

The Ford Foundation and Communication Studies: The University of Toronto Program (1953-1955)

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In March of 1953, the University of Toronto forwarded the following three applications to an interdisciplinary competition as part of the Ford Foundation's Behavioral Sciences Program: "Changing Patterns of Language and Behavior and the New Media of Communication," "Study of Problems of Social Learning and Co-operation in an Industrial Society," and "Radical and Conservative Behaviour." All were associated in varying degrees with the legacy of Harold Adams Innis, a prominent economic historian and political economist at the University of Toronto, who had died in November of the previous year. "Changing Patterns" was the one that was accepted: its group of sponsors, spearheaded by Marshall McLuhan and Edmund Carpenter, was awarded a grant of \$44,250 over two years.¹ This came as a surprise to many, as the other two applications featured not only renowned established figures but also younger scholars who were quickly coming into prominence. Moreover, while the other two applications were grounded in Innis's highly respected work in political economy and economic history, that of the McLuhan/Carpenter group used Innis's less well-known work in communication as a point of reference.

However, within the context of Ford Foundation funding, this focus on the relatively new field of communications might have been an advantage. In situating the context for its project, the McLuhan/Carpenter group placed the M.I.T. program in International Communications front and centre.² While highlighting the "brilliant new developments in communication study at the Massachusetts Institute of Technology" – particularly in the area of information society and development -- the McLuhan/Carpenter group emphasized how its own proposed program on research -- emphasizing language, culture, and human senses in relation to communication -- would break new ground. In viewing communication as an "art form," the members of the McLuhan/Carpenter group claimed they would be able to deploy "a variety of techniques of judgment not within the scope of the M.I.T group, which viewed communication primarily as "information engineering."³ In advancing this line of argument, the proponents of the "new media of communication," had inadvertently – but fortuitously – mirrored some of the issues raised about language, culture, and symbols in memoranda written by culturally oriented critics such as Margaret Mead and Geoffrey Gorer,⁴ in response to an advisory report on research on international communications prepared by the Center for International Studies at M.I.T. ⁵

What also likely worked in the group's favour was the attention that it gave to trying to break down the disciplinary barriers that had come to characterize academic life; one of the key aims of the Behavioral Sciences division was to encourage cooperation among

disciplines. The proposal also contained a number of intriguing suggestions about how interdisciplinarity might be accomplished through a variety of measures. In line with its interest in cultivating relations with persons sharing similar interests, the McLuhan/Carpenter group began to explore how support for a publishing venture as part of its activities, might be arranged. For whatever reason, the initial request for this support did not come from anyone at the University of Toronto, but rather from W.R. Keast, an associate professor in the Department of English at Cornell University. Keast, having received a letter from McLuhan regarding the terms of the Ford Foundation grant, agreed to sound out Bernard Berelson informally about the matter, before a more formal route was taken. He informed Berelson that McLuhan and Carpenter wished to publish a journal “to be called *Explorations*.” While it would be “tied in” with their project, it would not limit itself to “its special research topics [or] methods.” He informed Berelson that Carpenter and McLuhan believed that this journal would be “novel in scope and function and ... once underway ... could be carried on after the project was over.” Keast conveyed to Berelson that McLuhan would like to know if the Foundation “would be receptive to an application for a small addition to their grant -- \$2500 a year for the two years.”

Keast had advised McLuhan that Berelson may be able to let them know if it would be worth their while to submit a formal application about it. Perhaps in an effort to lend some support to McLuhan’s request, Keast mentioned that the two of them were “thinking of hatching up a discussion group on this communication business and the study of literature for [that] year’s Modern Language Association meeting.⁶ Berelson’s response was short and swift: “As for Toronto: I’m afraid not. Support of publications isn’t very favourably received around here.”⁷

Undeterred by this unfavourable response, proponents of the proposed journal at the University of Toronto came up with a new strategy for having it supported. This time, University of Toronto Vice-President C. T. Bissell wrote to Berelson informing him that certain economies had been effected. Above all, employing a full-time secretary for two years proved to be unnecessary, meaning that \$5,000 could be saved. Moreover, it had been possible to secure free accommodation and telephone service for two years, saving another \$1,000. Beyond that, further adjustments were possible in both research fellowships and “released faculty time for the five sponsors.”

