Digital Ethics Now¹

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The history of language and literacy education offers an important lesson—that the teaching and learning of communication, by definition, entails ethical and ideological constraints and conventions, however explicit or implicit these may be to learners. To rethink current policy and curriculum strategies, consider this alternative proposition: *The educational challenge raised by digital culture is not one of skill or technological competence, but one of participation and ethics.* Accordingly, digital education would move far beyond the current attempts to expand curriculum definitions of competences and capacities. As a matter of social justice, it requires, as the articles in this issue call for, nothing less than (1) equitable access; (2) ongoing dialogue over the personal and collective consequences of everyday actions and exchanges with digital resources and social media; (3) critical examination of the semantic contents of the digital archive and how these represent the world; and (4) the use of digital media for the exchange of ideas, viewpoints, and resources as part of a renewed civics and civility across communities old and new, residual and emergent.

The everyday issues faced by digital youth are ethical matters. How do today's young people and children deal with right and wrong, truth and falsehood, representation and misrepresentation in their everyday lives online? How do they anticipate and live with and around the real consequences of their online actions and interactions with others? How do they navigate the complexities of their public exchanges and their private lives, and how do they engage with parental, corporate, and government surveillance? Finally, how can they engage and participate as citizens, consumers and workers, friends, colleagues, and kin in the public and political, cultural and economic spheres of the internet? These questions are examined in current empirical studies of young peoples' virtual and real everyday lives in educational institutions and homes (e.g., Livingstone & Sefton-Green, 2016; Quan-Haase, 2016).

The Problem

There are now almost continuous public calls for heightened child protection and surveillance in response to widespread moral panic around digital childhood (e.g., Havey & Puccio, 2016). These range from concerns about the displacement of embodied activity, physical play, and face-to-face verbal exchange by compulsive online messaging and gaming to online harassment, bullying, real and symbolic violence, and corporate and state surveillance and data mining; from sexual and commercial exploitation of young people and children to exposure to violence, pornography, ideological indoctrination and outright criminal behavior. Their power to generate fascinating new expressive forms and

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relationships and reshape the arts and sciences notwithstanding, digital media are amplifiers of the best and the worst, the sublime and the mundane, the significant and the most trivial elements of human behaviour, knowledge, and interaction. How could it be any other way? It is all here online—statements, images, sounds; acts of hatred and love, war and peace, bullying and courtship, truth and lies, violence and care, and oppression and liberation—and in every possible third or fourth space, in ever proliferating redundancy, cut through with noise and clutter.

How we can enlist and harness these media to learn to live together in diversity, mutual respect, and difference—addressing complex social, economic, and environmental problems while building convivial and welcoming, just and life-sustaining communities and societies—is the key educational problem facing this generation of young people and their teachers. This is an ethical vision and an ethical challenge.

Many school systems are in shock and denial over this turn of events, especially given the historic use of print textbooks as a practical and effective means for defining and controlling what might count as official knowledge for children and youth. Schools have responded with a patchwork of rules governing what kids can and cannot do in their online exchanges and communications. These emerge in a reactionary and agglomerative way, often in response to incidents of abusive, illegal, or symbolically violent online acts, or to events whose origins are attributed to online actions—from suicides to gun violence to pedophilia. Schools work from a mix of regional and district-level policies that include constraints on hardware access, proprietary lockout and surveillance systems, privacy and intellectual property regulations, and school-level codes and class rules on everything from texting and screen time to plagiarism and copying from internet sources. These sit alongside home-based restrictions (or freedoms) on time, access, and use in those families that can afford mobile and online devices. This is complicated by increasing law enforcement efforts to prevent the online recruitment, exploitation, and indoctrination of youth by terrorist groups, financial scammers, and criminal organisations. In this thicket of overlapping systems of surveillance, unmediated exchange by youth and children would appear to be the exception rather than the rule (Boyd, 2015). Taken together, the digital strategies of large public education systems in North America, the Asia Pacific, and Europe appear to be at best post hoc and piecemeal—motivated by genuine concern and real problems, but typically lacking stated ethical foundations and working within prevailing neoliberal policy frameworks (the latter of which have eschewed engagement with educational philosophy and ethics more generally). This underlines what has become a significant (meta) ethical dilemma in itself—that the policy push for teaching through and about educational technology presents itself as ethically and politically neutral.

