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McLuhan's Pedagogical Art

This essay presents some of the salient ideas that have come out of the early writings of Canadian media theorist Marshall McLuhan whose work has been enjoying a renaissance since the mid 1990s. This renewed popularity coincides with the cultures of the internet and may be due to the fact that the central role played by communication technologies and the digital media in creating new spatial, temporal and social compressions seems more obvious today than it did fifty years ago when McLuhan was writing about such changes. Even though McLuhan's work predates the digital, he was able to recognize the value of studying these new forms of mediation and their ecologies. While McLuhan's work did not provide policy makers with concrete recommendations, and while he did not leave communications scholars with a theory of the media, he nevertheless did provide us with radical interdisciplinary methodologies to study the media and to devise questions for thinking through media technology in the context of globalization.

Let me begin by situating McLuhan's intellectual influence in Canada since it will illustrate how he viewed culture as a dynamic and integrated ecology. While he was commissioned by the U.S. National Association of Educational Broadcasters (NAEB) under the Pentagon to produce a new high school curriculum (a plan that was never adopted), the Canadian government never formally invited him to develop policy recommendations or research documents. While he did exert a massive influence over many of Canada's most esteemed artists of the sixties and seventies (from Glenn Gould to Michael Snow to Margaret Atwood) as well as an entire younger generation, he was less influential when it came to governments. In fact, McLuhan's contribution might be located in terms of a critique of federal cultural policy. When the Massey Commission published its report on culture in the early fifties,[1] McLuhan wrote a short scathing review of it for the University of Toronto Bulletin. He was angered by its segregation of popular culture from Canadian "'kulcha," by its insistence on defining the arts in Canada in terms of hermetically sealed "museumified" high art, and by its retrenchment from U.S. culture. Given that public television was being established in Canada at that time, it was clear that – like it or not – the "electronic bride" with its "cornucopia of American surrealism" was to be an inherent part of Canadian life. McLuhan set about expressing his disapproval by writing a long poem called "COUNTERBLAST" very much inspired by Wyndham Lewis's 1914 magazine *BLAST*. McLuhan's

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[1] The Royal Commission on National Development in the Arts, Letters and Sciences, referred to as the 'Massey Commission', was established in 1949 and produced a now famous report on how to best develop culture in Canada.

magazine was self-published (1953) and was eventually published as a collaboration with the graphic artist Harley Parker by Random House in 1969. It was made up entirely of headlines; here is an excerpt:

Oh Blast:
The Massey Report damp cultural igloo for Canadian devotees of Time and Life;
Oh Blast:

Nursery politics and Henry Goose on the Loose. The cringing, flunkey spirit of Canadian culture, its servant-quarter snobbishness
resentments
ignorance
penury

Ottawa tomb of talent
fount of dullness
snorkel centre of underwater
thought and orders in council

The Maritimes
Impoverished little empire that breeds
Eager Executives for all the
Rampant Empires: Daily Express
        Imperial Oil
        Bank of Montreal

Western Canada
for its meekness in filling the coffers
of Bay Street

French Canada
Locked in the double talking
Seventeenth century Bosom of Pascal

Bless:

The Massey Report,

Huge Red Herring for

Derailing Canadian Kulcha while it is

Absorbed by American Art and Technology

Bless:

Massey-Harris farm machinery, Canada's

REAL contribution to Culture. (McLuhan 1969)

McLuhan's principal complaint was that the Report was too rigid in its definition of Canadian culture. For example, it did not include sports – most especially hockey ("art on ice, our one contribution to international culture"). Was McLuhan simply being ironic in his praise of farm tractors or hockey players as Canada's great cultural contribution? He was certainly being satirical, yet, he was also seeking to foreground the way that culture was being defined in exclusionary terms as high art. For McLuhan, who was a trans-nationalist *avant-la lettre*, such a definition would only further erode cultural diversity and make Canada all the more susceptible to absorption. Instead, McLuhan proposes an image of culture and of Canada that is more open to the cultural interface and connected to electric culture. The reality for Canadians is that ninety percent of the population lives within one hundred miles of the U.S. border. While Canadians are not citizens of the United States and we have a different constitutional struggle, the United States is part of our culture through the 'global theatre' (i.e. the media) which mediates our identities.

