CAMBRIDGE AND TORONTO: THE TWENTIETH-CENTURY SCHOOLS OF COMMUNICATION

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Communication theory flourished at Cambridge and Toronto as a result of contemporary poetic and technological achievements being interpreted in the light of rhetorical "new criticism" based on ancient learning.

As the foremost twentieth-century schools of communication, Cambridge and Toronto were dissimilar organizationally, the former being a school of English, the latter being chiefly informal and interdisciplinary. At neither school was there unanimity of opinion nor uniformity of outlook, merely creative scholars whose collective insights about the processes of human communication far surpass those of all other universities in the Western world. The principal figures at Cambridge were I. A. Richards and F. R. Leavis and at Toronto, H. A. Innis and H. M. McLuhan. Cambridge was ascendant from about 1912 to the Second World War; Toronto, pre-eminent afterwards to 1980. At both schools the approach to human communication was linguistic, embracing the classical, medieval, and Renaissance periods and the languages of contemporary media such as advertising, film, radio, and the press. At Toronto H. M. McLuhan, the intermediary between the two institutions, gave the humanistic study of communication unequaled scope, depth, complexity and relevance.

On his arrival at Cambridge in 1934 McLuhan was struck by its immense vitality and "the alert awareness of the undergraduates themselves, their eager realization of the immediate relevance of their studies to the concerns of everyday living. ...Nobody could live in this atmosphere a week without sensing its actuality" (McLuhan, 1937, 21). There he encountered living models of excellence: "Richards, Leavis, Eliot and Pound and Joyce in a few weeks opened the doors of
perception on the poetic process, and its role in adjusting the reader to the contemporary world. My study of media began and remains rooted in the work of these men" (McLuhan, 1969a, xiii-xiv). Another living exemplar was Wyndham Lewis, who had done studies on popular culture and whom McLuhan describes as being "far too moralistic for my tastes. I greatly admired his method. Lewis looked at everything as a painter first. His moral judgments never interested me" (Stearn, 1967, 269).

It was his personal friend, Lewis, who had moved to Toronto, who was responsible for McLuhan's return to Canada (Assumption University, Windsor) in 1944. After his own move to Toronto, McLuhan collaborated from the mid-1950's onwards in books and mixed-media with another painter, Harley Parker.

The temper of the Cambridge English school was set at its outset in 1912 by Sir Arthur Quiller-Couch, who occupied the chair of English for more than twenty-five years, when he stated that "neither Oxford nor Cambridge nor any university on earth can study English literature truthfully or worthily, or even at all profitably, unless...by embracing itself to consider a living art" (McLuhan, 1937, 23). The result of the efforts of "Q" and others was that Cambridge students in the 1930's were looking at films and other forms of popular culture as things to be studied and understood as "languages." They were also interested in vernacular language, especially the idioms of popular speech, and in literary works such as Finnegans Wake, The Wasteland, and Pound's Cantos. The "new criticism" of I. A. Richards had had great impact, especially his books, Principles of Literary Criticism (1925) and Practical Criticism (1928). and at Downing College F. R. Leavis was completing Culture and Environment (1937).

At Cambridge the student began his or her study of English with Chaucer and proceeded as far as Eliot and Auden, in marked contrast with Oxford where in the 1930's the focus was on periods prior to Shakespeare and where English literature officially concluded in 1832 with the death of Scott. Oxford was a place which was "bogged down in Skeatism" and where, it is said, they even part their beards in the Anglo-Saxon manner,..." (McLuhan, 1937, 22). At Cambridge Anglo-Saxon had been separated from the English tripos and linked to the school of Celtic languages. There "the approach selected was to have the immediacy, the practical concern for contemporary expression, and its relation to the past, of the craftsman" (McLuhan, 1937, 24).

As a means of achieving its goal, the school, inspired by T. S. Eliot, reopened communications with the seventeenth century of Shakespeare and Donne and the alternative English tradition of which those men and Langland, Skelton, Jonson, Marvell, Dryden, Hopkins, and Eliot are a part. Up to that time the favoured English tradition was represented by the works of Chaucer, Spenser, Milton, Wordsworth, and Tennyson. When Eliot was invited to Cambridge to lecture on the metaphysical poets, "an undeclared guerilla war began amongst the dons and students as to whether the Jacobean or the Romantic period was the one to be 'loyal' to....with the Romantics in the position of the Spanish
'Loyalists'" (McLuhan, 1937, 24). F. L. Lucas, the self-appointed champion of "The Romantic Ideal," was one of the combatants, a man hostile towards the critical tendencies of the school. Another could have been Basil Willey.

