Posthumanizing McLuhan's Curriculum: Riffing on City as Classroom

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Abstract:
Conditions of the posthuman are hastened by the technologies that now fully mediate our brains and nervous systems, a circumstance anticipated by Marshall McLuhan some sixty years ago. In 1977, McLuhan co-developed a media textbook for Canadian high school students. We expand on a selection of the concepts and themes identified in *City as Classroom: Understanding Language and Media* and query in what ways we might apply a forty-year-old media curriculum to our present-day circumstances. We riff on Marshall McLuhan's prognostications on education during the electric age as a recalibration of his remarkably prescient work and conceptualize a *hypercity* in which to explore our considerations. We enmesh *City as Classroom* with the materiality of city spaces and theorize a *posthuman* critical pedagogy as a call to action.

Keywords: Marshall McLuhan; posthumanism; critical pedagogy; city as classroom; *hypercity; riff; onto[Riffology]*

Posthumaniser le programme d'études de McLuhan : Faire des riffs sur *La ville en tant que salle de classe (City as Classroom)*

Résumé :
Les conditions du posthumain sont accélérées par les technologies qui assurent désormais la médiation complète de nos cerveaux et nos systèmes nerveux, une circonstance anticipée par Marshall McLuhan il y a une soixantaine d'années. En 1977, McLuhan a co-développé un manuel des médias pour les élèves canadien(ne)s du secondaire. Nous développons une sélection des concepts et des thèmes identifiés dans *« City as Classroom : Understanding Language and Media »* et nous nous demandons de quelle manière nous pourrions appliquer un curriculum des médias de quarante ans à notre situation actuelle. Nous faisons des riffs sur les pronostics de Marshall McLuhan sur l'éducation à l'ère électrique comme un recalibrage de son travail remarquablement prémonitoire et nous conceptualisons une *hypercité* dans laquelle explorer nos considérations. Nous entremêlons *« City as Classroom »* avec la matérialité des espaces urbains et nous théorisons une pédagogie critique *posthumain* en tant qu'un appel à l'action.

Mots clés : Marshall McLuhan ; le posthumanisme ; la pédagogie critique; la ville comme salle de classe ; *l'hypercité ; le riff ; onto[Riffologie]*

City as Classroom

From within this present Canadian educational milieu, we[1] delve into the half-century-old prognostications of Marshall McLuhan on media learning during the electric age, recalibrating one of his many remarkably prescient works. The textbook was designed to transport secondary school media students into the city in order to alert and expose them to "problems in their cultural environment" (McLuhan, Hutchon, & McLuhan, 1977b, p. 2). Once out of the physical classroom, they were challenged to train their perceptions by "concentrat[ing] on the structure of a situation" (McLuhan, Hutchon, & McLuhan, 1977a, p. 14).

As *human* scholars collaborating with technologies, academic influences, and physical environments within agented assemblage, we have studied the approaches with which we explore informational spheres. We have fashioned this study as an *[onto]Riffology* during which we perform *riff* as a medium for exercising postqualitative research's attractions. Riff, as a process ontology, operationalizes the experimentality of Deleuzoguattarian philosophy by embracing becomings, interrupting hegemony and recognizing nonhuman agency. In composing this paper, we resist linearity, instead allowing emergences of refrains and bass lines. Each section's headings punctuate these emergences, attempting to straighten nonlinear processes. These media-enabled ruminations and our technologically mediated tangents invite readers' participation in a bootstrapping process that will be discussed herein. When we "leave off", it is with a call to action for a people and world yet-to-come (Deleuze & Guattari, 1991/1994).

McLuhan's media textbook has us thinking about all manner of spaces of ontological potentials. We theorize a posthuman critical pedagogy that draws on Guattari and Negri's (1985/2010) liberatory work, and we regard their revolutionary tones as aspirational. Posthumanizing a study on the city as classroom, we negotiate passages through and under city spaces, and we immerse ourselves in a *hypercity* that is not just for humans, and which is enmeshed with materiality. We adopt as signposts the various human ages, called timescapes (Haraway, 2016), and geological epochs mapping our histories and futures. One demarks the human populating of the earth after its most recent ice age (the Holocene); a second eyes capitalism's inability to structurally regard the needs of the nonhuman as central to the needs of the world (the Capitalocene); a third bespeaks the significant impacts of humanity on earth (the Anthropocene); while another favours multispecism and deprivileges the myopic humanism that has preceded (the Chthulucene).

