McLuhan:Technology::Being

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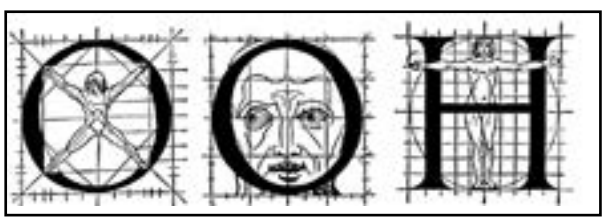
> [C]ulture is best seen not as complexes of concrete behavior patterns—customs, usages, traditions, habit clusters—as has, by and large, been the case up to now, but as a set of control mechanisms—plans, recipes, rules, instructions (what computer engineers call 'programs') for the governing of behavior. … [M]an is precisely the animal most desperately dependent upon such extragenetic, outside-the-skin control mechanisms, such cultural programs, for ordering his behavior.
>
> Clifford Geertz, *The Interpretation of Cultures* (1973)

As the names 'Facebook' and 'YouTube' suggest, we are increasingly experiencing our being via technologies of mediation. Brian Rotman has expressed this phenomenon as a process of 'becoming beside ourselves,'[1] which suggests the displacement of fixed notions of being by processual notions of becoming, and the way in which these processes are taking us beyond defined notions of selfhood. In this paper I want to explore McLuhan's foundational theories of mediation as they pertain to the increasingly relational sense of being emerging from the mediascape, and what the implications are for our ideas of learning, taking as my point of departure McLuhan's comment that media are effecting 'an evolutionary … [shift] from biology to technology' in which 'the body becomes the old hardware environment,' and 'media [the] means of extending and enlarging our organic sense lives into our environment.'[2]

Insights such as these derive from McLuhan's sense of media as embodied; as he put it, media are both extensions and amputations of the body, and, with the computer, that process extends to consciousness itself. In conjunction with this extension theory, McLuhan developed an environmental or ecological theory of mediation, bringing the two notions together in his 1967 tour de force, *The Medium is the Massage*, a book which is so brilliant in terms of its design that its importance for McLuhan's thought tends to be overlooked. As Jeffrey T. Schnapp and Adam Michaels put it in their recent study, *The Electric Information Age Book*, 'the turn from message to massage was more than a public relations gambit or an addition to the already extensive catalog of McLuhan puns. It signals two broader shifts. The first is in McLuhan's thought, from his prior insistence on … 'extension' to the more forceful concept of the 'total media work-over.' The second is in his language, from linear modes of exposition to a 'sort of post-alphabetic, non-syntactical language.'[3] These interrelated concepts of a bio-mediated environment that was post-linguistic in its structuration were of profound importance to McLuhan's articulations of media and their implications. The third fundamental principle of his theory of mediation was that the content of a dominant medium is a previous medium, a notion that provided this theory with a deeply historical element.



McLuhan had argued in *The Gutenberg Galaxy* (1962), that the effect of print culture had been to de-tribalize the oral community, the agency of this detribalization being typography itself, and hence the book's subtitle, *The Making of Typo-*

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graphic Man. In McLuhan's argument, typography, mediated by the book, created the 'individual,' a notion that emerges from the illustrations to Geoffrey Tory's 1529 treatise on typography titled *Champ Fleury*.[4] This already suggests that our notion of selfhood was a product of mediation, but it was a particular self that was produced in this process—the sovereign self, a concept which Tory alludes to via Leonardo's famous drawing of man as the universal measure of creation, such that the body is the repository of all knowledge. As we re-tribalize through electronic mediation, McLuhan argued, the sense of individuality that had been produced by the book would be displaced by the power vectors of mass communications. The sovereign self, as depicted here by Leonardo, is precisely that which is breached in the ontology of electronic mediation, when you experience your being via your 700 friends on FaceBook and when you share your identity with the tube.