One effect of the battle was to project the studies of the English school on a plane of contemporary significance. In McLuhan's words, "the vitality of English letters was immediately apparent to the dullest, in this atmosphere electric with opposing literary judgments" (1937, 24). The new critics insisted on the direct confrontation of the poem or prose: "It should, by continual insistence and varied exercise in analysis, be enforced that literature is made of words, and that everything worth saying in verse and prose can be related to judgments concerning particular arrangements of words on the page" (McLuhan, 1937, 25). This from I. A. Richards, the man noted for applying medieval rhetorical exegesis to literary criticism.

Derrick de Kerckhove explains that when the classical trivium was in vogue:

Grammar was the science of words and word arrangements (syntax), whereas dialectics concerned the proper arrangement of arguments; the former investigated etymologies and levels of interpretation of meaning (scriptural exegesis), and the latter applied the rules of logic to test the textual evidence against potential inconsistencies in meaning. Both dialectics and grammar concerned primarily the written word (though both also applied to spoken utterances) but rhetoric was evolved specifically for speech. Insofar as it was normally intended for live communication, the art of rhetoric could not really be learned or practised without including its intended public in the critical process. This was not the case for grammar or logic which benefited from paring down all contextual evidence to the minimum. This simple difference is at the root of rhetoric's slow disintegration and obsolescence during the growth of print technologies, and it also explains why communications did not really become a branch of learning until very recently. (de Kerckhove, 1981, 8)

It is no accident that rhetorical exegesis, the basis of the new criticism, re-emerged in an era in which spoken communications flourished as result of the introduction of the telephone, the phonograph, radio, and talking pictures. The idioms of popular speech abounded in the new media and in contemporary poetry and prose.

The new technologies were environmental in their effects, as Richards was well aware. He impressed on a young McLuhan the idea that the teaching of English consists of initiating the student into a living tradition, one that must include media studies:
'A serious interest in literature starts from the present and assumes that literature matters, in the first place at any rate, as the consciousness of the age. If a literary tradition does not keep itself alive here, in the present, not merely in new creation, but as a pervasive influence upon feeling, thought, and standards of living (it is time we challenged the economists' use of this phrase), then it must be pronounced to be dying or dead.

...Practical criticism of literature must be associated with training in awareness of the environment -- advertising, the cinema, the press, architecture, and so on -- for, clearly, to the pervasive counter-influence of this environment the literary training of sensibility in school is an inadequate reply' (I. A. Richards as quoted by McLuhan, 1937, 23).

When McLuhan took hold of Richards' idea of standards of living in relation to print and the newer media, he concentrated on the quality of life as determined by their sensory, psychic, and social effects, not on false distinctions between high and low or popular culture.

For Cambridge's new critics:

poetry and literature could be understood not only as instances of syntactical and narrative structuring, or as aesthetic interpretations of life and feelings, or as exhibits of culture and history, but as verbal strategies for change and metamorphosis....Adopting this new stance, the critic would suddenly find himself between the text and its implied reader looking for interactions of effects rather than entering into a solitary conversation with the text looking for interactions of meaning....By contrast with the dialectical varieties of New Criticism practised in most European and American universities which claim the status of scientific enquiry, rhetorical criticism naturally leads to non-specialist attitudes because it considers the written text as only one of many supports of communications. As a set of techniques for various kinds of persuasion, literature has much in common with advertising, cinema, radio, television, and other media. (de Kerckhove, 1981, 9)

Literature and other media are not only sets of verbal and imagistic techniques to be used for persuasion, but are also poetic forms of expression. For the Cambridge men, Richards and McLuhan, no kind of experience is, in itself, either "poetic" or "unpoetic."

From his Cambridge days onwards McLuhan's concern, like that of Coleridge, was with poetic vision as a process involved with ordinary experience. McLuhan asserts that:
it was Coleridge as much as anybody who hastened the recog-
nition of the poetic process as linked with the modes of
ordinary cognition, and with the methods of the sciences.
The very great effort he made to thread the labyrinth of the
arts and sciences compelled him to an encyclopedism unap-
proached since Francis Bacon. For Coleridge was convinced
that in the heart of the poetic process was to be found not
only the echo of human perception but the Filium Labyrinthi
which Bacon sought in vain. (McLuhan, 1969, 115)

It is, of course, McLuhan's unrivalled encyclopedism that presents the
greatest challenge to his critics.