As educators, we build pedagogical tools, rendering students more than repositories of facts. However, there remains a dearth of clear indications about how to fully engage learning encounters that equip students for their futures. Although the banking model of education has been largely abandoned, learning encounters are still often physically situated in vaults and safety deposit boxes holding bonds and certificates of graduation, available only during bankers' hours, and with staff

[1] When "we" refer to "we" and "us", these pronouns are referencing all human and nonhuman actants which operate in collaborative assemblage.

supervision. In schools, education is being offered in epistemological conditions that have indeed evolved, while technologies have destabilized ontological ambitions and hastened the posthuman.

In their time, McLuhan's pronouncements seemed strange to audiences, barely comprehensible to most. The general public and academic community, alike, struggled to grasp the ramifications of what was taking place in a rapidly changing world and were troubled by McLuhan's assertions. Early on, McLuhan had suggested that any human-made artefact, idea or tool becomes medium once harnessed to human use, and he forewarned that technologies—products of the electric age—were the media that had increasingly become extensions of human bodies, skin, nervous systems and functions. In the post-world-war era, the simultaneity in availability of information through technology had launched the world on an irreversible course to a seemingly unknown destiny. By as early as the late 1960s, however, the implications of satellites orbiting earth, of computers' ability to surveil and of societal infiltration by technological media were becoming apparent to McLuhan and were startling to consider. His pressing concern became how to deal with the *effects* of the burgeoning media.

Decentring the Human

In 1977, McLuhan co-wrote a media textbook for Canadian youth, in collaboration with school teacher Kathryn Hutchon and McLuhan's son Eric. The authors reimagined the school's function in response to the altered circumstances of an electric age. *City as Classroom: Understanding Language and Media* explores a modified function of schools as venues in which educators ask questions that elicit discovery in urban spaces. Although McLuhan and his collaborators recognized that the preponderance of available information was now sourced outside school edifices, McLuhan also believed that the school "might still be useful for examining the *real* education children were receiving from the electronic media" (Marchand, 1989, p. 275).

McLuhan et al. (1977a) tasked students with activities that they hoped would expand their gaze and sharpen their powers of observation. An example reads thus:

> Have you ever tried to find a book which you *knew* was in a particular bookcase, yet still couldn't find? We're too used to looking at the books on the shelves as we look at the wallpaper.
>
> *Be sure to find a safe and sensible place for the following experiment, where you are legally entitled to drive at the speed suggested. Arrange to have both the driver and observer in the car. They should not share responsibilities.*
>
> Put a Toulouse Lautrec poster beside the road. Drive by at 10 km/h. Can you read the poster? Drive by again at 80 km/h. Can you see it?
>
> What information have you discovered from this experiment about the ground of nineteenth-century France? What have you discovered about the ground of twentieth-century North America? Is there a difference between town and country billboards? Are city billboards supposed to attract conscious attention? Are they *figures* or part of our barely noticed, urban ground? (p. 19)

The three educators wrote curriculum that was intended to "enlist the school system as a prophylactic against the effects of advertisements and best sellers" (Marchand, 1989, p. 274). We, in turn, want to understand what it is about their manner of engagement that helps us to learn. Our interest is in *posthumanizing* education by decentring the human, and our point of departure is the textbook *City as Classroom: Understanding Language and Media* (McLuhan et al., 1977a). These considerations of posthuman education delve into the implications of McLuhan's assertions that media (a chair, a film, a motorcar, a satellite) are prosthetic to humans and are even extensions of our nervous systems (McLuhan, 1969). Relationships between technology and humans have complexified to a degree not quite anticipated even a few decades ago, while technology in schools is still presented as partitioned learning and often as a defined subject area taught by *human* instructors. Epistemologically, computer learning is often still presented as "the tech bit" of a school day, a topic of study scheduled to fit timetables.