Bissell asked Berelson if it would be possible “to use some of the money to subsidize publication.” This would involve issuing “a number of studies over the two-year period... made up of contributions from faculty sponsors... members of the seminar [as well as] scholars outside the University.., working on similar programmes.” Bissell made the case that a “series of publications” like this would stimulate scholarly activity in the seminar [as well as] provide for the seminar materials for discussion and elaboration.”⁸ Berelson’s response was more encouraging this time around. He expressed his gratitude to Bissell for having raised the question, but requested more information about what sort of publication the group had in mind.⁹

Perhaps anticipating what Berelson’s response might be like, Bissell wrote back enclosing “a brief prepared by the sponsors of the seminar” addressing the questions that Berelson had raised in his letter. He assured Berelson that the journal would not become permanent but would only be published over the course of the two-year period of the grant.¹⁰

The untitled brief accompanying Bissell’s letter both expanded upon the rationales given by both Keast and Bissell and also provided more detail about what the project’s sponsors had in mind. They wished to publish “a series of small booklets, each containing separate but related papers... A maximum of six would be published... three per year.” The brief emphasized that the series would be closely aligned with the seminar, and would provide the opportunity for the seminar members (including graduate-student members) to have their work published alongside that of “distinguished guest contributors.” The main underlying theme of the brief was that the series would provide “tangible focus for students and staff,” and would be “vital to the success of the seminar.” By virtue of advancing “an integrated, overall argument,” it would further the cause of the “interdisciplinary approach basic to the whole project.” By publishing the series while the seminar was in progress, an “effective release of energy or effort” would be ensured, and a “fuller co-operative response” would be elicited. Moreover, the seminar members would be able to have the benefit of “international criticism” instantaneously rather than having to wait for commentary. In terms of content, it was proposed to have one issue dedicated to H.A. Innis, another to Siegfried Giedion and others to histories of various media. Finally, as they wished to maintain a high standard and wide distribution, they proposed that the series be printed rather than mimeographed.¹¹

Obviously persuaded by Bissell's letter and the brief accompanying it, Ford Foundation officers were of the view that the university should decide whether the publication was "an appropriate part of [a new media] program," and that the Foundation would be satisfied with whatever decision was made; the first of nine issues of *Explorations* appeared in December, 1953.¹²

McLuhan's report on the "progress of the Toronto project" over the course of its first year gave a good deal of attention to the contribution made by *Explorations*. While his overall account was generally positive, it was also somewhat circumspect and ambiguous.¹³ He noted that the project was able to get off to a good start during the first few months, during which the faculty members were able to establish common ground through engaging in a critique of the methods of study in their own fields. However, this progress was halted upon the admission of "a dozen graduate students" in the fall of 1953, which entailed "retracing much of the summer's work" with this group. That the members of the project were making an effort to better understand how communication related to other fields was evident in some of their initial activities. In September 1953, senior members of the seminar took part in the annual meeting of the Economic History Association (EHA) held in Bryn Mawr, Pennsylvania. Their reason for attending was to participate in a special program in the area of communication that had been organized. Given that the proposal for their project was grounded in the later work of Harold Innis, this dovetailed with the EHA's efforts to honor him (in the aftermath of his death) by dedicating part of its annual meeting to his legacy in the area of communication. Along the same lines, efforts were made to increase contact with the field of English. To this end, two core faculty members held an "experimental seminar" on the "relevance of methods in English to the field of communication study and vice-versa" at the meetings of the Modern Language Association that took place in Chicago in December, 1953.¹⁴

And in March 1954, some of the seminar members took part in a round table in Windsor, Ontario during which they explained how the new field of communication related to "older subjects."¹⁵ Exchanges with other areas of study were also facilitated through the regular attendance in the Seminar by University of Toronto faculty members as well as by Vice-President Bissell.¹⁶ Visitors to the Seminar from outside the University included Freeman Twaddell of Brown University and Karl Polanyi from Columbia University.¹⁷