These ideas raise profound philosophical questions, yet McLuhan was raising these questions at the very moment—half a century ago—when the linguistic metaphor was rapidly coming to dominate philosophies of structuralism, post-structuralism, and deconstruction. The longstanding repression of the notion of mediation (or, more broadly, technicity) within philosophical discourse meant that McLuhan's media theory was read in a culturalist context rather than in a philosophical context, and this despite the fact that he was famously claimed as the 'pop philosopher' of the 1960s. It is only now, as the linguistic metaphor fades from French philosophy, that McLuhan is once again coming into his own as a thinker whose theories of technologies of mediation raised significant and challenging questions about 'materiality, worldliness, shared embodied existence and human subjectivity,' as Ian James puts it in his recent study of *The New French Philosophy*.[5]

McLuhan was well aware that utterance, the fundamental act of mediation in his theory, was a problematical index of subjectivity, because all utterance is also outerance, thus displacing the subject from the embodied site of origin which brings that subject into being.[6] In this reading, utterance is a site of ontological uncertainty. Who speaks when I speak? Martin Heidegger famously responded that it is speech that speaks. Friedrich Kittler built upon these notions in his media theory, arguing that it is media that determine our situation. Peter Sloterdijk has continued this trajectory, stating that 'it is society that comes into being through media and not the reverse.'[7]

These comments raise a question of fundamental importance, namely the 'always already' of mediation: how can we think the *a priori* of media? One approach to addressing this question can be made through an analogy with the deconstruction of speaking operated by Derrida *et al*. While speech appears to have primacy over writing, and thus an originary status, speech is in fact always already 'written' insofar as it is coded rhetorically. But Derrida's analysis tends to connect Plato with Rousseau without taking into consideration the intervening two millennia (as Geoffrey Winthrop-Young notes), and does so through its invocation of the trace, which, in Kittler's analysis, is a metaphor that derives from one of Edison's more famous inventions.[8] This medialogical *a priori* raises the stakes of the questions posed here, since it suggests that mediation is intrinsic not only to our knowing, but also to our being; the questions posed are thus not only technological, they are biological. How can we understand mediation in this posthuman context, especially if we do not wish to invoke a linguistic paradigm, which, by implication, would limit mediation to the role of communication (at a point in history when our devices communicate more with themselves than they do with us)? To put it another way, how can we provide 'an analysis of history and of the present in terms of interacting 'grey' and 'green' ecologies—of the configurations that arise from the interaction of climate and computers, mammals and machines, media and microbes'?[9]

The approach taken by Bernhard Stiegler has been to follow the Derridean paradigm by invoking the always already of technicity, or what he calls an 'originary technicity.' As Ian James suggests, Steigler's work 'aims at nothing short of a systematic thinking of the technicity of life in general and of human life in particular.'[10] Steigler argues that philosophy established 'a hierarchy between *episteme* (knowledge) and *tekhne* (productive technique, all art and artfulness, including that of language),' based on the notion that 'foregrounding the importance of *tekhne* rather than episteme in philosophy would lead it into sophistry: the privileging of skillful or rhetorical use of language.'[11] Stiegler's *Tech-*

nics and Time, published in 1994, invokes the myth of Epimetheus in order to convey both orginary technicity and the philosophical forgetting of *tekhne*. Epimetheus was assigned by the gods to give each creature a defining trait. Alas, he forgot about humans, and so had nothing left to give them; fortunately, his brother, Prometheus, came to his and our rescue, stealing the gift of arts, or *tekhne*, and fire, from the gods, and giving it to humans. This myth, argues Stiegler, suggests both the forgetting of *tekhne* within the history of the human *and* the defining nature of *tekhne* for the human.[12] As Nathan van Camp writes, 'Since for Stiegler, the human is constituted through its exteriorization in technical objects, its origin cannot be explained in either purely transcendental terms by appealing to, for example, spirit or language, or purely empirical terms such as genetic evolution.'[13] What Stiegler seeks to argue, again according to van Camp, is a 'structural coupling of the human and technics that makes the constitution of the one impossible and unthinkable without the other.'[14] For McLuhan, this coupling is utterance, which constitutes interior and exterior at the same moment. Stiegler, however, is reluctant to understand the body as a technics (such that the gift of Prometheus would be technological embodiment itself, and thus the relevance of his punishment). McLuhan's notion of discarnation, or extension that is also amputation, captures the paradox of this form of embodiment that is experienced externally to ourselves, via our technologies, or outerances, a process which renders us *corporate*—the body we share is not our body, yet it embodies us.

Further differentiating Stiegler's position from McLuhan's is Stiegler's refusal to abandon language as primal signifier; instead, he argues that there is 'the need, today, to forge another relation to technics, one that rethinks the bond originarily formed by, and between, humanity, technics, and language.'[15] The inclusion of language in this listing suggests it has a status separate from technics. McLuhan, however, proposed more radically a human-technological interface, that of the *mechanical* bride (to cite the title of his 1951 book); that of *typographic* man. For Stiegler, 'what makes humans distinctive *as* humans is their ability to conserve the past through the meanings sedimented in the materiality of technical prosthetics and to project this past into a future (in a way which constitutes the present as such).'[16] For McLuhan, this notion of a '*redoublement épochale*'[17] is intrinsic to the concept of mediation itself.