The school wall is no longer the site into which students and school systems plug their computers, but whence worlds of artificial intelligence (by way of an "always-on" network connection replacing the dial-up modem) are reciprocally plugging into students' intellects, technologies, social systems, ecosystems, and even physical bodies. Today, students have far less legitimate networked access *within* learning institutions than is granted during youth's private use of technology outside of school hours.

Riff

We are interested in posthumanizing education by decoupling pedagogy from the humanist enterprise (Snaza, 2016). Riffologic activity compels us to "plug in and play" (Wainwright & Stevens, 2017), generating a toolkit of strategies that interrogates the traditional methodological approaches to which "emancipatory researchers" often default, regardless of how enthusiastically they have been hitherto dabbling in the experimentality of Deleuzoguattarian concepts (St. Pierre, 2014). We resonate with St. Pierre's perspective (2014, 2018) as we, too, reach towards *post-inquiry* and Deleuzoguattarian ontology and defy contemporary qualitative research methodologies.

By mobilizing riff, we explore ways of *becoming* that are other than anthropocentric and which attempt to initiate a posthuman critical pedagogy that is preparing for a people yet-to-come, before knowing who those people will be (Carlin & Wallin, 2014; Deleuze & Guattari, 1991/1994; St. Pierre, Jackson, & Mazzei, 2016). Here we anticipate what lies *beyond*, in a future of people inseparable from other beings and matter. Riff is not merely an epistemic response or logical argument against humanism, but rather, it interrupts the ontology of humanism by appropriating, hacking and eroding its relationships with "resources", while reimagining relationships capable of life-fulfilling balance.

Riff draws from the concepts of Deleuze, Guattari, other continental thinkers and a contemporary discourse that engages new materialism, the nonhuman turn, the ontological turn and the posthuman. Haraway (2016) broadens our thinking of the conditions in which we are situated by asserting the existence of a Chthulucene, an epoch she posits as a *becoming-together*. During this timescape, one may better recognize that relationships between the human and nonhuman are

inextricably interdependent and that *sym-poiesis* "makes with" all species to effect co-existence on this planet, Earth. Rather than perpetuate human practices of rampant resource extraction and heedless ecological dominance, we wonder how we might, over less explored terrains of thought and experience, push posthuman ontologies farther yet.

Riff facilitates pedagogical engagements: those *happenings* that populate educational encounters and stimulate learning in assemblage as "becoming curricula without syllabi" (Stevens & Wainwright, 2016, p. 163). The nonlinear history of humanist pedagogies includes Platonist assertions of the individual as "raw ontological input" rendered human through one's education (Snaza, 2016, p. 21). Aristotle's early rationalist reasoning, Descartes' cogito, Dewey's social projects and Freire's (1970/2000) liberatory ambitions each posit relationships between human democracy, citizenship and freedom, in the context of educational pursuits. If human education is concerned about agency, emancipation and democratic institutions, a posthuman education decentres the human and envisions a different type of agency that encompasses matter, conceding the limitations of humanist critical pedagogy, while adequately broadening participants' scope, tools and relationships.

Wallin (2011) and jagodzinski & Wallin (2013) submit that humanist emancipatory pedagogies are no longer central to education for social change. Thoroughly surveying the field of posthuman education, Snaza and Weaver (2016) admit that posthumanist thinking without concern "for what things mean for humans" is so recent a prospect that its implications are still largely undiscovered: a situation necessitating educational approaches that even more fully imagine critical engagement through an exploration of relational ontologies. We contemplate the role of schooling (and, by extension, teachers) during conditions of radical-reshaping of human and nonhuman engagement.

Bootstrapping

Are we mistaken in our belief that teachers remain critical to the survival of the world and the creation of a world worth surviving? What becomes of the *human* instructor once students are immersed in posthuman education streams, particularly if learning is happening during their encounters with the vastness of information simultaneously available? If learning and change are closely tied to aleatory processes, then how do we set conditions in which events are experienced?

