



## **DOUBLE VISION: MCLUHAN'S CONTRIBUTIONS TO MEDIA AS AN INTERDISCIPLINARY APPROACH TO COMMUNICATION, CULTURE, AND TECHNOLOGY**

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Marshall McLuhan stated in the first chapter of his watershed work, *Understanding Media*:

In a culture like ours ... it is sometimes a bit of a shock to be reminded that, in operational and practical fact, the medium is the message. (1964/1994, p. 7)

With this remark, McLuhan introduced into the language our current usage of the term *media* as well as the idiom, *the medium is the message* (Lapham, 1994, p. x).

This study, a companion to my “Introduction” to this volume, considers McLuhan’s contributions to media as an interdisciplinary approach to communication, culture, and technology. It also considers McLuhan’s contributions in light of the arguments presented in the various essays in this issue of *MediaTropes*, each of which is concerned with the meaning and significance of the adage, “the medium is the message.”

It has now been several decades since McLuhan published his major works and inevitably, his writings are a product of their place and time. Even so, his insights continue to resonate. In an era when academic research seldom remains relevant for more than a few years, and changes wrought by technological innovation are radically reconfiguring social and cultural practices—and nowhere more so than in the study of media itself—much of McLuhan’s scholarship has stood the test of time.

Why is McLuhan essential reading for anyone attempting to understand media and their effects?

Of McLuhan’s many unique and significant achievements, I focus on three contributions to knowledge that I maintain have been central to his wide readership, enduring reputation, and continuing relevance. I propose that McLuhan remains indispensable reading because his writings encapsulate fundamental concerns that distinguish media as a framework for research across

multiple disciplines. In making media and mediation the center of his examinations of social and cultural phenomena, and in focusing his investigations on break-boundaries and revolutionary shifts in communication technology, he created a discipline, provided it with a theoretical basis, and devised paradigms and techniques for examining media as messages.

We continue to read McLuhan because his writings are models of interdisciplinary research. *The Gutenberg Galaxy*, for instance, is cited by the current guidelines for the Ontario, Canada twelfth grade curriculum for university preparation in interdisciplinary studies as an *exemplar* of interdisciplinary writing. This work is celebrated as bringing together the “varying perspectives of media study, linguistics, and sociology [social trends]” to analyze topics (Ontario Ministry of Education, 2002, p. 31). In this and other books, McLuhan devised a “mosaic or field approach to problems” (1962/1967, p. i). In conceiving this field approach, he demonstrated how to bring to an examination of issues, questions, or problems, repertoires of methodologies from different fields and disciplines under the framework of mediation. His approach was to examine media as signs—so that images, objects of material culture, texts, TV, and advertising can be viewed as technologies for communication.

McLuhan’s *Understanding Media* shows how to synthesize multiple approaches and bring them to an analysis of different media as modes for communicating social and cultural information. Thus, after some opening chapters on theory, including a section on “media as translators,” the table of contents in this book lists the following chapters: the spoken word; the written word; roads and paper routes; number; clothing; housing; money; clocks; print; comics; wheel, bicycle, and airplane; the photograph; press; motorcar; ads; games; telegraph; typewriter; telephone; phonograph; movies; radio; television; weapons; and automation. In each case, McLuhan examines the medium for cultural messages, drawing on the full range of resources of all the disciplines to create an analysis and interpretation. Decades later, the many instances of media that he investigated still serve as textbook examples of how to delineate a medium in order to make it the focus of interdisciplinary research.