Through the notion of an 'originary technicity,' Stiegler's philosophy of technics raises the question of a 'deep history' of media. That is, if we argue the always already of media, how can we conceptualize this notion historically? This is the question posed by the notion of 'deep history,' which seeks to free history from its dependence on written evidence, and thus poses a mediatic question similar to the one we have been considering thus far. The chief proponent of deep history is Daniel Lord Smail, whose book *Deep History and the Brain* proposes to coalesce his thesis around 'biology, brain and behavior'[18] in order to produce 'narrative continuity between prehistory and history' (5). In the mediatic context, these concerns have been pursued through the notion of media archaeology, though a deep history of media archaeology would go beyond researching the objects of mediation to the idea of mediation itself. Smail's notion of deep history is useful because it effectively seeks to extend the notion of history from writing to other forms of mediation, though it is curiously dead to the idea of mediation itself. Smail's greatest insensitivity is his inability to understand the human as always already mediated. The 'English language,' he writes, 'does not have a word for the category that consists of all things that encode information about the past. So what shall we call these things, if not documents. *Artifact* could do, except one balks at the idea of describing a gene or a phoneme as the product of handiwork' (48). But surely one could describe both gene and phoneme as forms of mediation. This is precisely what information theory now proposes, as Smail acknowledges, though without realizing the implications for his own project: 'Modern DNA,' he writes, 'is uncannily similar to an edited text. It consists of lines of code, written in an alphabet of four letters, that faithfully reproduce[s] an original' (9).

But Smail wishes to go further than the 60,000 years of 'modern linguistic capability' (57); he wishes to argue against the notion that 'a consciousness of history is a pre-requisite for historicity' (57), stating that the 'insistence on the written is a patronizing denigration of the oral, a persisting and blind denial of the fundamental role of memory as an archival and historical medium in all Postlithic societies' (59). And thus we arrive at the medium, except that for Smail, the medium is not the message, and so he can state

with splendid naïveté that 'to write a natural history of the earth is to imagine that all the events of the past four and a half billion years could have been captured by a video recorder capable of tracking events in all their minutiae' (70).[19] The gap that Smail seeks to bridge has already been bridged by the philosophy of mediation. On the one hand, Smail wishes to decenter the human from the historical, much of his book presenting itself as a diatribe against the 'eminent persons' theory of history; on the other hand, he is reluctant to decenter the sovereign self, such that it merges with the technicity that is the focus of his study. Yet this was the nub of Harold Innis's great work *Empire and Communications*, which extended the notion of history vastly beyond writing, a work that became one of the major points of reference for McLuhan's own work. And McLuhan extended that work precisely in the direction that Smail wishes to follow, namely into the brain and its environmentalisation through the medium of the computer.

The sticking point for Smail is the notion of cultural evolution. Smail argues that the notion of an accelerated cultural evolution simply repeats the schism between 'the time of biology [and] the time of history' (86), because it implies that human history is different from pre-human history, although he is in sympathy with Clifford Geertz's notion that culture be understood as a set of control mechanisms that operate similarly to computer programs (quoted as the epigraph to this paper), as well as with the idea that 'things have their own social lives' (103) and that 'discourses developed by record-keeping bureaucracies serve to frame people and things' (104).[20] What troubles Smail is acceleration, the notion that cultural evolution is accelerated evolution whereas Darwinian evolution is slow, since this once again appears to be reproducing the divide that he is intent on overcoming.

Smail's desire for a 'unified theory of cultural evolution' (101), one that combines slow with accelerated evolutionism, has in fact been put forward in a revised notion of Darwinianism theorized by microbial taxonomist Carl Woese. Through taxonomic research spanning decades, Woese was able to discover an unknown domain of life, the archaea, whose existence caused him to question the verities of Darwinian evolution.[21] The implications of Woese's research is that Darwinism was an interlude in the evolutionary process; it was preceded by a period of horizontal transfer, where the entire *bios* advanced as one. With the dominance of *homo sapiens*, Darwinian evolution is coming to an end, and we are returning via cultural evolution to horizontal transfer, but in the cultural model, technology shares the field with biology. In this era, the rules of Open Source sharing will be extended from the exchange of software to the exchange of genes, as Freeman Dyson has compellingly put it.[22] Even Smail concludes that '[c]ulture, in some fundamental sense, has been revealed as a biological phenomenon' (154). Thus, it is wrong to say that 'biology gave way to culture with the advent of civilization' (155). Rather, 'Civilization *enabled* important aspects of human biology' (155).[23]