Daignault (2008) describes curriculum as accidental encounters that are neither scripted nor anticipated. Curriculum becomes parenthetical. Despite our avowed interest in the spontaneities of thought and curiosity—the very lifeblood of riff—we are mindful that if human instructors are relegated to merely providing *contexts* for learning encounters, their function is threatened to become reduced to opening schoolhouse doors, rebooting computers for students' use and staffing the physical locations in which students will *potentially* engage learning during online collisions with stimuli. Moreover, if this is the case, we wonder, do educators' roles simply approximate those of the technician, casino croupier, or code authenticator? We alternatively attempt to re-invigorate aspirations held by school teachers to become change agents**,** submitting that such an incarnation of the educative role and pedagogical endeavour befits a societal circumstance determining that

students generally average more time daily spent with their school teachers than with any other adult presence in their young lives**.**

To initiate these capacities, bootstrapping as conceptualized by DeLanda (2013) intrigues us. Its *human* function activates a "machinic ontology" that is performed in a manner analogous to computing's assemblage of hardware, software and bootstrap loader. The schoolteacher's part corresponds with the activation of the small strip of code responsible for loading the operating system and hardware once a computer reboots and initiates its potentials. The educational bootstrap's operations are intentional, setting terms and conditions for learning events. Bootstrapping re-situates human participation in learning from that of engagement in *operating* the machine to being machinic. A necessary shift away from anthropocentrism's typically custodial role takes place when riff is deployed. Consequently, the machinic assemblage depends not on the *human as master*, but on the human as one of many agential collaborators.

In bootstrapping, DeLanda (2003) recognizes that "a realist ontology may be lifted by its own bootstraps, assuming a minimum of objective knowledge to get the process going and then accounting for the rest" (pp. 27-28). If bootstrapping is indeed a machinic function of social and educational change, then, in turn, the application of Freirean (Freire, 1970/2000) critical pedagogy—with its Marxist-inspired focus on emancipation from the oppressor—demands a different type of revolution. This circumstance hearkens back to Guattari and Negri's (1985/2010) enthusiastic claims:

> Nobody will seize power in the name of the oppressed! Nobody will compensate freedoms in the name of freedom. The only acceptable objective now is the seizing of society by society itself. (The state! That is another problem. One should not oppose it in a frontal way, nor flirt with its degeneration to smoothen the way of tomorrow's socialism! (p. 126)

New Alliances

Process ontology encompasses the tenor of Guattari and Negri's (1985/2010) version of revolution and Guattari's (1989/2011) advocacy of social, mental and environmental ecologies that counter the homogenizing processes applied by mass media and *Integrated World Capitalism*. A flattening of ontologies, thus, ensures that humans become partners-in-the-world, rather than its rulers and stewards. The bootstrap incorporates, within an ontology of becoming, an insertion of crucial**,** human-constructed, objective knowledge that jumpstarts technological processes, providing a context for educational encounters to become Deleuzian events. Without this necessary piece of mind-dependent reality, how do humans know that they are moving in any particular direction and singularity, either by aleatory means or ones shaped by ecological encounters? We submit that for the purposes of explicating bootstrapping, Guattari and Negri's (1985/2010) rather humanist revolutionary stance serves to operationalize Deleuze and Guattari's philosophy of revolutionary change.

Guattari and Negri's (1985/2010) call to action, *New Lines of Alliance, New Spaces of Liberty,* sets forth mechanisms by which we can apply Deleuzoguattarian thought to riff, effecting a *change theory* that shifts our reference points beyond established humanist critical pedagogies and Freirian

dialogical epistemologies, and towards a materialist ontology. The pair writes, "What we are evoking here is not a utopia. It is the explication of a real movement, which innumerable traces and indices designate as a power in action" (Guattari & Negri, 1985/2010, p. 73). Guattari (1989/2011) conceptualizes three ecologies—re-singularizing social relations, the environment and the human mental state—which he contends are vulnerable to mass media's ill effects that penetrate "people's attitudes, sensibilities and mind" (Guattari and Negri, 1985/2010, p. 53). Guattari's ability to fully anticipate the acceleration in speed and impact of social, environmental and mental decay suggests him to be every bit as prescient as we have deemed McLuhan.