The desire to create a pluralist and culturally diverse society is what McLuhan admired about the long time leader of the Liberal Party, Pierre Elliot Trudeau. Trudeau was the architect of a bilingual cosmopolitan nation. His pluralist mandate for Canadian federalism was to be found in the official languages act (1969) which mandated bilingualism and the Charter of Rights/Constitution Act (1982). While McLuhan in general viewed nationalism as a form of parochialism given the way that new technologies were opening up the world to a new global order (c.f. McLuhan and Zingrone 1995: 233-269), Trudeau was the kind of nationalist he admired. He had reviewed Trudeau's book, *Federalism and the French Canadians* (1968) for the *New York Times* and the two became friends shortly after that. Trudeau was a guest of honor in 1977 at McLuhan's famous Monday evening seminar held at the Coach House at the University of Toronto. Both had much in common: they were mystic Catholics interested in Teilhard de Chardin; and each believed that Canada in its pluralism had a strong destiny that was separate from the United States and from Europe.[2] The idea of Canada as a "multicultural mosaic" (the Liberal govern-

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[2] Exchange with B.W. Powe, June 2005.

ment's cultural mandate for a pluralist society in Canada that included Québec) was certainly in-flected by a McLuhanesque vision of a technological nation (Powe 2007). While McLuhan often offered Trudeau advice on his media persona as well as other technological issues,[3] his suggestions were never directly heeded.

McLuhan's media studies were not geared towards governments, but towards creative enterprise (mostly artistic) and more fundamentally towards educating the public about the centrality of the electric media in their everyday lives. In fact, we can read all of McLuhan's books as belonging to a larger project for media literacy very much in the same vein as Cambridge English Studies where he studied. Given the importance of communications and technology to the Canadian Nation, this task was enormously important.

McLuhan's writings of the forties and fifties are considered by many to constitute his most important contributions (Stamps 1995; Theall 2001; Marchessault 2005). This body of work along with the writings of George Grant, Harold Innis, and Eric Havelock has helped to establish a distinctly Canadian intellectual tradition in cultural and communication studies. This distinct tradition is characterized by "a discourse on technology" (Kroker 1984; Charland 1986), a discourse that sees technology as constitutive of social and psychic space. Here is where we can begin to discern McLuhan's methodology for studying the media.

Pedagogy

McLuhan is first and foremost an English professor. He was a conservative if not a stubbornly anti-modern man of letters and satirist who never drove a car and did not watch television (Marchand 1989). It is crucial to understand that his concept of the media, a term he made famous, begins with an awareness of the materiality of language, with language as *techne*. It is this passion for the beauty and the organic existence of language both written and oral that sets McLuhan's writings on the media apart from the more empirically driven approaches that came to characterize the North American social sciences in the 1950s and 1960s (Carey, 1983). McLuhan's oeuvre (both his writings and oral communication) can be interpreted in terms of a deeply and consistently pedagogical project. His career encompasses the multiple meanings of the word project: the process of creating, the performative aspects of speech, refracted light, psychological transference, a course of action, a community of making.

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[3] When Trudeau was having trouble with student strikes, McLuhan advocated a small get together (five to six students) for an informal discussion on television that would be more suited to the medium than debate or direct address to cool things off. He also suggested that Trudeau shave off his beard at one point – it was too cool! (Marchand 1989: 223)

From his early years at Cambridge in the mid-thirties, McLuhan would use the artistic process and the learning process interchangeably. Learning is a creative activity, an act of the imaginative retracing of experience, of making experience visible. McLuhan understood that aphorisms, paradox, and collage represent a broken knowledge and, as such, invite further speculation and participation. In "Cogito Interruptus," Umberto Eco has maintained that the technique of radical juxtapositions, "a technique common both to the insane and to the authors of a reasoned 'illogic'," has as its prime virtue and difficulty the fact "that it is ineffable" (Eco 1986, 222). Books based upon radical montage tend to see the world in terms of symbols and symptoms. For Eco, McLuhan's books are impossible to summarize or to evaluate because as readers we can make our way through one particular line, but, like novels, they exceed their readers. Indeed, McLuhan's books are filled with multiple intermedial data – comics, railway, printing press, the automobile, telegraph, typewriter, television, sunglasses etc. – which take on meaning through radical juxtapositions. This is an aspect of McLuhan's work that is often misunderstood. He views knowledge as necessarily always partial and always grounded in the senses, and in dialogue with others. His interpretive methodology grows out of criticism rather than theory because he wishes to address what is contemporary, present and always in process.