Smail's notion of deep history allows for the conceptualization of humanistic learning on a broad basis which reflects the shift to the digital that is now taking place within academia—in effect, Smail is giving us an information theory of history without the information theory. Friedrich Kittler has identified the shift toward the informatic as one of the most profound in the history of learning. Noting that medieval universities were founded on the practices of storage, transmission, processing and recording, he argues that they in fact constituted 'a complete media system.'[24] This unity was broken apart by the invention of the printing press and the concomitant rise of nations (a point McLuhan makes in *The Gutenberg Galaxy*). The press divorced the processing of texts from the activity of learning, and nations took over the rights to publication from universities, Francois I (the Francois for whom Geofroy Tory produced *Champ Fleury*) 'ordering two copies of each book to be stored in his royal depot legal,' thereby devaluing the wealth and subverting the monopoly 'of medieval university libraries' (247), since the 'production of modern subjects (in the Cartesian sense) required their extrication from the older guilds' (247). Hence the instrumentalization of education, according to Kittler, which is now coming to an end with the ascendancy of the computer; as Kittler puts it,

> universities have finally succeeded in forming once again a complete media system. … [T]he computer processes, stores, and transmits whatever data it receives, whether textbooks, measurements, or algebras. … For the second time in eight centuries, the university is technically uniform simply because all departments share one and

> the same hardware. … Even the humanities' knowledge volatilizes into software libraries. Furthermore, whereas the book-based humanities encountered difficult problems when trying to store or address images, animations, and sounds, computers do not simply record such data but address and process them. The methodical integration of studies in language and music, film and poetry may begin' (249-50).

Of particular note is Kittler's comment that '[w]hen the … humanities do not deal with man, their topics are cultural technologies such as writing, reading, counting, singing, dancing, drawing. … For the humanities, there is nothing nontechnical [now] to teach and research' (251). This is so because ontology, according to the argument I have been making, has fused with mediation—we mediate ourselves. In this scenario, Smail's concerns are addressed by the fact that 'the so-called sciences and technologies, far from dealing with ahistorical truth, are involved in history simply by making it' (251).

Katherine Hayles has noted that '[t]he regime [of computation] reduces ontological requirements to a bare minimum. … [F]ar from presuming the 'transcendental signified' that Derrida identifies as intrinsic to classic metaphysics, computation privileges the emergence of complexity from simple elements and rules.'[25] The questioning of technology, as proposed by Heidegger, here takes on the core function that motivates interdisciplinary research and teaching. Far from being instrumentalist, this questioning probes our being in the world, since the nature of computational tasks require that they be distributed across a broad global network, which at once decenters the sovereign self (because communication takes place more often between computers than human subjects) and redefines it relationally.

This may sound like a proposal for digital humanities; however, I am concerned about the way in which 'digital' has become the contemporary mantra. The alphabet, after all, is digital. What I am proposing, instead, is a cultural analytics or, to use McLuhan's term, 'pattern recognition,' that extends from textual criticism to the philosophy of software. From the Kantian notion of reason as the regulator of university discourse, to the culturalist arguments of the Humboldtians, cultural analytics proposes that digital technologies are now poised to assume the role of producing subjects who realize *Bildung* (self-cultivation) precisely in their awareness that they achieve their subjectivity in relationship to the world around them—'a shared digital culture' as David M. Berry puts it in *The Philosophy of Software*,[26] producing 'a *humanistic* understanding of technology, … which also involves an urgent inquiry into what is human about the *computational* humanities [and] social sciences' (21) because 'the project of humanity requires urgent thought … in relation to the challenge of a *computationality* that threatens our understanding of what is required to be identified as human at all '(21-2). The only challenge here, however, is to notions of the sovereign self; to understand what it is to be human in relation to the world around us, to decenter the human, strikes me as the greatest lesson that technology can teach us. As McLuhan once stated, '[i]n the sense that … media are extensions of ourselves … then my interest in them is utterly humanistic.'[27]

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Notes

1 Brian Rotman, Becoming Beside Ourselves: The Alphabet, Ghosts, and Distributed Human Being (Durham: Duke UP, 2008).

2 McLuhan, The Book of Probes, ed. Eric McLuhan et al (Berkeley and Hamburg: Gingko P, 2003) 111;155.

3 Jeffrey T. Schnapp and Adam Michaels, The Electric Information Age Book (N.Y.: Princeton Architectur-

al P, 2012) 67.