Ethics refers to the codes, norms, and procedures that govern everyday life and interaction, civility, and exchange in institutions, societies, and cultures (Dewey, 2008). Digital ethics—the normative principles for action and interaction in digital environments—cannot be addressed through a listing of prohibitions for what kids can and cannot do online. For those young people whose families and communities have affordable everyday access to the internet²—and, in fact, many rural and remote, Indigenous and

² The common claim that the internet is now universal is unfounded. While composite estimates are that 89% of North Americans and 73% of Europeans and Australians have Internet access, global access continues to be below 50%. Quan-Haas (2016) further describes the persistent stratification of Canadian and American access by social class, age and social geography. See: http://www.internetworldstats.com/stats.htm

economically marginal communities do not have such access—knowledge and learning, civic participation, work, leisure, and everyday social interaction with their peers and others occurs online. Digital actions—whether clicking or tweeting, posting, sharing or liking—are by definition social actions; as such, they are used for goal-seeking purposes with real pragmatic effects and consequences (Wilden, 1972).³

Digital actions—even those of children and youth, students, and "average" citizens—may carry higher stakes and have amplified consequences that exceed the scope of their actions through speech, writing, and other modalities in everyday life. In real human experience and real geo/spatial and temporal contexts, digital actions can be used to launch drone strikes; they can pass on complex technical information for making weapons; they can draw the attention and approbation of millions to shame and humiliate. They can be used for play, to build community, to solve complex problems, to mobilise constructive and destructive social action. As is axiomatic in critical discourse theory, while much of what we know and experience in the world is represented through discourse, some discourse actions don't matter much; others may kill, wound, maim and desecrate; and, indeed, some may enlighten and heal (Luke, 2004). Digital action is discourse—semiotic and social action through a "cognitive amplifier" (Bruner & Olson, 1977) that may have expansive and reflexive, durable and exponential effects across space and time.

In consequence, my case here is that digital ethics—an ethics of what it is to be human and how to live just and sustainable lives in these technologically saturated societies and economies—is the core curriculum issue for schooling. It is not an adequate educational, philosophic, or political response to current cultural, geopolitical, and economic conditions and events for this generation of teachers and scholars, parents, caregivers, and community Elders to simply document or celebrate the emergence of new digital youth cultures without attempting to call out ethical parameters and concrete historical consequences for communities, cultures, and, indeed, human existence in this planetary ecosystem. This is a generational and pedagogic responsibility as we stand at a juncture where residual and emergent cultures meet; where Indigenous and non-Indigenous, historically colonized and colonizing, settler and migrant communities attempt to reconcile and negotiate new settlements; where traditional, modernist, and postmodern forms of life and technologies sit alongside each other, uneasily, often with increasing inequity and violence.⁴ All, it turns out, under the watchful eye of multiple layers of surveillance and analysis—by the state, policing and military authorities, corporations and, it would seem, any and every species of subcontractors, consultants, and "researchers" seeking commercial, political, and economic advantage. This is a moment that requires more from researchers, scholars, and educators than descriptions of instances of local assemblage, creativity, or voice.

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³ Dewey (1934) defines art as human endeavor meant to make the world coherent ("cohate") and to address and resolve problems resulting from "organism-environment disequilibria". This is comparable to Freire's (1970) call for education to "problematicise" the world.