Hypercity

While physically inhabiting his mid-20th-century North America environs, McLuhan was always anticipating the ways that the electric age would wholly change societies. Given his observations of technologically wrought change, he early predicted that the metropolis would become a

> circuited city of the future [which] will not be the huge hunk of concentrated real estate created by the railway. It will take on a totally new meaning under conditions of very rapid movement. It will be an information megalopolis. (McLuhan & Fiore, 1967, p. 72)

Railways had once been the circuitry of cities, their installation influential in determining the locations of cities, their formation central to the amalgamation of towns, and their groupings into megalopolises. It is, in fact, locomotives' sheer physical mass that has determined the location of train stations, requiring their separation at a distance of some three to five kilometres, to permit both their acceleration and deceleration (DeLanda, 2016). Such spatial distribution has similarly influenced the positioning of subway stations beneath cities. The physical materiality of cities' transportation systems is juxtaposed with information systems travelling at lightning speed, these systems the means of its technological conveyance.

McLuhan brought cities, information and the classroom into proximity when he posited that "the metropolis today is a classroom, the ads are its teachers. The traditional classroom is an obsolete detention home, a feudal jungle. The city is obsolete, ask the computer" (McLuhan & Fiore, 1967, p. 12). His curriculum projects on studying the effects of media had been taking shape for some years, having been first conducted in 1964 (Gordon, 1997).

Our riff on McLuhan, cities and education now imagines the posthuman metropolis as a *hypercity*: its spaces energized by hypermediated engagements. What it means to be human is changing at an exponentially rapid pace during an "hyperreal 21st century" (Petitfils, 2014) during which humans have been slow to recognize the extent to which they have become interdependent with machines (McLuhan, 1994). We apply to "city" the prefix, "hyper" to imply activity, speed and movement toward conceptualizations of hypermedia and hyper-objects.

The hypercity challenges an ideology that the city is made only for humans. Instead, all matter coexists and potentiates in assemblage within many layers of enfoldment. Returning to McLuhan's assertion that "the city is obsolete, ask the computer," we now do exactly that, and often.

Siri, is the city obsolete?

Understanding Media

McLuhan et al. (1977a) sought to enlist media students in addressing what the authors feared would be the deleterious impact of the electric age on youth. As curriculum, *City as Classroom: Understanding Language and Media* encouraged high school students to spill into city spaces while engaging the study of media and its properties: magazines, motor cars, newspapers, light bulbs, films, clocks, airplanes, satellites, money and so on. (McLuhan et al., 1977a). Class members were to group themselves with one or two other students, select a project among the textbook's many offerings, exit the schoolhouse to engage their inquiries within the city and reassemble to discuss their findings, upon completion of their tasks. These explorations were designed to help students identify patterns and structures within their social environments, while sharpening perceptions about their surroundings. The research would be "important and original" (McLuhan et al., 1977b, p. 1). It would study the media's effects rather than its content. The culture presented "problems" that McLuhan believed could be ameliorated by engaging the perspectives presented. However, *City as Classroom* never gained traction.[2] Perhaps, it has been suggested, the curriculum merely comprised "too patently a bouquet of McLuhan's ideas" to ever be widely accepted (Marchand, 1989, p. 275). Its inability to prove influential to youth quite disappointed McLuhan and it would be his last work published during his lifetime (Marchand, 1989).

Plug in and Play

We are interested in potentiating pedagogical complexities in the city's physical, informational and ecological spaces. *City as Classroom* assumes the nature and spirit of the school field trip: taking the world seriously, engaging it as fieldwork. Upon having returned to the physical classroom, the "intelligibility" of the world can be determined through a discussion of one's findings (McLuhan et al., 1977b, p. 1). Investigations into these environments explore tensions between what happens in the classroom, the city and the rest of the world.

Our conceptualization of a hypercity aligns with speculative realism and its disavowal of anthropocentrism: a response that is deemed necessary "when we face the prospect of ecological catastrophe and when we are forced to recognize that the fate of humanity is deeply intertwined with the fates of all sorts of other entities" (Shaviro, 2014, p. 1). *City as Classroom* addresses features inherent in a cultural environment considered to be evolving too rapidly to be entirely understood by its denizens (McLuhan et al., 1977a)**.**