For example, McLuhan takes his Cambridge teacher F.R. Leavis's concept of living culture to heart in *The Mechanical Bride* (1951) by "showing the community in action." Following Leavis, he makes a case for a new kind of media education. Against the *Great Books of the Western World* series, organized by Mortimer Adler in the late forties, he directs attention to "the unofficial instruction carried on by commerce through the press, radio, movies." The *Great Books* project seeks to counter this unofficial instruction with grand ideas but, in fact, merely represents "an unintentional reflection of the technological world" (McLuhan 1951: 43). The media cultures have come to be "the only native and spontaneous culture in our industrial world" (McLuhan 1951: 44). For McLuhan it is by going through the popular cultures of the present, with "the particulars of contemporary existence" that one can converse with the great minds of the past. Thus he calls for "a part-time program of uninhibited inspection of popular and commercial culture" that, until the present, has been entirely ignored in the schools and colleges. Finally, "the study of the great books would then be pursued with a fuller sense of the particularity of cultural conditions, past and present, without which there is no understanding either of art, philosophy, or society" (McLuhan 1951: 45).

While McLuhan does not wish to celebrate popular culture (on the contrary), he recognizes that without placing ideas in the historical and social context through which they continue to survive, they will have no effect on, or meaning in, the present. Like the adult literacy movement of the previous century that laid the foundations for English Studies, McLuhan wishes to engage

with readers and invite them to analyse the culture in which they are immersed on a daily basis. McLuhan's pedagogical project was to materialize the web of human relations (diachronic and synchronic) through radical forms of collage. He believed this approach was enhanced by electric media. One can read his collages and his stimulating and sometimes crazy homologies as motivated by a faith that everything is interrelated. The researcher's task is to devise ways of materializing, or excavating these hidden relationalities. For this reason, artists and the experimental methodologies of modernist art are absolutely central to McLuhan's research.

Art as Epistemology

McLuhan's work cannot be divorced from his immersion in the Catholic intellectual tradition, which includes Aristotle, Augustine and Aquinas. This is a tradition that in his interpretation gives pride of place to the poetic process and to artists. There is a whole line of artists that interest McLuhan in this regard: from Chaucer to Rabelais and Shakespeare, Poe, Coleridge, Mallarmé, Baudelaire, and, of course, the greatest writer of the twentieth century: James Joyce. Poetry is the privileged art form for contemporary poetry has healed the breach between art and science (McLuhan 1954a: 71). Language is the primary media, which he sees as a collective work of living art because of its connection to oral culture, to human speech, and to the temporal realm, and here is where we see the influence of the Cambridge New Critics (McLuhan 1954b). For McLuhan, the artist provides the source of great insight. Artists are the "antennae" (Pound) of the culture not because they are privileged humans or visionaries but because they take as their object human perception and cognition. According to McLuhan, everyone should use the methods of art to see through the mediated environment and to understand the epistemological biases created by technologies (McLuhan 1960: xiv). Art produces "anti-environments" that make visible the scaffolds and patterns of cognition through which the world is perceived. One of the most successful anti-environments of the modern period is Joyce's *Finnegans Wake* which is at once a history of writing and an invitation to awake from modernity and the instrumentalization of experience (McLuhan 1961: 263). Canadian intellectuals, McLuhan argued were especially well positioned to create new of forms of critical thinking. As a former colony of France and England, and because of the close proximity and distance from the last Empire (i.e., the U.S.), intellectuals working in Canada have a unique perspective on the world. The country's particular geography in relation to the U.S. has enabled it to keep an eye on things, and to function as "an early warning system," providing a model for anticipating future events (in Staines 1977: 226-48; c.f. *Dew-Line Newsletter* 1968-70).

Yet McLuhan's project is geared not so much to the future (even though he has been called a media "prophet") as to the present moment. For McLuhan, the inhabitants of the Western world of literacy should approach things with a keen sensory awareness and a desire (the Romantic dictum) 'to see things as they really are' through reflexive methodologies that draw upon modernist aesthetics. This interest in perception led McLuhan to interdisciplinary formulations, to an interest in neurophilosophy before it was formulated as a field. One of McLuhan's contributions to communication studies is a conceptualization of space as produced, of time as living culture, and of culture as living time. That is, he connected bodies to environments and spaces. For example, he drew attention to the architectural space of the school in the city, but also to the city as an educational space not simply filled with rhetoric, but constructed by it. Theorists of space from Henri Lefebvre to Edward Soja share this insight, and certainly Lefebvre (1991: 261, 286) was influenced by McLuhan's conceptualization of space as created and historical.