⁴ The Yonglu Aboriginal peoples of Northwest Arnhem use the term *ganma* to describe cultural contact, blending, and, potentially, conflict. This refers to the point in river estuaries where fresh and salt water meets and blends. Its application to Aboriginal "two-way education" is attributed to Mandaway Yunipinnu of Northwest Arnhem Land (see: http://livingknowledge.anu.edu.au/html/educators/07_bothways.htm). See also: Canadian economist Harold A. Innis' (1951) history of the river as a medium for intercultural exchange, communications, and transportation.

The alternative is to outline a definition of human ethics in relation to communications media. The case here is for a critical literacy based upon common principles of social justice in relation to all forms of human communication. Classroom practice—the everyday curriculum enacted through speaking and listening, print and digital reading and writing, signing, and imaging—can be refocused to include rigorous debate, study, and analysis of digital communications in terms of their real consequences as human actions; their ideological, scientific, and cultural codes, truth claims, and meanings; and their everyday possibilities for community-based cultural and social action—for art and science, human conviviality, and sustainable forms of life.

What is needed, I would argue, is to reconceive the central aim of schooling as the interrogation of the forms and contents, practices, and consequences of digital communications. The curriculum should engage developmentally and systematically with the current issues regarding everyday actions and their consequences; corporate and state surveillance, privacy, and transparency; and political and economic control and ownership.

Reframing Communicative Ethics

To speak about ethics is to speak about the moral codes and norms of everyday life. The nominal foundations of Western ethics are attributed to Plato and Aristotle. Yet all cultures—Indigenous, African, and Asian, historical and contemporary, and Eurocentric depend upon normative rules, stated and unstated, regarding the rightness and appropriateness of actions and interactions, actions, and transactions. That is, the conduct of daily practices, the coherence and cohesion of everyday communications, and the functional survival of communities depend upon shared (and, indeed, contested and dynamic) codes of conduct, epistemic standpoints, and worldviews. Without normative "cultural scripts" (Cole, 1996), everyday problem solving and learning are impossible. Ethical norms are presupposed in every instance of communication and exchange in social fields. Communicative ethics, then, comprise a kind of master cultural script that sets the interactional grounds and meditational means for building, critiquing, and using other scripts. Given the contentious political and cultural issues that schools and communities, teachers and children now face—even where we cannot presume ideological agreement or moral consensus, especially where we are not idealized, rational (white, male, heterosexual, urbane) speakers with equitable access to cultural codes, discourses, and knowledge (Benhabib, 1992)—how could this *not* be the centre of any curriculum?

New communications technologies have the effect of destablising and reframing social and economic relations, living cultures, and planetary ecosystems. Such changes raise and renew ethical dilemmas. At the macroeconomic and geopolitical levels, the reorganization and compression of space and time enabled by communications (and transportation) technologies have enabled new forms of monopoly, of profit, debt and, indeed, of cultural and economic empire (Innis, 1949). The transitions from oral to literate culture, from manuscript to print culture, and, currently, from print and oral to digital exchange have destabilized and altered relations of power, authority, and control. This occurs on several levels—both in terms of the actual everyday mediation of what will count as knowledge, action, and utterance, and in terms of whose collective cultural, economic, and political interests are actually served through these interactions. With the coming of the book (and newspaper, broadsheet, treatise, contract and legal brief, domestic manual, and romantic novel) and the emergence of nationalism and "print capitalism" (Anderson,

1983), the question of who owns, regulates, and controls—and profits and dominates—from control and use of the dominant modes of information comes centre stage, shifting from religious authorities to the state and, ultimately, to the industrial and postindustrial, national, and transnational corporation. Some regimes burn books; others write, print, and mandate them. Some governments censor the internet; all use it and monitor it. Disputes over hate speech, libel, and what can and cannot be said in the media-based civic sphere are now daily news—alongside revelations of the profit structures, labor practices, environmental consequences, and taxation schemes of those media and technology corporations that have become arguably the most profitable and dominant businesses in human history. Note that this political economy of communications typically is *not* studied in schools—even as this corporate order competes for the *edubusiness* of what counts as knowledge, and how it is framed and assessed within these same schools (Picciano & Spring, 2012).