In the 21st century, the Anthropocene—a geo-political epoch subsequent to that of the 12,000 year-long Holocene—is evinced, signalling the degree to which humans impact the earth's ecosystems and geology. Haraway (2016) characterizes the Anthropocene as one of various "timescapes", alternatively proposed to be "boundary events" when these geological episodes are of relatively short duration. Another such timescape and boundary event is the Capitalocene, which recognizes wealth's acquisition as a primary factor driving the earth's resourcing by "exterminationist

[2] The textbook was retitled and published in the United States in 1980, only to suffer the same fate (Marchand, 1989).

extraction" (Haraway, 2016). Haraway (2016) contends that because the Anthropocene asserts the anthropocentric, its premise is, therefore, speciesist. Further, its moniker bespeaks not only "human exceptionalism", but primarily concerns itself with the activity of homo sapiens who live in highly industrialized regions and who occupy higher socio-economic classes. Haraway (2016) submits that it is the Chthulucene that more inclusively and accurately tells the story of humanity's, and all beings', circumstances. It is a timescape—situated in the past, present and future—wherein the multiple species of survivors, victims and refugees of the Anthropocene construct intertwined *tentacular* existences and thrive during mutually reciprocal states in an ecologically reconfigured world.

Figure, Ground, Surround

As we are exploring how engagement and informational access course through learning as rhizomatic pressings-forth, it is the nature of what happens to thinking that spurs interest in discovery of concepts. Learning events are situated in a pedagogical assemblage that includes the bootstrap as evidence of both human interjection and a capacity to leverage, in Deleuzian parlance, what is real, virtual and actualized (Deleuze, 1966/2011).

An articulation of riff is enriched by Deleuze's conceptualization of the *event*: "a garden, a chair, the great pyramid, a collision with a bus, Adam sinning, a concert⋯" (Williams, 2011, p. 82). Events signal a "set of singularities . . . [as] turning points and points of inflection; bottlenecks, knots, foyers, and centres; points of fusion, condensation, and boiling; points of tears and joy, sickness and health, hope and anxiety, 'sensitive' points**"** (Deleuze, 1969/1990, p. 52). Indulging spontaneity, tangentiality and inspiration in learning, we can perhaps say both that riff *events* and that *the event* riffs. In its momentary appearance, "it's the chance we must seize" (Deleuze, 1990/1995, p. 170).

In *City as Classroom,* students are encouraged to learn to differentiate between "figure" and "ground",[3] introducing the early 20th-century psychological work of Edgar Rubin as a study in exercising perceptions. The structural relationships of any given situation are examined by recognizing what scrambles to the forefront of our attention, which is "figure," while "ground" becomes backdrop (McLuhan et al., 1977a). Although a "figure" might immediately recede into "ground," then reverse again, the components (lines, shading, sounds) of figure and ground may be simultaneously detectable by the viewer: "Therefore the ground, or underlying structure, of a situation provides the conditions for experiencing any part that presents itself as figure" (McLuhan et al., 1977a, p. 14).

Inattention to the "hidden ground" of sound, representation, technology and media takes place because its familiarity has resulted in us no longer "paying it any conscious attention" (McLuhan et al., 1977a, p. 19). A hidden ground of media exemplifies how technology, too, may elude notice. When McLuhan (1994) posited in 1964 that "all technologies are extensions of our physical and nervous systems to increase power and speed" (p. 90), he understood that humans do not exist independently of their "tools." McLuhan was suggesting both that there is agency in the technologies used by humans and that humans are merging with their technologies by extending

[3] See https://www.youtube.com/watch?v=7f1G6Nx5VDw

themselves in prostheticity. The nature of these mediated relationships aligns with Sharon's (2012) typology of the posthuman, which features four manifestations in biotechnologies: liberal, dystopic, radical and methodological. The extension of human function through technology as prosthesis may alternately be viewed as bringing more comfort and leisure to human existence (the liberal), creating the conditions of our human demise (dystopic) or providing to humans the tools that overcome tyranny during future revolution (radical). The category of methodological posthumanism is aligned with the riffologic project as an advancement of conceptual frameworks in both science and technology, and in the adoption of tools "that can better account for the networks and zones of intersection between the human and the non-human" (Sharon, 2012, p. 6).