He insists that artistic awareness is mandatory for the creative
analysis of the phases of human culture, pointing out that:

it has taken a full century to move from the stage of artis-
tic awareness of Edgar Poe to that of Siegfried Giedion.
Poe put crime detection on a scientific basis by bringing
into play the poetic process of retracing the stages of
human apprehension. It is likewise the procedure of Words-
worth's Prelude and Sterne's Tristram Shandy. And this pro-
cess of arrest and retracing, which has been consciously
followed by poets since the end of the eighteenth century
(when used by a cultural historian and analyst like Sieg-
fried Giedion) provides the very technique of empathy which
permits intimate insight into the processes and impulses
behind products utterly alien to our own immediate ex-
perience. (McLuhan, 1969a, 116)

It was the opportunity of learning about the very process of the actua-
lication of being, the poetic process, the crux of communication with
self and society, that drew this writer to Toronto in the 1960's.
There McLuhan himself was influenced profoundly by Giedion's Mechani-
ization Takes Command (1948) and Space, Time, and Architecture (1954)
which was, in McLuhan's words, "one of the great events of my lifetime.
Giedion gave us a language for tackling the structural world of archi-
tecture and artifacts of many kinds in the ordinary environment"
(Stearn, 1967, 270). Both he and McLuhan studied the environment as a
structural, artistic work.

In The Medium is the Rear View Mirror, Donald Theall suggests
that, like Francis Bacon, McLuhan:

is trying to 'read' the Book of Nature (which for him in-
cludes technology, history, and the total contemporary
world), or rather in post-Gutenberg electric age terms, to
make manifest the total environment....Just as Bacon moves
from reading the Book of the Spirit to reading the Book of
Nature and sees nature as something that can be exegeted and
analyzed, McLuhan examines the environment as if it were
some type of artifact -- a new nature turned art, parallel-
ing the nature that Bacon's day thought had become a work of
art. (Theall, 1971, 17)

Understanding the nature of oral and written cultures and our created
technological environments, past and present, can be achieved only by
using the multi-level, non-linear, verbal strategies of the poet.

McLuhan's strategy of cultural analysis is, according to Theall,
"an inheritance from the exegetical literary traditions of the past
filtered through Bacon to the New Criticism of the present....The use
of such exegesis for moral criticism of culture had evolved from the
so-called Cambridge School and its leader, F. R. Leavis" (Theall, 1971,
17 - 18). It would seem that of the two men, Richards and Leavis, the
influence of the former on McLuhan was greater than that of the latter,
particularly after the publication of The Mechanical Bride (1951).

In England, as Theall notes, "the Cambridge School gradually
generated a parallel interest in communications and media in Raymond
Williams who moved from an analysis of Culture and Society, through a
discussion of The Long Revolution brought about by the mass arts, to a
critical study of media in Communications" (1971, 18). Theall also
mentions the Centre for Contemporary Cultural Studies and its Director,
Richard Hoggart, who, in The Uses of Literacy, "examined the sociology
of popular arts with relation to British working class society. Both
Williams and Hoggart argue, in fact, for the use of the literary imagi-
nation in sociological analysis in ways surprisingly similar to C.
Wright Mills" (Theall, 1971, 18). Unlike McLuhan, the three men share
"a strong commitment to some modified Marxist position as the only
position consonant with the growth of the new society that must emerge
from the long revolution" (Theall, 1971, 18).

In emphasizing ideological theory, European communication studies
have become sidetracked, as have media theorists in the United States
who have become preoccupied with stimulus-response behavioralism. Re-
cently, in the Canadian Journal of Communication, Farrel Corcoran,
mentioning the writings of Antonio Gramsci and others, reminded us that
much of European "critical theory builds on the attempts of Marx and
Engles in the nineteenth century to discern another form of distorted
consciousness, that derived from the social and economic conditions of
existence, as the forms of thought and feeling within a culture gain
adherence among all other groups" (Corcoran, 1984, 46). What distorts
consciousness in the first place, as McLuhan demonstrates in The Guten-
berg Galaxy, is environmental technological conditioning, print being
the raison d'etre for all psychic and social change in the Western
world from the Renaissance onwards. Before print and mechanical tech-
nologies had destroyed the old feudal, agrarian world, created the
industrial plant, and absorbed the social system into the economic
system, the Europeans did not have industrialization to worry about.
Once its problems arose, however, communism and tribal socialism tended to be the preferred means of socially institutionalizing the industrial plant. But such ideological responses are secondary, not primary.