A first task facing institutions, then, is to reframe and renew dialogue over ethics in relation to both changed human interaction, contexts for thought and action, and changed societal, cultural, and environmental ecologies. As is painfully clear in the current geopolitical and national debates over borders, terrorism, security, trade, and globalization, establishing criterial grounds for adjudicating right and wrong, true and untrue, scientific and unscientific, civil and uncivil, humane and inhumane, and private and public knowledge and behaviour is increasingly difficult for adults—let alone for young adults and children—as citizens, workers, consumers, voters, and audiences. We live in an era of post-truth, truthiness, factoids, and simulacrum—where freedom of speech and expression is construed by many as meaning that all spoken or expressed statements or images are equally true or right, or that statements, claims, and expressive actions have coequal effects and consequences. That everything is, technically, known via discourse and representation doesn't exempt that discourse and representation from corporeal, material, and bioecological effects. Some discourses and images kill people; some don't matter much.

As this article goes to press, questions about the use of Facebook metadata and ongoing debates over the proliferation and control of what has come to be known as "fake news" are test cases for digital citizenship and communicative ethics, with interweaving questions about what might count as truth, how to ascertain the truth, what is real and what is imagined; and about control, privacy, and transparency of the information archive (an archive—packed with trivia, state and corporate secrets, personal actions and images, and official and unofficial communications; metadata on human behaviors, wants, needs, and actions; as well as communications of all orders—proliferating at a breathtaking rate, even as it is being hacked and mined).

Almost all elements of conventional electoral politics and public discourse in democratic states have been put up for grabs. Even the longstanding conduct and procedures for running autocratic and fascist states have had to accommodate and adapt to the capacity of social media. These include the shift from television/broadcast and print-based campaigns to the use of social media for instant commentary and mobilization of constituencies. New social movements and coalitions, across political and cultural spectra and across social strata and regional location, have been enabled through social media.

As the 20th century newspaper business and broadcast media struggle to survive, the procedural conventions of the fourth estate have been supplanted by online commentary reliant upon pastiche, forwarded tweets and images, tautological hotlinks, and internet

cross-reference for validation. News cycles are continuous; information proliferation, redundancy, and appropriating unceasing; the accumulation and analysis of metadata by the state and the corporation omnipresent (Davies, 2009). Furthermore, the making "public" of what were considered governments', political parties', and individuals' proprietary face-to-face and online communications on putative grounds of transparency has confused matters even further. Literally nothing goes unreported, and verification, validation, and analytic refutation of claims are, at best, difficult without recourse to other online representation. Signs have been cut loose from the signified—from originary context and place—and the placement, attribution, and location of signs, signifiers, and signified is increasingly difficult. The cognate means for countering deliberate misinformation and untruth have become more difficult to disentangle in a fully mediatized world.

There are, of course, longstanding criteria, standards, and conventions for the conduct of face-to-face verbal and embodied interactions—from how we read and interpret deictic to gesture, bodily disposition, and eye contact. These are by definition vernacular, local, and place-based. They are language and culture-specific, and vary by spatial locality and community, time of day, and by the age/color/gender/sexuality/kin of the interlocutors. Nonetheless, there have been attempts—from Plato to, notably, Austin (1962) and Habermas (1976)—to establish forms of "universal pragmatics;" that is, ethical procedures and criteria for judging both the truth (locutionary) of particular speakers and utterances, and the interactional, intended and actual (illocutionary and perlocutionary) consequences of utterances. These models have been forcefully criticized for their presupposition of an idealized (male, rational, White, Eurocentric) speaker with common and equitable access to discourse resources (Benhabib & Dallymar, 1990). Yet speech still matters, and we proceed each day to navigate through an array of speech acts and exchanges according to procedural norms—both dejure and defacto, stated and tacit, conscious and unconscious. Each vernacular community proceeds under assumptions about the maintenance of "face" in communications (Scollon & Scollon, 1981). Without shared assumptions about the intent of speakers and the consequences of speech acts in place, even the simplest verbal exchange between a parent and a child, or a student and teacher on the playground, is problematic.