Accordingly, the idea in “the medium is the message” is that the medium itself communicates messages that inform the content of a work and guide its interpretation. Studies of media therefore concentrate on the medium itself as a kind of language with its own conventions for generating meaning. McLuhan used linguistic theory, for example, to show that there is a language of print technology that makes the study of this medium different from the language of radio or live performance, and these differences are actualized

through the rules and conventions of meaning that are built up around the medium. In this volume, Deanne Bogdan (2008) and Stuart J. Murray (2008) build on this foundation, by looking at how changes in the medium affect the meaning communicated by a work. Bogdan considers meaning in music, examining a Chopin piece first from the perspective of live performance. She then listens to the same piece recorded on a 78 LP, and then played on video. These rapid shifts in media display the effects of different mediums on the perception of the meanings conveyed by the performance. Changing the medium changes the meaning. In much the same way as translating a haiku from Japanese to English inevitably changes the meaning of the poem, translating from one medium to another alters the way ideas are organized and communicated, converting the representation of information in a work to a different system of symbolic conventions. Murray too pursues a media analysis, in his case, of meaning in literature and film. He compares and contrasts speech in Joseph Conrad's novella, *Heart of Darkness*, with speech in Francis Ford Coppola's film, *Apocalypse Now*, and then applies his findings to psychoanalytic and religious speech. Bogdan and Murray show that when information is remediated, meaning is not simply translated or transported; it undergoes a metamorphosis. Meaning is transformed. This is why in the study of media, "the form is most significant, not the content," as McLuhan frequently pointed out and Lance Strate in this volume reiterates and underscores (2008, p. 130).

In addition, McLuhan gave to the study of media roots in scientific method by drawing on the sociology of social trends. Bringing research from the social sciences to bear on problems and questions provided insights into how media shape phenomena in contemporary and popular culture, insights that could be verified or falsified in accordance with scientific standards of proof. McLuhan's central concern, as he often repeated, was with how media affect individuals and societies. He asked, "What did writing do to the people that invented it and used it?" and "What do the media of our time do to the people who use them?" (1974/2003, p. 230). In bringing sociological methods to the study of trends, he brought legitimacy to the investigation of popular culture, styles, or fashions that had seldom been the subject of serious scrutiny previously.

Finally, McLuhan was devising a methodology with a compass that was wider than the scope of a single discipline and in so doing, he was inventing "media" as the key component in *interdisciplinary* research. In interdisciplinary research, the problem, question, or theme *defines* the approach adopted and directs efforts to find a *synthesis* across subject, field, or disciplinary divisions (Ontario Ministry of Education, 2002, p. 4). Interdisciplinary methods of

research contrast with *transdisciplinary* methods, where real life contexts guide research that extends beyond individual subject areas. Interdisciplinary research contrasts as well with *multidisciplinary* work, where disciplines are loosely linked by way of a problem, question, or theme and there is little attempt to synthesize and integrate the diverse methods employed (ibid.). In pursuing his “field approach to problems,” McLuhan noted that his writing drew upon the “mosaic image of numerous data and quotations in evidence” (1962/1967, p. i). He described his method as juxtaposing evidence from different fields to create “a galaxy or constellation of events” around the theme or problem. These constellations of different fields were then viewed as “a mosaic of perpetually interacting forms” (ibid.). Thus, his writings show us how to select fields or disciplines appropriate to an examination of a specific question, problem, or topic; to view the issue from multiple perspectives; identify the linkages and interdependencies among the concepts and applications associated with the various disciplines utilized; integrate diverse methodologies to examine converging lines of evidence from different sources; and bring insights from this research into a new amalgam. McLuhan also described methods that support research on complex topics that transcend the capacity of any one researcher or discipline. The upshot was that his writings pioneered techniques of interdisciplinarity that anticipated by forty years some of the developments now taking place in the university, especially those that have emerged as a consequence of the Internet.

So the study of media today employs a range of methodological repertoires to analyze how cultures and technologies respond to geographies, for example, or it brings multiple disciplines to bear on the study of a particular time period, or it formulates a problem or question and then puts disciplines together in novel ways to look at an issue. Concentrating on the medium provides a construct for the examination of interconnections among diverse fields of inquiry and categories of information. So “the nineteen-seventies,” for instance, can be studied by bringing together analyses from texts, films, television, magazine advertisements, graphic design, furniture, and fashion, among other cultural phenomena. Or any one of those mediums—for example, texts produced during a given time period—can be compared cross-culturally as expressions of the 1970s in different geographies and in other social, cultural, political, and ethical registers. McLuhan’s writings paved the way for contemporary studies that employ media as a rubric for combining disciplines to examine a range of artifacts, images, and texts across different dimensions of time and space, in order to create *a composite picture* of the forms and patterns of societies and cultures.