Straying even farther afield, Wilhelm Reich "took the individual mechanisms of Freud a stage further by suggesting that they can have a collective impact in the form of an ideology" (Corcoran, 1984, 54). Summing up, Corcoran states that "like other manipulatory theories of media, ideological theory has an impoverished conceptualization of the construction of individual consciousness within the total ideological process. The psychological issue of how ideologies are subjectively internalized is far from fully resolved in modern critical theory" (Corcoran, 1984, 52). He also mentions the introspective probings of Jacques Lacan who has lately muddied matters by reinterpreting Freud in the light of Saussurian linguistic theory.

If it is true that European communication theory is convoluted, then it is equally true that the American theorists are naive. They have become mired in behavioral, stimulus-response, manipulative folly, of which their emphasis on the behavioral effects of TV violence is a classic example. When American communication studies evolved in the 1940's, they were immediately hamstrung by the uncritical absorption and adaptation of stimulus-response psychology, the operant conditioning of B. F. Skinner, and by the Shannon/Weaver transportational view of communication (1949) which stresses the extension of messages through space from sender to receiver for the purposes of attitudinal or behavioral change. Shannon and Weaver regard all information transmitted unintentionally as "noise" interfering with intended signals or messages, thus ignoring the transformation of noise into new kinds of information capable of shaping men and society alike. Behavioristic research simply ignores the fact that human activity is a blend of conscious and unconscious elements conditioned by the formal characteristics of media quite independently of content.

In concerning themselves with mediated social definitions of reality (the power of the media to define reality through content alone), both American and European theorists reveal not only their lack of a satisfactory theory of consciousness, but also their unawareness of the thrust of McLuhan's aphorism, the medium is the message, that our social definitions of reality are an outgrowth of the structural forms of the media themselves whether the medium involved is speech, print, television, or the computer. To begin to understand the organization of private and corporate consciousness, we have to come to grips with the structures of the languages, verbal and nonverbal, through which we interiorize the external world and enter into a dialogue with it. In defining ideology, "in an epistemological sense to refer to the process by which we know the world, that, is, to the relationship between 'reality' and the various forms of consciousness to which it gives rise" (Corcoran, 1984, 48), Corcoran merely underscores the importance of the Cambridge and Toronto schools and the immaturity of their rivals.
The Canadian experience of being a marginal, pluralistic culture in an oversized, inhospitable environment has created a natural concern with the problems of communication, the partial solutions to which were found in the first half of this century in the application of electric light and power, Bell's telephone, Marconi's wireless, and in the introduction of airplanes and automobiles. Into such a stimulating milieu were born Harold Adams Innis (1894) and Herbert Marshall McLuhan (1911). After graduate study abroad, they eventually arrived at the University of Toronto where there was the intermingling of British, European, and American intellectual currents and the existence of the British collegiate system, factors which may have helped encourage independent thought.

At Toronto, McLuhan, in his historical emphasis on culture and technology, reacted against the bias of the Head of the English Department, A. S. P. Woodhouse, an eminent Miltonist and student of Irving Babbitt's, towards the history of ideas approach to literature. Seemingly following Oxford's pattern, the historically oriented honours English programme at Toronto focussed on Renaissance, Romantic, and Victorian literature. As an encyclopedic scholar with a background in those periods, McLuhan fitted in well there, but his very encyclopedism, poetic contemporaneity, and eventual mass popularity alienated his departmental colleagues.

Given McLuhan's introduction at Cambridge to the study of mass culture, it is not surprising that, as early as 1946 when he arrived at St. Michael's College, the interdisciplinary magazine, Explorations, "took shape during informal seminars at [his] residence...." (de Kerckhove, 1981, 9). In the 1940's he taught, expanded his investigations of culture and communications and did preparatory work on his first book, The Mechanical Bride (1951), one that attracted Harold Innis' notice.

McLuhan explains that "flattered by the attention that Innis directed to some work of mine, I turned for the first time to his work" (McLuhan, 1964, ix). From Innis, McLuhan learned "how to use the bias of culture and communication as an instrument of research. By directing attention to the bias or distorting power of the dominant imagery and technology of any culture, he showed us how to understand cultures" (McLuhan, 1964, xi). Aphoristically put, what McLuhan learned from Innis is that the bias of communication is the message of the medium. Papyrus is portable; stone or clay tablets are not. Thus the former medium created static, priestly bureaucracies; the latter wide-ranging empires controlled at a distance.