In riffologically methodologizing the posthuman, we expand our purview beyond the anthropocentric concerns of McLuhan's use of both figure and ground to propose a further layer of consideration for analysis which we term *surround* (Stevens & Wainwright, 2019). Interchangeably, figure becomes ground and hidden ground (by its familiarity); ground becomes figure; and surround encompasses materiality that is figure, ground, hidden ground, and all that is largely imperceptible to humans. We conceptualize surround broadly we now narrow our interest to its enfolding of entities, features and resources that have been displaced, destroyed or reconstituted in a centuries-long capitalistic orgy of destruction imposed on ourselves and all matter. Surround's inclusion alongside the figure/ground paradigm permits us to better recognize, among other things, the extent of ecological damage caused by urban development, anthroturbation (human tunnelling) and technofossils (plastics, aluminum and the cement used to human tunnel, etc.). Surround provides context for consideration of matter to which we may be largely inattentive because it does not serve capitalistic gain.

Technological Assemblages

McLuhan et al. (1977a, 1977b) promoted figure/ground analysis in order to hone perceptions to solve problems. Figure and ground are observable to humans, each alternately creating territory and, in turn, reconfiguring territory within binary relationships. However, Harman (2009) deems "figure and ground" to be confining and relegated "to the sphere of human perception" (pp. 119-220). A conceptual surround is less apparent to humans and is instead attuned to intensities and forces. It introduces spatial depth to our considerations. By bringing into assemblage the functions of figure, ground and surround, we attempt to ontologically re-conceptualize, re-group and re-intensify our efforts to decentre the human. We are relying on the ability of the assemblage to potentially unleash realizable force, as demonstrated by the oft cited "man-horse-weapon" configuration, which brilliantly illustrates all that these interrelationships impel.

Deleuzoguattarian nomadic "innovations in war" include "technological elements ⋯ the saddle, stirrup, horseshoe, harness, etc." (Deleuze & Guattari, 1980/1987, p. 404), all maximized in assemblage. Tools may become weaponized as a result of speed—not merely absolute speed, but its expression as well (DeLanda, 2016, p. 75).

The galloping horse ever increases its pace once spurred by a rider prosthetically attached to his mount through feats of technological engineering (saddle and stirrup). In turn, the rider augments the inflicted damage of his weaponry by supplementing the speed of his mount with his own physical strength in order to maximize his weapon's velocity—its tip sharpened by technological means to a degree befitting its deadly intent.

What Deleuze and Guattari consider "innovation," McLuhan (1994) recognizes as "disruption" that catalyzes performance. McLuhan (1994) posits that:

> unless there were such increases of power and speed, new extensions of ourselves would not occur or would be discarded. For an increase of power or speed in any kind of grouping of any components whatever is itself a *disruption* [emphasis added] that causes a change of organization. (p. 90)

Social Assemblages

Hypercity comprises assemblages of the physical, the social, the technological, the human and the animal, the organic and the inorganic. The hypercity exists in sites of anthroturbation, for example, subway systems, which are far more than spaces occupied by human beings shuttling to their destinations. Multiple material features contribute to subways' transportation functions, including platforms, rails, electricity, tunnels, plumbing and turnstiles. There are also life forms dwelling in these subterranean spaces that include, but are not limited to, moulds, mildews, viruses and rodents, which complexify an elaborate ecosystem beyond what has been a traditionally anthropocentric gaze. So complex is this hidden life that as much as half of the DNA found in New York subways remains unidentifiable to human categorization (Afshinnekoo et al., 2015). Toronto's sewer systems intersect with its subway systems, at times creating spillages of human waste and weather-related effluents. In these complex networks, humans, trains, power, fresh-water**,** raw sewage and storm run-off all may converge and diverge (Bharti, 2018). The innumerable elements forming a subway's (eco)system offer opportunities for learning from everything in one's environment.