Over the course of several hundred years, interpretive communities have developed criteria and procedures for adjudicating, judging, and making sense of the printed word. These range from the (written) laws governing what can be said and written, to intellectual property conventions, to fine-grained, unremitting debates over how to interpret and value literature and the corpus of written laws. The point here (hardly original) is that while the rules of exchange for speakers and interlocutors, writers, and readers are far from static—always contested and dynamic, culture and community-specific—they are (for better and worse) established and institutionalized via schooling and universities, courts, and legislatures.⁵

⁵ These historical dynamics between rule systems and the eccentricities of local practice are, ultimately, the tension between *langue et parole*—between paradigm and syntagm, between system and practice, between form and function—that has driven linguistic science and semiotics since Saussure (Wilden, 1972).

Three Foundational Claims

To begin to set a curriculum agenda for teaching and learning digital ethics, I outline three key foundational claims. These set the *curriculum contents* for digital ethics as a field or area for teaching and learning.

The first claim is that digital ethics must operate at two analytically distinct but practically interwoven levels. It must engage at once with now classical questions about ideology *and* with questions about social actions and relations. As we have argued, the core concerns of educators about students' digital lives pertain to the ideational and semantic "stuff"—the ideologies, beliefs, and values that learners must navigate online. This raises key questions about the truth, veracity, verification, and belief, as well as the consequences of the information represented online. A recent article by a senior editor of the *Guardian* put it this way:

For 500 years after Gutenberg, the dominant form of information was the printed page: knowledge was primarily delivered in a fixed format, one that encouraged readers to believe in stable and settled truths. Now, we are caught in a series of confusing battles between opposing forces: between truth and falsehood, fact and rumour, kindness and cruelty; between the few and the many, the connected and the alienated; between the open platform of the web as its architects envisioned it and the gated enclosures of Facebook and other social networks; between an informed public and a misguided mob. What is common to thes struggles—and what makes their resolution an urgent matter—is that they all involve the diminishing status of truth. (Viner, 2016)

At the same time, truth claims and representations are themselves social actions—consequential assertions about what is. Thus, the simultaneous and equivalent ethical concern is with the interactional pragmatics of life online. In response to the aforementioned concerns of educators and the public, digital ethics must focus on the use of online social media as a primary site for everyday social relationships with peers and others. To speak of ethics, then, refers simultaneously to *both* the ideational contents—the semantic stuff—of online representations, *and* the social and interactional relations of exchange between human subjects. Hence, a first foundational claim:

1) On ideology and social relations. That digital ethics must address questions about ideological contents—the values, beliefs, ideas, images, narratives, and truths that one produces and accesses online—and questions about social relations that are lived and experienced online, specifically the interactional and material consequences of individual and collective actions.

The ideational contents (M.A.K. Halliday's 1978 "field") and the interactional relational protocols and consequences (Halliday's "tenor") may appear analytically distinct, but are always interwoven in practice. What we say, write, speak, signify, and how we speak, write, gesture, sign, and to whom, are ethical actions—no matter how conscious, unconscious or self-conscious, explicit, tacit or implicit the intentions and decisions of the human subject may be. In educational terms, then, digital ethics by definition engages both the "classification" of knowledge *qua* ideational content (whether construed as

disciplinary, thematic, artistic, or scientific) and the "framing" of knowledge via social relationships and actions (Bernstein, 1990).

Accordingly, schooling needs to introduce two interwoven strands of digital ethics:

- The teaching and learning of a performative ethics that enables the evaluation and anticipation of real and potential human and cultural, social and economic, bodily and environmental outcomes and consequences of digital actions and exchanges, including their real and potential participants and communities; and,
- The teaching and learning of a critical literacy that enables the weighing, judging, and critical analysis of truth claims *vis* à *vis* their forms, genres, themes, sources, interests, and silences.