Like McLuhan came to realize, Innis knew that once he:

had ascertained the dominant technology of a culture, he could be sure that this was the cause and shaping force of the entire structure. He could also be sure that this dominant form and all its causal powers were necessarily
masked from the attention of that culture by a psychic mechanism of 'protective inhibition,' as it were...He knew what the pattern of any culture had to be, both psychically and socially, as soon as he had identified its major technological achievements...He knew exactly what the members of the culture would be ignorant of in their daily lives. (McLuhan, 1964, xii)

As the dominant technology of our present culture, the digital computer is the realization of the mathematical unity sought in the seventeenth century by Descartes, Leibnitz, and Newton. Just as we ignore the message of the microcomputer, relating to auditory-tactile interactivity and instantaneous cognitive feedback via electromagnetic, light-through luminescence, so we miss the meaning of computerized automation, namely social and economic equilibrium.

The computer reverses the centralist patterns of work and living characteristic of the age of mechanization and urbanization. Those patterns attracted the attention of eminent sociologists in the late nineteenth and early twentieth centuries. The same centre-margin dynamics that fascinated them also inspired Innis whose studies at the University of Chicago after the First World War occurred at a most favourable time. The work of Emile Durkheim, Max Weber, and John Dewey had fecundated a new group of economic and social studies that flowered in the writings of Thorstein Veblen, George Herbert Mead, and Robert Ezra Park. These men created an atmosphere at Chicago in the 1920's that attracted and inspired many able students. Most of these men had, like Innis, spent their youth in small towns. The speedy growth of the metropolis after the first war presented an inexhaustible subject for these sociologists, and much of their work was directed to urban study and analysis, using the small town as a basis for comparison and contrast. Innis tended to follow another pattern, though, as we shall see, he was deeply in debt to Robert Ezra Park. Durkheim, the late nineteenth-century founder of analytic sociology, dealt with whole populations. The Chicago school dealt with local communities. Innis is European rather than American in his choice of larger themes. From Park, however, he learned how to identify the control mechanisms by which a heterogeneous community yet manages to arrange its affairs with some degree of uniformity. (McLuhan, 1964, xiv - xv)

McLuhan calls Innis "the most eminent of the Chicago group headed by Park" (1964, xvi), and says that "instead of despairing over the proliferation of innumerable specialisms in twentieth-century studies [Innis] simply encompassed them (McLuhan, 1972a, vii). McLuhan also points out that Innis took advantage of an unique opportunity to study the Canadian economy. From that involvement he perceived that the
specialization and fixity of form inherent in a staple economy channels economic and social energies in singular channels that appear peculiar to those living in a more diversified and developed economy.

What occurs nationally and internationally as a result of centre-margin organization also happens regionally and locally, as Henry Fielding, Samuel Johnson, Laurence Sterne, and Charles Dickens observed in the eighteenth and nineteenth centuries when commenting on rural living versus that of bustling and sometimes dehumanizing and degrading London. The Chicago group, in short, has literary precursors who were well aware of the effects of urban specialization, commercialization, and industrialization on human existence. Men like John Dewey advocated adaptation to the new social and economic realities through such educational proposals as "learning by doing," a method designed to retrain essentially agrarian populations to meet the demands of a rapidly mechanizing society for specialistic factory hands.

Whereas the Chicago school examined the effects of urban centre-margin industrialization, Innis instead concentrated on the economic organization of a marginal, backwoods society dependent on the movement of staples and natural resources to world markets. For him the further transition from the history of staples to the history of the media of communication was quite natural, as McLuhan explains in Counterblast. When confronted with the subject of the pulp and paper industries, the economic historian of the fur trade, the railway, and the cod fisheries "found himself compelled to extend his researches to the trade routes of the mind and of public opinion," thus becoming "the pioneer of the social and political effects of the media of communication" (McLuhan, 1969b, 124). McLuhan is adamant that "the kind of understanding of social processes which Innis achieved is not shared by other historians" (McLuhan, 1972, vii).

