. As school systems continue to falter under the strain of unbearable complexities, we must be ready to abandon that form in the interest of education itself. This the key to understanding education at the edge of history, where new forms are coming into being.

Screens have beat out schools, with the pandemic finalizing this transformation. As I have explored above, the means of cultural and educational production have been transferred

over to digital technologies. But these applications are not designed to be educational; they are designed to capture attention for profit. The only way forward involves a redesign of digital technologies, done in the context of rethinking of the very form of schooling itself.

Already with the advent of the smartphone schooling had been more or less permanently disrupted. Since then, and more so every day, technology and advertising companies have captured the attention of the youth with ruthless efficiency. Digital technologies have supplanted schools as the main dynamic of childhood socialization and enculturation (Sheldon *et al*, 2019). Outside of schools are emerging digital informational landscapes in which education is taking place on a massive scale, for better and for worse. Pop-culture commodifications of youth experience have been competing with schooling since the 1950s, but with the advent of digital technologies schools could not keep up.

There has been a turning over of the means of cultural and educational production, if you will, a transfer of power in the domain of who provides the main contexts, materials, and scaffolds in which education takes place. Today Google, Facebook, and a rotating host of other platforms own the means of educational production. The means of educational production used to be in the hands of large international publishing houses, state runs schools, and universities. Before that it was in the hands of religious communities, tribes, and families. Today's changing of the guard places education firmly in the digital, which is itself in the hands of large private corporations. The implications of this turn over are beginning to unfold around us, mostly in the form of pollution, coercion, and degradation within the informational commons, and the commodification of educational contexts, i.e., the culture war.

I have written elsewhere about the fact that we stand poised between various different educational futures, some good, and some bad. When I published my book, *Education in a Time Between Worlds* (2019), the argument needed to be made that the large school systems built by modernity would soon be transformed drastically. Today it is apparent that such a process is taking place. Schools, colleges, and universities across the country shut their doors and sent

students home to learn in a new way. Each school has dispersed into a distributed digital educational network, mostly unplanned and makeshift. School districts are figuring out how to make learning happen without school buildings, while colleges are finding a way to operate without a campus. According to my arguments, much of the prior system of schooling would be better left “switched off” so the opportunity can be taken to end modern schooling and begin a new and truly digital era of education.

We are already seeing direct-to-consumer offerings, innovations in artificial intelligence-based tutoring systems, and technology-enabled pop-up classrooms beginning to reshape the educational landscape. Given this opening and fragmentation there are sweeping science fiction-like vistas for educational futures. There are futures in which state schools have disintegrated into thousands of for-profit “EduShops” that sell software and remoter tutoring and proctoring. There are other futures in which massive online public schools teach millions of students exactly the same ideas in exactly the same ways, as kids sit at home in front of state-distributed screens for hours on end. These are some of the futures we must fight.

Although what I am saying may seem radical (i.e., schools as we have known them are dead), I am actually fighting for a future that embraces the civilizing accomplishments of the public schools built by nation-states around the planet. These vast school systems of the modern world are not simply to be dismantled or shut down, nor should they be sold off to private enterprises, as is now happening worldwide in what is the largest privatization of educational institutions in history (Stein, 2019).

Our great school systems need to be repurposed and redesigned—and now is the time. The school buildings themselves could be transformed into unprecedented institutions that are a combination of public libraries, museums, co-working centers, computer labs, and cooperative childcare centers. Funded to the hilt and staffed by citizen-teacher-scientists, these public and privately supported learning hubs would be the local centers of regionally decentralized pop-up classrooms, special interest groups, apprenticeship networks, and career counseling.

Giant schools built on the model of early twentieth century factories can be gutted, remodeled, and reborn, metaphorically and literally, to create the meta-industrial one-room schoolhouses of the future—21st century temples of learning. Technologies will enable the formation of peer-to-peer networks of students and teachers of all ages, from all across the local region (or the world through video), without coercion or compromise. What enables these safe and efficient hubs of self-organizing educational configurations are fundamentally new kinds of educational technologies, which put almost unlimited knowledge in the palm of every person's hand.

The new sciences of learning are largely ignored or misused in the design of most educational technologies. The digital technologies we know are not optimized as *educational* technologies, not even close. For decades research has told us that learning is optimized when it involves sustained interpersonal relationships, emotional connection, embodiment, and dynamically interactive hands-on experiences. Based on the best of what we know about the dynamics of learning, educational technologies should be bringing people together *away* from screens—*not* isolating individuals alone in front of screens. Technologies ought to help us customize learning and provide universal access to information through useful, well organized, and curated content. They should not be the primary focus of attention or main source of interaction and instruction.

Right now, throughout the United States and the world, many schools are being forced to patch together something like the technological backend of a digital system of education. With makeshift stacks of existing educational technologies, we are experimenting on a massive scale with spoke-and-hub networks of decentralized mini-classrooms. During a “stay at home” order every house in the country becomes a school, at least for a certain amount of time each day. That has not been the case since the era of the one-room schoolhouse (i.e., not since pre-industrial education). Under the strain of social crisis, education retreats to its first and truest

bastion: the relationship between children, their parents, and a network of concerned and responsible adults.

We should not think that keeping schools running now means having students sit at home in front of their screens all day. We must innovate, radically and quickly. If we do so, it may happen that communities and families will realize that the power of education has been put back in their hands. And although it may feel like a relief when the schools reopen, there is the possibility that most of the learning stays on screens, and that the experience of a decentralized, resilient, and innovative digital education makes schools as we have known them appear obsolete.

But none of this is possible without reclaiming the means of cultural production and making good on the promise of the digital. The difference is between a pop-up classroom in a park and sitting in a chair watching a YouTube video. Compare a long conversation in real time to the asynchronous text-based exchanges found on platforms like Twitter. There is a stark contrast between actual embodied problem solving in the world and massive online multiplayer video games. The choice is between reality and the screen, between the freedom of attention or its imprisonment.

Digital technologies could be designed to liberate attention, rather than capture it for profit. Bending history in the direction of a learning-centric (or human development-centric) civilization requires that educational vision take precedence over business as usual. It is still possible to repurpose digital technologies for different ends, to recapture the best potentials of the planetary computational stack, and to avoid a catastrophic disruption of intergenerational transmission. It is not too late to save the very possibility of education from the clutches of total capture by capital.

The way forward involves, as I have been suggesting here, the end of schooling and the end of digital technologies as we have known them. What could emerge, what we know is possible, is a future in which truly unprecedented educational configurations become the new

normal. The vision of a decentralized education hub network outlined above offers one way forward. This can locate the seat of education within the community again, outside school walls, beyond campuses, engaging young people in the problems and processes of their community.

The secondary effects of the pandemic include fundamentally new economic realities, with radical changes in the dynamics of labor markets. The “college to job pipeline” looks complex to say the least, let alone the school to college transition. Should the youth be sent back to schools as if they are being prepared to enter pre-pandemic higher education and labor markets? No. They should be released from this misconceived notion about the function of schooling.

Intergenerational transmission and education can be liberated from outmoded forms of schooling through digital technologies. But this can only be done if technologies are designed with educational value as the bottom line. Digital tools can enable people to safely find each other in actual embodied community, to collaborate, learn, and contribute to community problem solving. It may be that the only way out of the multifold crises cascading around us is to untap the wellspring of human potential. School aged children and adolescents can help actively solve many of the problems facing their communities if the right tools are put in their hands. Without this possibility, with only a vision of “returning to school,” there will be a long, drawn out, and painful period of educational decline. We stand poised between a new dark age or a new enlightenment, with the future depending on who controls the means of cultural and educational production.

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