The second claim focuses on the political economy of communications (Graham & Luke, 2013); that is, the relationships between state regulation and control, corporate ownership of the modes of information, and their ideological and economic effects. Following the prototypical work of Stuart Hall (1974) on broadcast media, the field of cultural studies has focused variously on audience positioning and responses to media texts ("decoding"), on the actual economic ownership and control of dominant modes of information (political economy), and how these are manifest in ideological message systems ("encoding"). Of course, digital exchanges operate on radically different dimensions of scope and scale, speed, and interactivity than the broadcast media studied by Hall and colleagues. Digital tools have the revolutionary effect of altering the monologic and linear relationships of production/consumption and encoding/decoding established through broadcast radio, television, and cinema, leading to claims that social media enables new community, agency, and democratisation in ways that were intrinsically more difficult in an era of network and studio-based broadcast media (Jenkins et al., 2016).

What remains powerful and relevant from Hall's groundbreaking work is the acknowledgement of the ideological interests at work in the production and reception of screen and image. Even what might appear to be idiosyncratic local assemblage is undertaken within political, economic, and cultural constraints (conditions of production) and mediated by disposition and affiliated ideological resources. Affordances, further, are historical and cultural products—not intrinsic technical features. Where it takes up the challenge of digital content, the tendency in schooling has been to focus principally on student and teacher responses and uses of media texts (through models of viewer and reader response) and the semantic content (through models of comprehension, literary and, to an extent, ideology critique); yet, far less explicitly if ever, has it focused on the relationships between ideological content, relationships of institutional control and power, and the corporate ownership of the modes of information.

Consider this analogy. This would be very much like if we were to teach—recalling Canadian economist Harold Innis' prototypical analysis of the "bias of communications" (1951) in preindustrial mercantilism and industrial capitalism—how to read newspapers or how to use the railroad, without raising questions about who owns the press and transportation infrastructure; whose interests these structures of ownership and control serve; and who benefits and who is exploited by these configurations of political economy.⁶

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⁶ This is, ironically, exactly how traditional Canadian and American social studies and history textbooks have taught about the railroads—as a celebration of the domination of nature by monopoly capitalists. Until

As Innis' (1949) discussion of the relationships between "empire and communications" argues, all emergent communications media and transportation systems effectively reshaped human/machine *and* political economic *and* geographic ecosystemic relations as well.

The basis of economic rule (and plutocracy) has shifted from those of colonial trade documented by Innis (e.g., the Dutch East India Company, Hudson's Bay Company)—to the owners of elements of the dominant transportation infrastructure (e.g., the railways, steel, oil, and auto industries); to the emergence of media empires (e.g., telephone, wireless, newspaper, and television networks); to the current situation, where the world's economy is dominated by digital hardware/software /information corporations (e.g., Apple, Facebook, Google/Alphabet, Oracle, Tesla, and Samsung) and producers of military and advanced technological hardware (e.g., Boeing, Airbus, and arms manufacturers).

Hence, a second foundational claim:

2) On the political economy of communications. In digital culture, the political and economic are always personal—with every personal digital action being an interlinked part of complex and often invisible economic exchanges that, by definition, support particular corporate and class interests and have material and ecosystemic consequences.

The educational lesson here is simple: The media that we use are not "neutral" or benign, but are owned, shaped, and enabled—and controlled, capitalized upon, and managed—in their own corporate interests (Pasquale, 2015). These interests, as social scientists, ecological scientists, and community activists are increasingly realizing, have reshaped the transnational and domestic divisions of wealth, labor, and power, and have broad, heretofore unexamined effects on the use and sustainability of finite planetary resources and ecosystems (cf. Klein, 2015).