In addition to expanding its sphere of influence through academic outreach, the project built up its written resources through the acquisition and circulation of “a good collection of books on communication problems” and the development of a manuscript library “of brief excerpts on communication from many sources” as well as from “fields ancient and modern not represented in [the] seminar.”¹⁸

The project did not confine itself to building up its resources and external contacts; it also conducted an experiment on the “relative efficacy” of four different media. In collaboration with the Canadian Broadcasting Corporation, it tested the extent to which “T.V. radio, studio and the printed page” when used simultaneously, were able to convey ideas and information to an audience. Noting that “the results of this experiment were ‘news’ in many papers, including the *New York Times*,” McLuhan proudly announced that their findings would be published in a forthcoming issue of *Explorations*.¹⁹

McLuhan took this announcement as an opportunity to explain the role played by the journal to the Seminar, emphasizing how it served as a publication outlet, a vehicle for having contact with others interested in communication, and as a source for “novel and stimulating” contributions to the field of communications. However, in discussing the Seminar itself, McLuhan’s remarks betrayed at least some degree of disappointment. “The greatest enemy of an inter-disciplinary Seminar,” he claimed, was “the individual eagerness to get tangible results in place of sharing insights.” This suggests that their discussions had been hampered by the tendency of some Seminar members to view it instrumentally, as a means for achieve short-term goals rather than as a forum for the exchange of ideas, wherever they may have led. At the same time, McLuhan was of the view that the Seminar (which met weekly for the entire year) served to temper this tendency by siphoning off “individual zeal while providing a group awareness of function and achievement.”²⁰ Denouncing the perils of specialization in the same ironic register, he observed that “the next great enemy” of Seminars of this kind “is the discovery that communication among specialists is possible.” This seemingly unanticipated state of affairs “destroys the entire base of emotional security and prestige which the average academic regards as his (sic) birthright today.”²¹ McLuhan, nonetheless, held out the hope that the Seminar would function better in the second year of the grant. Given that half a dozen of the graduate students would be continuing, “the possibilities of high-level performance” would be greatly enhanced. This gave him reason to “expect a much more satisfactory year than the first one.”²²

In his report on the project submitted at its conclusion in the summer of 1955, McLuhan's perspective on the nature and meaning of it seemed to have shifted.²³ Above all, he now referred to the entire initiative as *the Seminar*, as reflected in the title he gave to his report.²⁴ In contrast to his earlier report, McLuhan provided much more detail about how the Faculty group laid the foundations in the summer and early fall of 1953 for the project's activities over the course of the two years, for which it received funding. Possibly as a result of having contended with – but not fully overcoming – disciplinary distinctions, McLuhan began his report by stating who the faculty members of the group were, along with the discipline that each represented. While he re-iterated that each faculty member presented an account of how his or her field had developed, he now specified that the period in question was over the course of the previous century.

While in his first report, McLuhan stated that the goal of this exercise was to find common ground, in the final report he stated more definitively that this commonality had indeed been discovered. He was of the view that the presentations “served to reveal a great many parallel developments,” particularly in “methods and points of view,” and that a growing sense of cross-cultural unity” was confirmed.²⁵ According to McLuhan, this “unity” and “parallel development” was also accompanied by an appearance of balance within the group. In his final report, McLuhan also drew attention to the diversity of fields represented by the graduate students admitted for the fall of 1953.

In order to further consolidate the fields represented by both faculty and graduate-student members of the project, the entire group began to engage with the Innis's communication writings. Drawing on Innis's reflections on old media of communication such as “roads, clay, papyrus,” and “the entire history of writing and printing” in terms of their effects,” the members of the project faced the challenge of developing “the power of discussing [new media] in relation to the whole society.”²⁶ To this end, the graduate students were set “a wide range of papers on all aspects of the work of Innis” from the standpoint of the various fields represented in the project.