Looking at culture through the lens of media is a way of focusing investigations that is aligned with library, museum, information, and archiving systems currently in place at universities and beyond. As our collections are gradually documented as images of artifacts and texts online, there is a need for innovative frameworks and methodologies for sorting and classifying material. As the content of our cultural institutions becomes the content of the new medium of the Internet, we need innovative ways to assemble this information in order to pursue solutions to problems or to link materials by way of novel combinations of interests and themes. The study of media, as pioneered by McLuhan, offers a larger framework within which to bring together under a common rubric varied aspects of human culture.

Thus, we continue to read McLuhan at the graduate level in the university because his works set the stage for the way we study media today. He created media as a framework that translates across historical time frames, disciplinary boundaries, and cultural domains. “The medium is the message” is a fundamental premise underlying this trans-historical, interdisciplinary, and cross-cultural approach.

Along with McLuhan’s delineation of media as objects for analysis is his specification of models for examining patterns of social and cultural change that follow from radical innovations in communication technology. The reconfigurations of culture wrought by the shift in dominant technologies for communication from oral traditions to the phonetic alphabet in the ancient world, and from handwritten manuscripts to printed documents in the Renaissance, serve as models for investigating the present transition from print to the Internet. Conversely, contemporary research concerning the advent of the World Wide Web can be employed to develop new answers to outstanding questions concerning changes that came in the wake of the two previous revolutions in communication media. In the course of using the medium to compare analogous historical situations, McLuhan drew the lines that helped establish media as a distinct field of inquiry. At the same time, rethinking rigid divisions—between pure and applied research, between the roles involved in solitary and team research, and between disciplinarity and interdisciplinarity—he described how electric media would lead to a connected—indeed, networked—research landscape that is fluid, dynamic, and inclusive. In so doing, he outlined some of the early concerns of media studies that marked it off as a unique and emergent subject area in the academy.

Marcel Danesi points out that McLuhan saw that constant exposure to the mediated world engenders feelings of alienation, “disembodiment,” or “depersonalization” (2008, p. 114). McLuhan also saw the propensity for those

possessing the most efficient communication technologies to use them to dominate others, as the papers of Monique Tschofen (2008), Donald Carveth (2008), and Murray in this volume discuss. Elaborating further, McLuhan cautioned about violence at borders and frontiers of media fields or systems, and described hostility as a “quest for identity” (1977/2003, p. 266). Bogdan, Carveth, Danesi, Murray, and Tschofen all emphasize aspects of alienation that, following McLuhan, demand closer inspection and suggest the need for education as a remedy for some of the effects of the rapid shift to global communication.

Today, we are overwhelmed with multiple media messages making claims on our time and attention. Media studies of mass consumer culture attempt to understand the power and influence of media ownership and consolidation (Danesi, 2008, p. 113). They also attempt to understand the role played by media in the dynamics of consumer (and other human) behaviors by examining repeating patterns in the content. Studies of mass media look especially at the role of rhetoric, seduction, stereotypes, and other components of media images, dialogue, and texts that establish conventions and formulas for types of themes, motifs, and manipulations. Psychoanalysis enters media studies through its role in the history of public relations and advertising (Curtis, 2002). These contemporary studies of the effects of media on individual people and on cultures and societies carry on and refine the work initiated by McLuhan.

We therefore continue to read McLuhan because he established media studies as a discipline and created the framework for viewing media as communication. Though there may be ambiguity in determining where media begin and end (Mitchell, 2008, p. 4), McLuhan also developed techniques for cutting through ambiguity, and “stepping out of the system,” as Strate describes, to gain perspective on the larger picture (pp. 129; 139). These aspects of McLuhan’s scholarship are as relevant now as they were when he first committed his major works to writing, and help explain why his ideas are requisite to any comprehensive understanding of media today.