My point is that while the curriculum should entail both the study of the sources of information and their apparent distortions and ideological biases, such study can also be extended to understanding the relationships between knowledges and global, planetary interests—including the corporate ownership, capitalization, and profit from dominant modes of information. There are, furthermore, persistent questions about the complex relationships between digital work and culture and its relationship to carbon-based economy and resource utilisation (e.g., Bowers, 2014).

The third claim is core to the establishment of any set of ethics. As argued, for many schools, digital policy and practice tends to be both prohibitive—in reaction to "risks" posed by digital technologies—and silent about the reconstructive institutional uses of digital technology. Ethics is by definition a *normative* field; like all education and schooling, ethical systems and claims are predicated upon a vision of what should be—of how human beings can and should live together. The central message of Aristotle's *Nicomachean Ethics* (1999) is that everyday judgments about right and wrong are grounded in visions of what might count as the "good life." Ethical judgments are the prerequisite philosophic and practical grounds for civility and justice. Habermas (1996)

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recently, there has been negligible reference to their impacts on Indigenous peoples and their utilization of Chinese labor.

refers to this as a "counterfactual ideal" that is presupposed in each speech exchange. The third foundational claim is:

3) On a normative model of digital culture. That ethics cannot exist as a set of norms or procedures for everyday life in digital cultures without a shared normative vision of the good life.

In terms of digital ethics, this means that any set of ethical injunctions taught to youth and children by definition presupposes a vision of what should be—a lifeworld where digital communications are used for ethical purposes, for the good. Further, this version of the good, following Behabib (2002), must acknowledge the moral imperatives and challenges raised by diverse communities in pluralistic democratic societies, whether online or face-to-face. My view, then, is that any school-based approach to digital ethics must move beyond silences, prohibitions, and negative injunctions (which, in-and-of themselves, rarely have salience with youth) to the reconstructive project of modeling and enacting digital citizenship, convivial social relations, and action for social justice in education, economy, and culture. The aim is to reframe digital ethics as part of a larger inclusive and decolonizing educational project that refuses to relegate diversity and difference (including childhood and adolescence) to "second class moral status" (2002, p. 2)—and pursues a vision of sustainable forms of life for all.

What is to be Done?

We have been here before. Dewey (1907/2012) surveyed the situation wrought by industrial technologies, new communications media, economic globalization, large-scale migration, and geopolitical conflict:

The social change...that overshadows and controls all others is the industrial one—the application of science resulting in the great inventions that have utilized the forces of nature on a vast and inexpensive scale: the growth of a world-wide market as the object of production, of vast manufacturing centers to supply this market, of cheap and rapid means of communication. ... One can hardly believe there has been a revolution in all history so rapid, so extensive, so complete. Through it the face of the earth is making over, even as to its physical forms; political boundaries are wiped out and moved about...; population is hurriedly gathered into cities from the ends of the earth; habits of living are altered with startling abruptness and thoroughness; the search for the truths of nature is infinitely stimulated..., and their application to life made not only practicable but commercially necessary. Even our moral and religious ideas and interests...are profoundly affected. That this revolution should not affect education in some way is...inconceivable. (pp. 6-7)

In response to our current, comparable situation, education systems in the "hypercapitalist" (Graham, 2005) economies of North America, Europe, and the Asia-Pacific have attempted to respond to fundamental and profound changes in society, economy, and culture. Over the past three decades, they first viewed educational technology as a logical extension of school science and mathematics education; that is, as a matter of scientific technology and technique. This evolved into the current emphasis on

finding a place for the naming of the digital in the formal curriculum, with the enumeration of lists of digital skills and behaviours, competences, and capacities, to be taught and learned, as a preparation for work, consumption, and citizenship in technocratic society. More recently, it has begun moving towards a begrudging embrace of gaming cultures and creative industries more generally, recognizing that the new pathways to employment and technological competitiveness in the current multinational corporate economy may lie in the exploitation and development of media and genres, including the popular cultures that previously were deemed counter-educational. All of these are, in part, attempts to "curricularise" the new—to domesticate it into the institution that, as noted, developed to ensure the intergenerational transmission of orality and literacy. These are, furthermore, predictable strategies for the incorporation and appropriation of digital culture into a now teetering neoliberal project of social-class-stratified, free-market schooling designed to serve (digital) transnational corporate capital.