Alfred North Whitehead pioneered realist conceptualizations of nature as independent of the human mind, engaging metaphysical speculation to overcome what he considered an error of modern Western thought. He identified this oversight as the separation between *phenomenological* interactions and the "hidden physical reality" of the natural world (Shaviro, 2014, p. 2). Whitehead (1920/2004) explains:

> The reason why the bifurcation of nature is always creeping back into scientific philosophy is the extreme difficulty of exhibiting the perceived redness and warmth of the fire in one system of relations with the agitated molecules of carbon and oxygen, with the radiant energy from them, and with the various functionings of the material body. Unless we produce the all-embracing relations, we are faced with a bifurcated nature; namely, warmth and redness on one side, and molecules, electrons and ether on the other side. (p. 32)

Fully integrating the scientific properties of a fire with the sensation of its heat and the visual attraction of its "glow" is an apt example of all we wish to witness in the hypercity as space beyond cities, energizing sights, sounds and smells.

Networked Assemblages

Cities are traditionally recognized as busy, physical, geographic locations of populations, systems, interactions and intensities, all of which concern the doings of the "social agents" inhabiting them. In riffologically exploring the hypercity and the significant complexities existing between the human and nonhuman, we refer to DeLanda's (2013) consideration of realist ontologies as being committed to "a mind-independent existence of reality" (p. 1).

DeLanda (2016) suggests that social and biological identities are forged in the extensivity of spaces such as "the frontiers of a country, a city, a neighborhood, or an ecosystem; or . . . the defining boundaries of our own bodies—our skin, our organs' outer surfaces, the membranes of our cells" (p. 110).

Extensivity is described by DeLanda (2016) as quantitative features, such as length, area and volume, while the properties of the intensive are qualitative, expressing "speed, temperature, pressure, concentration [and] voltage" (p. 76). The former may be mapped as physical features that include coastlines and mountain ranges, while features of intensivity may include "zones of high and low pressure, cold and warm fronts, air masses moving slowly or rapidly" (DeLanda, 2016, p. 110).

Cities, as networked assemblages, are heterogeneous in composition, made up not just of human inhabitants but of all manner of matter. DeLanda (2016) lists city occupants as including:

> the material and symbolic artefacts that compose communities and organizations . . . the architecture of the buildings that house them, the myriad different tools and machines used in offices, factories, and kitchens; the various sources of food, water, and electricity; the many symbols and icons with which they express their identity. (p. 20)

Recognizing that a material world exists "independent of our minds" (DeLanda in Dolphijn & van der Tuin, 2012, p. 39) disrupts human reliance on anthropocentrism.

Leaving off

The city retains heat and muffles wind. It shades plants that grow, and it hosts water-flow systems that flush out detritus. The city acts as contaminant, as sediment and as a filter. The city is assemblage and is in assemblage.

Reconfiguring an understanding of community, a hypercity is a posthuman metropolis, a collectivist entity not just for humans, nor restrained by geographic location. It comprises networked relationships amongst humans, animals, organics, bacteria and networked technologies. Different classes of relationship engage these diverse ecologies in a hypercity: teacher, student, technology; soldier, stirrup, bow.

The *hypercity as classroom* is both a physical space and one of intensities. Human cities, even the ones into which McLuhan pitched media students, will stand as relics of times past, as ontologically distinct from the hypercity as is a 1960's gasoline-fuelled car from a fully networked, self-driving 2020 Tesla. McLuhan and Fiore (1967) forecast that "former 'cities' will be preserved, museum-like, as living monuments" (p. 72). The posthuman city brings into relief living matter that thrives within metropolises. We recognize the hypercity, and the nonhuman features comprising it, when navigating spaces on which trains travel. Long conditioned to the sight of railway tracks across city surfaces and in subterranean tunnels, we now turn our attention to the rhizomatic nature of their domains of microorganisms and subterranean life forms. In so doing, we are reimagining the *City as Classroom* which ushers in a "becoming curriculum without syllabi" (Stevens & Wainwright, 2016). This is a hypercity.

Our present Canadian educational milieu demands that teachers and students act revolutionarily in their work. The ecosystem is in a state of human-made crisis, and technological change is happening at such a rapid rate that every part of human economies is affected. Traditional, humanist strategies have largely failed to address environmental degradations, safeguard technological development from dystopic (even malevolent) application and ensure equitable distribution of income and wealth. Strong stances buttress resistance to commercialism and rampant consumption. Departing from the liberatory practices that traditionally link *human* democracy with *human* education, this emancipatory work necessitates a flatter and more worldly consideration of an *agency of all things*.

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