In summary, McLuhan says that:

Innis learned from historical analysis that what Lusseyran describes as the private re-ordering of all the components of experience, as a result of a single sensory shift, occurs on a massive social scale with the introduction of technological innovation and the resulting new service environments thus created. ...What Innis indicates as a basis for social survival is nothing less than a reorganization of our perceptual lives and a recognition that the environments we witlessly or involuntarily create by our innovations are both services and disservices that make very heavy demands of our awareness and understanding. (McLuhan, 1972, vii)

Inspired by Innis, Giedion, the Explorations group, and by Kenneth Boulding's book, The Image (1956), McLuhan came to the sententious conclusion in 1957 that "the medium is the message," later producing varietal aphorisms using the puns "massage" and "mess-age."
Because they are the principal means of immediately orchestrating and uttering or outering our sensory beings and psychic experiences, vernacular languages respond quickly to sensory shifts brought about by technological change. New words, phrases, and expressions come into use, revealing perceptual biases subliminally conditioning thought. In discussing language and the revival of the trivium, McLuhan states that:

the new context provided by anthropology and modern psychology really put grammar, logic, and rhetoric in an ancient rather than medieval or Renaissance context. Modern linguistic theory is quite sympathetic to the semimagical views of the ancients. Our idea of language as gesture, as efficacious, and as representing a total human response is a much better base for a study of the figures and arts of speech than any merely rationalistic approach can provide.... The linguistic studies of Edward Sapir and B. L. Whorf have lately shown that language is not only the storehouse of scientific thought. All actual and potential scientific theories are implicit in the verbal structure of the culture associated with them. By 1885 Mallarme had formulated and utilized in his poetry these concepts about the nature of language uniting science and philology, which nowadays are known as 'metalinguistics.' However, these views of languages were commonplaces to Cratylus, Varro, and Philo Judaeus. They were familiar to the Church Fathers, and underlay the major schools of scriptural exegesis. If 'four-level exegesis' is back in favour again as the staple of the 'new criticism,' it is because the poetic objects which have been made since 1880 frequently require such techniques for their elucidation. (McLuhan, 1969a, 25)

The poetic objects made since 1880 or thereabouts include the telephone, radio, television, and computers. McLuhan and Edmund Carpenter, the anthropologist, saw such media as "new languages," each with its own grammar of expression. McLuhan is unique in his application of "four-level exegesis" or "new criticism" not only to his studies of Eliot, Pound, and Joyce, but also to his analyses of our technological landscapes. His tetradic "Laws of the Media," developed in the mid-1970's, are an example of an exegetical approach to human communication.

The four traditional levels of exegesis cultivated by classical Grammatics and Philologia included the literal or immediate sense of the sacred text, the figurative or allegorical meaning, the tropological or moral sense, and the anagogical or mystical level of spiritual concentration. As a doctrine of philology that preceded Christianity, exegetical interpretation of the Book of Nature included people and society. In the new literary and social criticism of scholars like Richards, Leavis, and McLuhan, it took on renewed imaginative and spiritual significance.
In "Private Individual vs. Global Village," McLuhan, for example, said, in effect, that on the literal level, abortion is a tactic for population control; that allegorically, it can be said that its advocates are using a quantitative argument that the good of the private individual cannot be put in the balance with that of the group. On the tropological level, it is evident that the abortionists' arguments "of more or less convenience, or inconvenience, must apply to the decisions about continuing or suppressing the existence of any members or groups of all human or nonhuman populations" (McLuhan, 1972b, 246), and that the anagogical sense of the abortion issue, according to Christianity, is that human rights are grounded in a divine source which overcomes all merely quantitative differences.

After mentioning the abortionists' view that the unborn have no individuality and therefore do not present a moral problem, and their existential argument that if consciousness itself is the mark of the human condition, then that which is not conscious (the foetus) is not human, McLuhan concluded by stating that "decent and well-meaning people, acting as if in a corporate somnambulism, are engaged today in repeating in abortion centres the patterns of life processing which worked so well in meat-packing and death camps" such as Buchenwald and Auschwitz (McLuhan, 1972b, 247). The social acceptability of those patterns has lately been increased through the mechanism of the contraceptive pill, a means of separating sex from procreation and women's bodies from their inmost selves.

In seeing all technologies as "extensions of man," McLuhan was exploring analogical relationships between ourselves and our surroundings; and in suggesting that each major technological innovation represented a dramatic gesture or posture of being (Joycean apocalyptic thunder) that had evolutionary consequences, he reminded us of his 1950's statement that "the analogical relation between exterior posture and gesture and the interior dispositions of the mind is the irreducible basis of drama" (McLuhan, 1969a, 33). Our evolutionary technological drama is now unfolding in a computerized global theatre in which action and reaction occur almost simultaneously, sometimes threatening our very existence.