As noted earlier, in 1959 McLuhan was commissioned to develop a grade eleven high school syllabus that would introduce students to the contradictory aspects of the electronic media. McLuhan's media literacy proposal *Report on Project in Understanding New Media* (1960), while dismissed by the U.S. Congress, would eventually form the basis of *Understanding Media* (1964). Another media literacy project sprang from this first one and was published almost twenty years later in a book co-authored with his son Eric McLuhan and Kathryn Hutchon called *City as Classroom: Understanding Language and Media* (1977), a title that references the earlier essay co-written with the radical anthropologist Edmund Carpenter, "Classroom Without Walls." *City as Classroom* was rewritten in a prose that was far more accessible than the 1960 *Report*, while continuing to emphasize what is stressed so emphatically in his first book *The Mechanical Bride* (1951): the need to give students the analytic tools to understand the electric culture that is everywhere around them. The introduction to *City as Classroom* asks, "What's in a school?" This is not a rhetorical question but, in McLuhanesque fashion, asks students to consider the school "as a place of work," to analyze the meaning of work and of its placement, its layout and interior design within the built environment and overall design of the school. The authors go on to ask: "Does the community want you to be separated from the work force? Ask local leaders in business and education. Could you join the work force before you reach school leaving age? Contact your local labor union leaders and ask for their opinion of the school-leaving age in your area. Can you discover the reasons behind the legislation? Ask your vice-principal to explain the relation between school funding and school attendance. Do you and your (classmates) […] regard the classroom as a kind of prison? […] Do the days of your school life seem like "doing time" until you are eligible for the labor market?" (McLuhan / Huchon / McLuhan 1977: 60) *City as Classroom* investigates the relation between the room where classes are held and the experience of learning. It asks stu-

dents to hold a class in the teacher's lounge, to consider the design of desks and chairs, the idea and function of rows. This book, like all of McLuhan's work published in the seventies, received very little critical response. I would argue that such a book with its strong emphasis on material design and the architectural structures of learning is still, if not more, relevant in the age of dematerialized knowledge.

In effect, McLuhan's approach to new media is dialectical, taking into account both the materialization and dematerialization of educational systems as interrelated processes. While McLuhan recognized that the different uses of technologies will produce different kinds of products, he is ultimately not interested in how technologies are used but in the uses (which he called service environments), perceptions, behaviors, biases that technologies create. Thus, to the criticisms levied against him by James Russell of the National Association of Educational Broadcasters' Policies Committee that his 1960 *Report* on new media failed to address the impact of computers in the classroom, he explained that the computers were the classroom: "Post-digital computation returns to the pre-digital just as post-literate education returns to the dialogue. […] That is to say, any and all curricula are obsolete with regard to subject matter. All that remains to study are the media themselves, as forms, as modes ever creating new assumptions and hence new objectives" (Stearn 1967: 159). He was perhaps overstressing his point, but in the main he wanted to argue that the media needed to be an inherent part of the new curriculum—hence the urgency to design a curriculum for media studies in high schools. As he would explain to one of his staunchest critics, the neurologist Jonathan Miller[4]: "All I am saying is that any product or innovation creates both service and disservice environments which reshape human attitudes. These service and disservice environments are always invisible until new environments have superseded them. When we met last year, you seemed to concur as a neurologist with the fact that inputs are never what we experience, since any input is always modified by the entire sensorium as well as by the cultural bias of the individual." (Molinaro, McLuhan, and Toye 1987: 404)

Unfortunately, Miller didn't see the nuance in McLuhan's argument and wrote a very critical book (1971) that helped to launch some of the familiar accusations of technological determinism against McLuhan. While Miller misreads crucial aspects of McLuhan's ideas, he nevertheless raised one important question which he located as a central weakness in the media theorist's argument. McLuhan, he claims, does not reference the crucial debate between Noam Chomsky and Benjamin Lee Whorf with regards to the biological or cultural basis of language. McLuhan was certainly influenced by Whorf's writings as well as the Harvard radical anthropologist Dorothy Lee's observations on the influence of language on experience. He was also interested, as I noted earlier, in the machinations of the brain. As his comments above make clear, he would not see