There remains a persistent refusal by educational institutions to take on board larger ethical challenges. Finding a strategy that can cut through this refusal has not been proven easy. Whilst current versions of media literacy or media education are, 50 years after the era of the mass media, just about finding disciplinary respectability—as evidenced by the growth of various handbooks, courses, and accreditation⁷—there are very few examples of national or regional school systems making digital ethics central to their vision of education.

The three foundational claims here are neither original nor that different from earlier notions of critical self-consciousness that have been proposed by Dewey or Freire. One productive first step is to revisit and reinvent the longstanding work in critical literacies and media literacy (e.g., Share, 2009; Buckingham & Sefton-Green, 1994). In other words, the new kinds of social actions, political concerns, and participatory dynamics made possible by the internet have not erased but rather reframed and negated classical debates around the relationship of truth to untruth, right and wrong, and what it means to be a citizen in democratic societies. These things still count—and how they count in a digital culture should be at the core of the curriculum.

This is a very different view of where digital cultures, capacities, and technologies might "fit" in schooling and in the curriculum. Simply put, the great unresolved issues of our time should be at the heart of an engaged and relevant curriculum. What better way to educate youth about the powers and problems of digital communications than to make these same forces and problems (and indeed their digital representations) the object of study across the curriculum? I therefore return to the proposition that I began with: The educational challenge raised by digital technology is not one of skill and technique or technology, but one of participation and ethics. What might this approach look like in everyday school curriculum and instruction?

This territory is already being explored by teachers and students in the spaces left by what has become an increasingly narrow, test-oriented, and instrumental curriculum. Fortunately, this work is already underway in community-based projects. Many of these are contemporary versions of Deweyian "projects" (1907/2012)—using digital tools for community engagement and activism (e.g., Rogers, Winters, Perry, & LaMonde, 2015; Sanford, Rogers, & Kendrick, 2014), through the use of digital resources for intergenerational and intercultural exchange (e.g., Poitras-Pratt, in press/2018) and through

⁷(http://eprints.lse.ac.uk/57103/1/Livingstone media information literacy 2014 author.pdf)

larger scale curriculum reform that focuses on the use of digital resources in purposive, real world, "rich tasks" for students. In these studies, teachers and students are using digital technologies for (1) solving and addressing local political, social, and environmental problems; (2) mobilizing cultural resources to connect and engage with their communities and their histories, their Elders and younger generations, their peers, and with distant cultures that they might otherwise not have contact with; and (3) the practice of active and engaged citizenship, participation in community projects, and social movements and action.

As part of the mainstream curriculum, then, digital resources are being used as a means for engaging with, debating, critiquing, and navigating many of the difficult social, scientific, and cultural issues faced by students and communities—in the face of what are, for many, difficult conditions of economic hardship and divisive community and intercultural relations, in a world dominated by new corporate/governmental orders whose formations, mechanisms, and institutions sit well beyond the reach and comprehension of many. The current digital corporate order—this political economy of transnational information and technology—is at risk of a re-colonisation of everyday forms of life (both those of adulthood and childhood, work and play) without the deliberative democratic dialogue and informed debate about what might constitute a just, ethical, and life sustaining world. This is an overdue dialogue with teachers, children, young people, and students—and with their parents, Elders, and communities. Digital literacies, multiliteracies, and digital and creative arts are necessarily ethical, political, and cultural practices—not job skills or technical capacities. They are nothing less than new basics for all in these challenging and difficult times.

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⁸ Queensland's 'New Basics' (1999-2005) reforms introduced curriculum "rich tasks" that required that students use digital tools to address community problems; current Finnish curriculum reforms are making comparable efforts.

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