In McLuhan's view, this juxtaposition of perspectives while transformative, had both positive and negative aspects. He noted that “as the insights from each of the several fields are directed towards a common problem the students are either strongly swayed toward a preference for that field of study or they rally to resist the unexpected light from an alien source.” This process, which drew in faculty as well, was quite disruptive since the “ordinary

conditions of university life seem framed to protect ... the action of the blinkered mind.” An unexpected result was the “quite obvious anxiety and resentment” that grew as “greater understanding of one another’s fields began to develop.” Indeed, McLuhan claimed that the members of the group started to see one another as “hostile code-crackers.” The “professional” or “expert” status of some members was threatened when disciplinary codes were made available to all, which tended to breed “involuntary panic and dismay.” While McLuhan’s discussion of the group dynamics was couched in negative terms, it was evident that he believed that the disruption that took place was on the whole commendable, as it served to break down the “specialism,” which had led to the “impoverishment” of fields as well as “a general confusion of tongues.”²⁷

McLuhan used the same “positive disruption” frame of reference to examine the external impact of the project, claiming “the storms that grew within our seminar were as nothing to the storm that blew up as a result of it.” Within the university, McLuhan maintained that the project fuelled intense “inter-faculty gossip,” which in turn increased demand for *Explorations* to the point at which no copies were available to the public. Custodians of the “humanities,” he argued, contested the horizontal, interdisciplinary nature of the project, which challenged the vertical form of organization that they favoured.²⁸ More broadly, he detected animosity towards the project from the Toronto branch of the Canadian Broadcasting Corporation, which resisted their efforts to understand “the new technological culture.”²⁹

Notwithstanding the discontent in some quarters with how the project was proceeding, McLuhan called attention to some of its accomplishments during the second year of its operation.³⁰ During the summer of 1954, the faculty members of the project “met regularly to discuss the work of Siegfried Giedion” which offered insights into “the language of vision inherent in painting, technology, and architecture” through his “concept of ‘anonymous history.’” As it turned out, there was little continuity in the cohort of graduate students in the second year; only one was retained. There was, however, “a wide clamor for admission” into the Seminar, with nine new students being accepted (along with three “guest members”).

While McLuhan addressed the dynamics of the Seminar, with particular reference to issues of interdisciplinarity, his report does not provide a clear account of what the overall project accomplished in terms of findings. To be sure, he does allude to some of the

discontent—both at the university and elsewhere – that the project engendered. But he largely fails to capture what the faculty members of the project were able to agree upon, and which of the questions they had posed remained unresolved. Judging by McLuhan's discussion in his final report of the current media context, the faculty members largely failed to work collectively to examine the issues that were raised in the initial proposal. Rather, discussions were dominated by McLuhan, who used the meeting as an opportunity to “probe” various matters that were of concern to him. This was revealed by his account of “the stages of awareness arrived at during the final months of discussion in the Spring of 1955.” After a lengthy pronouncement about the effect of the new media on contemporary culture – including scattershot remarks about the mechanization of media, its impact on the human sensorium, life in the electronic age, and current “illiteracy discussions” -- McLuhan noted that what he had described were “not opinions fully agreed upon by any of us. They were broached and canvassed.” In all likelihood, what he had summarized were his own opinions, which he himself had broached and canvassed, without providing an account of how they were received by the other project members.³¹

While McLuhan was extremely vague about the positions taken by group members about the role played by new media in contemporary culture, he was much more precise about what had been accomplished through its ongoing research on media effects. Following up on the research that it had undertaken the first year, the group undertook an “extensive test of visual awareness and communication carried out with 800 students at Ryerson Institute”³² producing a “profile of the visual experience of mature students in the heart of a large city.” An article based on the research was published in *Explorations V* (“The City Unseen”). While he believed that the results of this study were not as “striking” as those of their earlier test, they did offer an “inter-disciplinary beginning” that could set the stage for the establishment of “An Institute of Contemporary Culture and Inter-Relation.” This would involve assembling “a pilot group of experienced secondary school teachers from several fields” who would work with members of their group “to devise class-room procedures for our time equal to those worked out by Erasmus for the Gutenberg era.”³³ McLuhan appeared to be suggesting the need for the educational system to produce “groups of teachers who can make the classroom a place of competent critical awareness of the new modalities of experience and information offered today [largely through] comparison and analysis.”³⁴ He believed that this had particular relevance to instruction in “music, painting, and poetry,” that could be studied “for the ways they exploit and modify various new media.”³⁵ In his view, these reforms were essential as “the school situation couldn't be worse. But it could so

easily be a 1000 times better if some contemporaneity were got into the present culture-lag.” Because the current age was characterized by “accelerated change,” there were “very few contemporary minds.” This meant that the other minds “have to be educated.” In his view, the University of Toronto, because of its “federated college scheme” was well placed to embrace the contemporary. In this sense, it offered a “unique opportunity to incorporate all the contemporary interests in a single contemporary Institute which would be independent of colleges and university.”³⁶