Chomsky and Whorf in opposition to each other but rather as thinkers working on different environments, 'the entire sensorium as well as the cultural bias' that make up the human landscape. McLuhan's comment that 'the entire sensorium' modifies external data to make sense of experience (an idea no doubt influenced by Alfred Whitehead's process philosophy, an important figure for McLuhan) foregrounds the complexity of his notion of mediation. That is, mediation is a process of translation that involves both the biological and the cultural which McLuhan does not see working in opposition, in an either/or relation but in a complex and dynamic interface. He would develop this in *Understanding Media*, his most popular media guide, under the chapter 'Media as Translators'. Embedded in technologies are forms of power and imagination that are never simply neutral but are imbued with the ideological contexts they grew out of. Fundamentally, language is an integrated ecology: it is both a product of physical bodies and a complex environment. While McLuhan is critical of dialectical thinking which he thought reduced a complex world to a schema, he nevertheless used oppositions to think through the media and their effects on perceptual modalities: eye or ear, hot or cool, sequential or simultaneous etc. He would devise such creative oppositions with colleagues who were part of the Explorations Group, a seminar that he co-organized with the anthropologist Edmund Carpenter at the University of Toronto in the early 1950s.

Experimental Seminar

McLuhan, along with Carpenter, organized one of the first truly interdisciplinary humanities based research projects in North America – the Culture and Communication Seminar at the University of Toronto that ran from 1951-1953. This endeavor was accompanied by several interdisciplinary journals, *Explorations (1953-1959)* being the most famous. *Explorations* would publish writing by the group along with psychological studies of the media effects, experimental poetry, scientific studies, and urban studies. Initiated by Carpenter and co-edited by McLuhan, town planner Jacqueline Tyrwhitt and psychologist D.C. Williams, *Explorations* focused on media as an environment. While framed by the politics of Carpenter's radical anthropology, the journal was an experimental space of enormous diversity and interdisciplinarity for its period, including contributions by many established and new scholars across the arts, humanities, social and natural sciences. For this reason, the seminar and journal mark an important development for interdisciplinary research in Canada and, in particular, for the emergence of a tradition of media studies that would take as its focus medium specificity in a comparative context.

All of these activities eventually led to the establishment of the Centre for Culture and Technology at the University of Toronto which McLuhan ran for many years. It is this interdiscipli-

nary experience in the early fifties that would have a strong impact on the development of McLuhan's most productive and lasting formulations – the 'medium is the message', 'global village' and 'global theatre', 'centre without margins' and so on. These concepts which are discussed in the pages of *Explorations* grew out of a phenomenological approach to the media that was deeply connected to McLuhan's encounter with radical anthropology through Carpenter. During this time, McLuhan developed an understanding of culture that shifts from his earlier notion of culture as a static frozen landscape (a mechanical bride) to culture as an ecology (a galaxy) that is in flux.

If there is something truly unique and original in McLuhan's inquiry, it is that his project was marked by the meeting of television (live in the 1950s) and anthropology, by the formulation of television/media studies in terms of anthropology. McLuhan looked to anthropology for clues to comprehend electric culture as a new constellation of space-time relations. He drew upon a sound-based paradigm that was historically grounded and directly inspired by oral cultural traditions. From here, McLuhan would find a vocabulary and metaphors to describe the experience of the Electric Galaxy in terms not of visual space but a new multidirectional 'acoustic space'. This idea of 'centre without margins', of a space with no fixed boundaries, is a means to describe the phenomenology of the imploded de-realized space of the media, to describe an experience of living not with the media but in and through mediation.

Acoustic space would inform McLuhan's astonishing statement at the beginning of *Understanding Media*: "After three thousand years of explorations, by means of fragmentary and mechanical technologies, the Western world is imploding. During the mechanical ages we had extended our bodies into space. Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned" (McLuhan 1964: 3).

Here we find the analogy between the human nervous system and the wired planet (an expression that came in vogue after McLuhan's death in 1980) that is fundamental to his ecumenical belief that the media may form a new unity, a "global embrace" among all the people of the world. Does McLuhan really believe that time and space are simply abolished or have ceased to exist in this global embrace? The answer to this question is a qualified no. On the one hand, our experience of time and space has changed through the media as he writes in the same text: "The total field created by the instantaneous electric forms cannot be visualized any more than the velocities of electronic particles can be visualized. The instantaneous creates interplay among time and space and human occupations, for which the older forms of currency exchange become increasingly inadequate […] Both time (as measured visually and segmentally) and space (as uniform, pictorial, and enclosed) disappear in the electronic age of instant information" (1964: 138).

McLuhan is trying to rethink the visual dimension of space-time relations by employing a new framework that relies on the temporal quality of sound (Stamps 1995:151; Cavell 2002: 22). McLuhan's argument is that different technologies, depending on which senses are amplified, organize our experience of space-time differently. Hence, it is not that time has been banished but that it has been reconfigured through technology to become space-time. This is the experience of the global village by which McLuhan always intended "global theatre," emphasizing the fact and the performative elements of mediation (Carpenter 2001:244).