McLuhan's association in the 1950's with Edmund Carpenter, the co-editor of Explorations, led to a growing interest on McLuhan's part in the dimensions of the primitive and to a reassessment of what primitivism meant. In particular, D. C. Williams, a psychologist, introduced him to E. A. Bott's concept of acoustic space, "a perfect sphere whose centre is everywhere and whose margins are nowhere," a definition that proved of immense value in comparing and contrasting the spatial organization and awareness of oral and literate societies. Also, according to Theall, the secretary to the original Culture and Communications Seminar in the 1950's, Dorothy Lee's contributions to Explorations, in which she argued that the Trobrianders did not perceive lineal order in the way we do, were important to the delineation of acoustic and visual cultures McLuhan undertook in The Gutenberg Galaxy.
Aside from the chief figures, Carpenter and McLuhan, other notable participants in the interdisciplinary seminars of the 1950's were Williams, W. T. Easterbrook, an economist, and Jacqueline Tyrwhitt, a town planner. Eric A. Havelock, a classics professor at Victoria College whom McLuhan refers to as a colleague of Innis, was not an associate of the former whose interest in Havelock's work seems to have come about through reading Preface to Plato (1963), a book that examines the clash of the old oral and the new written culture of Greece. It and the Origins of Western Literacy (1976) complement the earlier efforts of Innis and McLuhan. The oral/written dichotomies explored by the three men constitute a "school of thought" characteristic of communication studies at Toronto.

Northrop Frye was an early contributor to Explorations. In his article, "The Language of Poetry," he is concerned with the problem of how the use of conventions makes art communicable and sees poetry, taken as a whole, as "not simply an aggregate of artifacts imitating nature but one of the activities of human artifice taken as a whole" (Frye, 1960, 45). As a critic of civilization, he looks at poetry as one of the techniques of civilization. He is concerned:

with the social aspect of poetry, with poetry as the focus of a community.

The symbol in this phase is the communicable unit to which I give the name archetype: that is, a typical or recurring image. I mean by an archetype a symbol that connects one poem with another and so helps to unify and integrate our literary experience. By the study of conventions and genres, it attempts to fit poems into the body of poetry as a whole. (Frye, 1960, 45)

In From Cliche to Archetype, McLuhan asks the question of why the word "archetype" should seem to relate so exclusively to literature, concluding that it is necessary to consider "the cliche-archetype theme in its nonverbal forms. Language as gesture and cadence and rhythm, as metaphor and image, evokes innumerable objects and situations which are in themselves nonverbal" (McLuhan and Watson, 1970, 20). The poetry that is now the focus of the community is, of course, advertising whose verbal and pictoral archetypes McLuhan examined in The Mechanical Bride and whose imagistic methods of embedding primal archetypes relating to sex, technology, and death were the focus of Wilson Bryan Key's study, Subliminal Seduction (1973).

In his article Frye also remarks that "an archetype is not a simple but a variable convention. Archetypes are associative clusters and include a large number of specific learned associations that are communicable because a large number of people within a culture happen to be familiar with them" (Frye, 1960, 46). As "specific learned associations" and "associative clusters" of the human mind, archetypes are responsive to alterations to consciousness brought about by techno-
logical change. As McLuhan showed in the 1960's, the archetypal configurations induced by print as an environment take on quite different forms under electronic conditions.

Unlike Frye, McLuhan has an inclusive, environmental approach to archetypes. In their writings both have been influenced theoretically by James Joyce and by symbolist poets such as Mallarmé and Valéry, but have applied their insights differently -- Frye by replacing the history of ideas approach to culture with "a scientific criticism, McLuhan by transforming the history of ideas into a history of artistic techniques and then a history of technologies" (Theall, 1971, 246).

The history of technologies must include the entire range of their sensory, psychic, and social effects. These effects are inevitable given the nature of the learning process. Above all, what characterizes the success of the Cambridge and Toronto schools of communication is their attention to learning theory, ancient and modern, especially that associated with Aristotle, St. Thomas Aquinas, the classical trivium, and contemporary communications media. McLuhan in particular was seeking a reintegrated educational system in which a reborn version of the trivium would play a part. He seems to have reasoned, according to Theall, "that if grammar, logic, and rhetoric were the basic subjects and were involved with the arts of expression, then the humanities must be ultimately concerned with the contemporary equivalent of such a programme" (Theall, 1971, 116). That equivalent would involve, among other things, an application of the fourth part of rhetoric, "pronuntiato," or verbal action and delivery, a crux of ancient communication theory, to the study of the new verbal and nonverbal languages of film, radio, television, and computers.