Following the expiration of the grant, McLuhan unsuccessfully applied to have funding from the Foundation for a Contemporary Institute of Culture. Eventually, however, he was able to convince University of Toronto officials to support an initiative of this kind, and the Centre for Culture and Technology was established “with the stated purpose of investigating ‘the psychic and social consequences of all technologies.’” Originally planned in 1963, it finally began operations in 1967.³⁷ The Centre – and the Program that succeeded it -- were not the only major legacies of the Ford Foundation grant; it also provided much of the impetus to McLuhan’s highly influential work on communication and media³⁸ as well as to a worldwide network now recognized as the Toronto School of Communication.³⁹

NOTES

This article is based on a visit I made to the Rockefeller Archive Center from March 5-9, 2018 with the support of a RAC stipend. The subject of my research was Ford Foundation support for projects in communication studies undertaken at M.I.T. and the University of Toronto in the 1950s. I am very thankful to Mary Ann Quinn for her generous assistance in helping me to prepare my grant application and to negotiate the Ford Foundation microfiche reels held at the Archive. I am also grateful to Roseann Variano, Tom Rosenbaum, Michele Hiltzik Beckerman, Norine Hochman and other Archive Center staff for going out of their way to ensure that my research visit was a successful one, the inclement “in like a lion” weather notwithstanding.

¹ Rockefeller Archive Center (hereafter RAC). Ford Foundation Records (hereafter FFR). New Media of Communication, University of Toronto, grant file 0530070, Ford Foundation grants microfilm reel 0004.

² RAC. FFR. International Communications, Center for International Studies, MIT, grant file 05200150, microfilm reel 1194.

³ “Changing Patterns of Language and Behavior and the New Media of Communication”, p. 6. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

⁴ Geoffrey Gorer, “Research on International Communications,” pp. 74-85; Margaret Mead, “M.I.T. Communications study,” pp. 107-125. RAC. FFR. International Communications, Center for International Studies, MIT, grant file 05200150, microfilm reel 1194.

⁵ “Research in International Communication: An Advisory report of the Planning Committee. Center for International Studies, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1953. RAC. FFR. International Communications, Center for International Studies, MIT, grant file 05200150, microfilm reel 1194.

⁶ R. W. Keast to Bernard Berelson, July 28, 1953. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

⁷ Bernard Berelson to R.W. Keast, July 30, 1953. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

⁸ C. T. Bissell to Bernard Berelson, October 30, 1953. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.
Bissell’s role in contacting Berelson went beyond serving as the McLuhan’s group messenger. He not only had made his vice-president’s seminar room available for the project, but likely also telephone service as well.

⁹ Bernard Berelson to C. T. Bissell, November 4, 1953. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

¹⁰ C. T. Bissell to Bernard Berelson, November 10, 1953. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

¹¹ “Untitled brief prepared by the sponsors of the New media seminar,” November 10, 1953. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

¹² As had been planned, six issues were published from 1953 to 1955; three more issues were published from 1956 to 1959, using leftover fund from the grant as well as other sources.

¹³ H. M. McLuhan, Interdisciplinary Seminar in Culture and Communications at Toronto University, June 1, 1954. “New Media of Communication.” RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

¹⁴ H. M. McLuhan, Interdisciplinary Seminar in Culture and Communications at Toronto University, June 1, 1954. p. 2. “New Media of Communication.” RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004. W. R. Keast refers to this initiative in his letter of July 28, 1953 to Bernard Berelson. McLuhan mentions the presence of Keast along with that of xx, in his report.

¹⁵ Ibid.

¹⁶ Ibid. Bissell worked closely with McLuhan and was an ardent advocate of the project.

¹⁷ McLuhan, “Interdisciplinary Seminar,” p. 2.