Global Action

Despite his hope that the media may produce a new 'cosmic consciousness', McLuhan was much more dialectical about this. The metaphor of a 'centre without margins' that electric media enable multiplies rather than unifies differences and produces highly diversified cultures. The global village is a noisy violent clash of differences. However, it is important to recognize that this spatial model is a cultural and not an economic one. Saskia Sassen is skeptical of McLuhan's thesis that the informatic media will produce a radical de-centering of power. Sassen's work on global cities argues just the opposite, that globalization has only strengthened global cities as centres of power: "The widely accepted notion that density and agglomeration will become obsolete because global telecommunications advances allow for maximum population and resource dispersal is poorly conceived. It is, I argue precisely because of the territorial dispersal facilitated by telecommunication that agglomeration of certain centralizing activities has sharply increased "(Sassen 2001:5). Sassen's focus on the production of financial services and innovation provides an important survey of how globalization has created contexts whereby new forms of cooperation and 'networked systems', have grown up between global cities like New York, London, and Tokyo. Such systems can often supersede earlier economic structures or containers like the nation-state. Yet, despite Sassen's claim that cities have specific histories that inflect how these transactions are articulated, her focus on the macroeconomics of global finance obfuscates the work of cultures inside and between cities. In this sense McLuhan is right: globalization has given rise to new kinds of resistance, dissent, new concepts of place and identity, networks of cooperation and interconnectivities between disparate groups around the world. This is what Michael Hardt and Antonio Negri have called the 'Multitude'. The most radical challenge to the hegemonic structures of Empire, they argue, is political solidarity across a plurality of networks and political movements – which is precisely "the living alternative, which grows within Empire" (Hardt and Negri 2004: xii). There is no better example of global village or global theatre conditions than these new forms of collective resistance and action which often employ art forms and performance. It is the connections

between the social and political networks enabled by a variety of different media technologies from community radio, grassroots newspapers, posters, mobile phones and the Internet – that, I would argue, highlight some of McLuhan's insights regarding new space-time configurations of the information economies.

From his first book *The Mechanical Bride: Folklore of Industrial Man* to the posthumously published *Laws of Media* (1989), McLuhan saw his own books as heuristic tools written to enhance the process, rather than the completed product, of discovery. Not unlike the work of Walter Benjamin, to whom he has frequently been compared (Stamps 1995), his writings are oriented around the archival, encyclopedic, and artifactual surfaces to draw out patterns of similarity, matrices, and semantic networks. McLuhan drew his insights from the Cambridge New Critics (Leavis and I.A. Richards especially), along with the philosophies of Nietzsche, Henri Bergson, Alfred Whitehead, and Martin Heidegger, all of them important influences on his pedagogical project. The key to any analysis of the media, always for McLuhan connected to the spaces and temporalities of the life-world, is a mosaic field approach characterized by radical juxtaposition, a multiplicity of perspectives, and discontinuity. The mosaic is able to capture a world in action, to engage with living cultures without reducing them to one point of view or linearizing them into any one theoretical framework. This is why many are finding McLuhan's work useful when it comes to making sense of non-linear digital cultures (Stevenson 1995).

While McLuhan's inability to engage in any meaningful way with political economy or structures of power must effect any consideration of his work, his formalist project is profoundly epistemological. It provides a vital pedagogical imperative for the interdisciplinary study of the media connected to living culture and everyday life. McLuhan was one of the first intellectuals to participate actively in the commercial popular media of television (many of his interviews are available online), and as a media expert, 'the professor' created a bridge between the public sphere of the media and the University. His goal was to raise consciousness to foster and encourage media literacy. He aimed, through his interdisciplinary writings, experimental publications and media seminars, to create a public discourse around the uses of information technology. He connected the survival of the planet to the realm of epistemology and innovative pedagogies grounded in sensorial experience. As he would write in the last lines of his last book: "The goal of science and the arts and of education for the next generation must be to decipher not the genetic but the perceptual code. In a global information environment, the old pattern of education in answer-finding is of no avail: one is surrounded by answers, millions of them, moving and mutating at electric speed. Survival and control will depend on the ability to probe and to question in the proper way and place. As the information that constitute the environment is perpetually in flux, so the need is not for fixed concepts but rather for the ancient art of reading the book, for navigating through

an ever uncharted and unchartable milieu. Else we will have no more control of this technology and environment than we have of the wind and the tides." (McLuhan 1988:239)

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