At St. Michael's College, the Roman catholic institution at Toronto which housed the Pontifical Institute of Medieval Studies, McLuhan taught, furthered his interests in the medieval and early Renaissance periods and in contemporary theology, and came into contact with the brilliant neo-Thomists, the French philosophers Jacques Maritain and Etienne Gilson. They gave Thomism a modern relevance to McLuhan and others. It was Aquinas who restated the whole body of Roman Catholic dogma in terms that made sense to a person like McLuhan whose commitment was to Aristotelian philosophy rather than to the idealism of Plato. By combining the Aristotelian position that sensory experience is the basis of all knowledge with medieval doctrines concerning analogical proportionality and the common sense or sensus communis, he had a theory of consciousness that complemented his awareness that all technologies are extensions of our organs, senses, and functions. His individual pyrotechnics as a new critic at the University of Toronto put ancient communication theory in the limelight in the 1960's and made him the foremost communication theorist of our age.

The blend of ancient and modern in McLuhan is also found in one of his associates at St. Louis University, Bernard Muller-Thyme, who in 1940 wrote an article about medieval perception, "The Common Sense:
Perfection of the Order of Pure Sensitivity," and who later became the leading management analyst McLuhan quotes in *The Gutenberg Galaxy*. Arriving at St. Louis, the birthplace of T. S. Eliot, in 1937 as a recent convert to Catholicism, McLuhan met Walter Ong, whose medieval and Renaissance expertise was later to prove helpful, and associated with his close friend, Wyndham Lewis. Except for a doctoral return to Cambridge (1939 - 1940), McLuhan remained in St. Louis until 1944, teaching writing, and exploring ancient learning theory and mass culture.

It is, of course, impossible to achieve a deep understanding of mass culture without examining the technologies that shape and sustain it. Once understanding is achieved, anatural poetic response is to promulgate ideas about methods of humanistic environmental engineering. Therefore James Joyce's description of himself as one of the world's greatest engineers should not be surprising. In alluding to Joyce and in saying that "McLuhan's sensibility was dominated by a sense of mechanics" (Theall, 1984, 48), Donald Theall overstates his case. He is more accurate in contending that "McLuhan, seeing 'know-how' as the shared wisdom of artist and engineer, viewed technique as a creative force which had made man's culture rather than one side of that schism between creation and know-how which was a key presumption and presupposition of the romantic spirit" (Theall, 1984, 48). As a poet of the second Romantic movement, McLuhan saw that technological know-how could either imprison or liberate the human mind and spirit, depending on the strength of our efforts to understand and consciously program our person-made environments.

Unlike the early Romantics who ransacked nature for situations which would provide moments of intense perception, the later Romantics took advantage of the nineteenth-century discovery of the technique of invention that enabled modern science to discover whatever it needs to discover. Poets such as:

Rimbaud and Mallarmé, following the lead of Edgar Poe's aesthetic, made the same advance in poetic technique that Whitehead pointed out in the physical sciences. The new method is to work backwards from the particular effects to the objective correlative or poetic means of evoking that precise effect, just as the chemist begins with the end product and then seeks the formula which will produce it. (McLuhan, 1969a, 138)

From the 1950's onward McLuhan observed the effects of technology on human behavior and then worked backwards from the particular effects to an examination of the technology which, by its formal characteristics alone, could cause the behavioral patterns first observed. In the case of dominant technologies, whether verbal, written, mechanical, or electrical, those characteristics involve the extension of our sensory modalities of vision, touch, and hearing, the irreducible basis of all experience and knowledge. Not to program consciously sensorial techno-
logical inputs is to leave human evolution to the forces of uncontrollable technological innovation, the computer being the latest example of an invention changing our everyday lives (and terrorizing us with the threat of nuclear annihilation).

The striking and unrivalled informational compression and metamorphosis resulting from binary coding and the use of the silicon chip makes the computer medium utterly unique. Its power stems from a potent combination of fast, programmable transformations via tiny logic circuits and software content and unanticipated human effects via various electronic input/output forms, whether analogue or digital. This topic, however, must be left for a new critic to explore in another essay.

NOTES

Just prior to sending off this article for publication, Walter Ong, S.J., drew my attention to his account of McLuhan's years at St. Louis University. See his article, McLuhan as Teacher: The Future is a Thing of the Past, Journal of Communication, 1981, 31 (3), 129 - 135. See also Ong's Orality and Literacy. London: Methuen. 1982. This work appears to be based on the insights of the Toronto school.

REFERENCES


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