¹⁸ Ibid. pp. 2-3.

¹⁹ They appeared in *Explorations III* (1954)

²⁰ McLuhan, “Interdisciplinary Seminar,” p. 3.

²¹ Ibid., pp. 3-4.

²² Ibid., p. 3.

²³ Shortly after McLuhan submitted his report, C.T. Bissell, vice-president of the University wrote to Bernard Berelson (director of the behavioural sciences division of the Ford Foundation) as well. Although he judged the report to be “accurate in its summary of the specific activities of the seminar,” he underscored that it reflected “a somewhat personal point of view.” C. T. Bissell to Bernard Berelson. August 8, 1955. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

²⁴ Report of the Seminar at Toronto University, 1953-1955. “New Media of Communication” RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

²⁵ *Ibid.*, p. 1.

²⁶ *Ibid.*, p. 3-4.

²⁷ *Ibid.*, pp. 5-6.

²⁸ Prior to submitting the final report for the project, McLuhan paid a visit to Foundation officer Richard C. Sheldon to discuss its length and to “sound [the Foundation] out on a new idea. Sheldon had the impression that “McLuhan [was] very glad the project [was] over because the interdisciplinary efforts involved gave rise to violent controversies and political jockeying for the support of graduate students. Evidently, the major point of tension was between Williams and Carpenter. Sheldon also reported that interdisciplinarity was viewed dimly by the university faculty, an opposition that was “stilled somewhat by the ‘success’ of ... ‘Explorations.’” Richard C. Sheldon, Conversation with H.M. McLuhan of the University of Toronto. Ford Foundation, New York Inter-Office Memorandum, July 27, 1955. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

²⁹ Report of the Seminar at Toronto University, 1953-1955. “New Media of Communication” RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004. p. 7.

³⁰ According to McLuhan, the members of the group were reassured by “American enthusiasm for *Explorations*,” particularly that evinced by Margaret Mead, who supposedly shifted her fieldwork as a result of having read the journal. *Ibid.*, p. 13.

³¹ *Ibid.*, pp. 8-11.

³² This was the Ryerson Institute of Technology founded in 1948 and located in downtown Toronto. In 2001 it became Ryerson University.

³³ *Ibid.*, p. 14.

³⁴ He was referring to what is now known as “media literacy.”

³⁵ *Ibid.*, p. 15.

³⁶ *Ibid.*, p. 16. McLuhan provided more detail about what he had in mind during his conversation with Foundation officer, Richard Sheldon. He envisioned “an institute of modern cultural studies organize along the same general academic line lines of Toronto’s Institute of Medieval Studies.” In the same way that this institute examined “the inter-relationship of all the institutions of the medieval world... the proposed institute would do the same thing for the modern world.” When McLuhan asked whether the Foundation would be willing to support an institute of this kind, Sheldon was predictably non-committal. Sheldon, “Conversation with McLuhan,” July 27, 1955. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

Shortly after sending in his final report, McLuhan wrote to Berelson mentioning that he had shared his thoughts with Sheldon about establishing a cultural studies institute at the University of Toronto. An account of the work that had gone on in the Seminar was included with the letter. He also expressed his appreciation for the support provided over the course of “a gruelling but fruitful two years.” Marshall McLuhan to Bernard Berelson, August 3, 1955. RAC. FFR. New Media of Communication, University of Toronto, grant file 0530070, microfilm reel 0004.

³⁷ Philip Marchand and Neil Postman, 1998, *Marshall McLuhan: The Medium and the Messenger: A Biography*. Cambridge, Mass.: The MIT Press, pp. 158-160. The Centre was closed in 1980, replaced by the McLuhan Program in Culture and Technology. *Ibid.*, p. 273.

³⁸ Marshall McLuhan, 1960, *Understanding Media: The Extensions of Man*. London: Sphere Books; idem., 1962, *The Gutenberg Galaxy: The Making of Typographic Man*. London: Routledge and Kegan Paul.

³⁹ Rita Watson and Menahem Blondheim. 2007. *The Toronto School of Communication Theory Interpretations, Extensions, Applications*. [Toronto]; Jerusalem: University of Toronto Press ; Hebrew University Magnes Press.