4 Geofroy Tory, Champ Fleury, trans. George B. Ives (N.Y.: Grolier, 1927).

5 Ian James, The New French Philosophy (Cambridge: Polity, 2012) 4.

6 Compare Mitchell and Hansen: 'Before it becomes available to designate any technically specific form of mediation, media names an ontological condition of humanization—the constitutive operation of exteriorization and invention. … The body, in sum, is a capacity for relationality' (xiii; order of quotes reversed). See Critical Terms for Media Studies (Chicago: U Chicago P, 2010).

7 Sloterdijk makes this comment in his acceptance speech for the Prix Européen de l'Essai (2008) given by the Fondation Charles Veillon in Lausanne in March 2009. Sloterdijk goes on to say that 'This is an idea that in its most stimulating version one takes from Marshall McLuhan, an idea which the vast majority of German intellectuals since the 1960s understood very badly—and, as a consequence, in my country, one doesn't really know even today what is meant by 'the medium is the message.' … It is especially an idea that, recently, has been apprehended with such precision by Niklas Luhmann that it is most often suggested, sadly, that one source it in the sociologist from Bielefeld rather than in the Canadian media theorist.' See Peter Sloterdijk, En Guise d'aveu, my trans. from the French version available at www.espacestemps.net/document8851.html.

8 Friedrich Kittler, Gramophone Film Typewriter, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford UP, 1999) 33.

9 Geoffrey Winthrop-Young, 'Cultural Studies and German Media Theory,' in New Cultural Studies: Adventures in Theory , ed. Gary Hall and Clare Birchall (Edinburgh: Edinburgh UP, 2006) 88-104; this quote 94.

10 James, New French Philosophy 61.

11 Ibid., 63.

12 Giorgio Agamben puts it another way. In The Open, he cites Linnaeus to the effect that 'man is the animal that must recognize itself to be human in order to be human. The sapiens in homo sapiens does not thus refer to man's intelligence in this reading as to the fact that humans have no defining features (the myth of Epimetheus) except for the fact that he knows that he is human.' See The Open, quoted by Nathan van Camp, 'Animality, Humanity, and Technicity' in Transformations 17 (2009), available at www.transformationsjournal.org/journal/issue_17/article_06.shtml.

13 Van Camp, 'Animality' n.p.

14 Ibid.

15 Stiegler, The Fate of Epimetheus, quoted by James, New French Philosophy 64.

16 James, New French Philosophy 67.

17 James 69, quoting Stiegler.

18 Daniel Lord Smail, Deep History and the Brain (Berkeley: U California P, 2008) 3.

19 Compare Smail's comment that 'History, like any discipline, like any system of thought, is constrained by the metaphors at its disposal' (77).

20 Compare Smail's comment that, 'as with cases like the Internet, the intentions of the original designer, to whatever degree they are achieved, can be utterly dwarfed by the unintended things that happen as we adapt to the ecology that has emerged from someone's tinkering' (110).

21 See Bryan Appleyard, 'Some Like it Very Hot,' Intelligent Life (May/June 2012) 56-61.

22 Freeman Dyson, 'Our Biotech Future,' New York Review (19 July 2007) 4-8; for a fuller discussion see the chapter 'Mechanical Brides and Vampire Squids' herein.

23 Compare Mitchell and Hansen, Critical Terms for Media Studies: 'The … concept of media … is a tool for excavating the deepest archaeological layers of human forms of life. It is our collective attentiveness to this deep, techno-anthropological universal sense of media that allows us to range across divides' (ix).

24 Kittler, 'Universities: Wet, Hard, Soft, and Harder,' Critical Inquiry 31 (2004) 244-255; this quote 245.

25 N. Katherine Hayles, My Mother Was a Computer (Chicago: U Chicago P, 2003) 23.

26 David M. Berry, The Philosophy of Software (Basingstoke: Palgrave, 2011) 20.

27 McLuhan, 'A Dialogue with Gerald E. Stearn,' in McLuhan: Hot and Cool (N.Y.: Dial, 1967) 294.