### **The Medium is the Message**

As the papers in this issue all highlight, “the medium is the message” sets forth the central thesis of the study of media as modes of communication. In “the medium is the message,” McLuhan argued, the medium is any extension of the human body and mind through technology. “All media are extensions of some human faculty—psychic or physical,” he asserted (McLuhan, 1962/1967, p.

26). Thus “technologies such as alphabets, manuscripts, books, and weapons” are extensions of human “body parts, especially hands, teeth, tongues, and eyeballs,” explains Tschofen (p. 19). Extensions involve mediation. Accordingly, it is not the extension, medium, “or machine” but what one does with the machine that is “its meaning or message” (McLuhan, 1964/1994, p. 7). The “message” is therefore the consequences of the medium—that is, the “total configurational awareness” that “results from the new scale that is introduced into our affairs by each extension of ourselves or by any new technology” (ibid.).

### **The Medium**

A medium (from the Latin, *medius*) is “a ‘middle,’” adds W.J.T. Mitchell, “an in-between or go-between, a space or pathway or messenger that connects two things—a sender to a receiver, a writer to a reader, an artist to a beholder, or (in the case of the spiritualist medium) this world to the next” (p. 4). Pictography, suggests Danesi, “is a perfect example of what a *medium* ... is—a means of recording ideas on some surface (a cave wall, a piece of wood, papyrus) with appropriate technology (a carving tool, pigment, a stylus)” (p. 119). More generally, Danesi offers the definition of a medium “as the physical means by which some system of ‘signs’ (pictographs, alphabet characters, etc.) for recording ideas can be actualized” (ibid.). Strate reinforces that the medium has “some physical basis ... either in matter or in energy,” so that a medium can be the printed book that mediates the words (for example) as content; or it can be “internalized speech within the mind, the product of nerve impulses in the brain” (p. 131). Mitchell, by contrast, argues that the definition of the medium as “material support” is too constrictive. Conversely, he asserts that the proposal that the medium amounts to “social practices” is “too elastic.” He locates the medium somewhere between “materials and the things people do with them” (p. 3), pointing out that the ambiguity is that “the medium does not lie between sender and receiver; it includes and constitutes them” (p. 4).

The examination of media as “signs,” as Danesi discusses, draws on fields of reference from many different dimensions of culture to develop an analysis and interpretation. Signs derive their meaning only in relation to other signs in a system of signs. Using words as an example, the particular word on the medium of the printed page only has meaning in relation to the other words that surround it and contextualize its meaning. Viewing media as signs therefore entails a search for cultural references that reach outward into an environment of cultural meanings. As Strate points out, “In extending ourselves, our technologies come between ourselves and our environment, and

thereby become our new environment” (p. 135). For these reasons, McLuhan stated:

All media work us over completely. They are so pervasive in their personal, political, economic, aesthetic, psychological, moral, ethical, and social consequences that they leave no part of us untouched, unaffected, unaltered. The medium is the message. Any understanding of social and cultural change is impossible without a knowledge of the way media work as environments. (McLuhan, 1962/1967, p. 26)

The central premise of media studies, then, is that media are modes of communication that create “technological environments [that] are not merely passive containers of people but are active processes that reshape people and other technologies alike” (McLuhan, 1962/1967, p. i). An alternative word for environment, argued McLuhan, is “galaxy,” “a constellation,” or confluence of events, actions, or forms that come together with force producing multifaceted consequences or effects, a “kaleidoscopic transformation” of all the ingredients involved in the equation (ibid.). The metaphor of the kaleidoscope—a cylindrical optical toy with a mirrored lining that fractures the view of reality into interacting symmetrical patterns—presents the idea of a complex and shifting set of events or circumstances, wherein change in one element alters all the other components. Thus media studies consider how the medium reflects the dynamic interplay among numerous facets of cultures simultaneously through the processes and fields of reference that it represents and commands.

McLuhan was wont to caution that it is often difficult to distinguish a particular medium—especially a radically pervasive one—from its various contents and effects as well as from other media: “Environments are invisible. Their groundrules, pervasive structure, and overall patterns elude easy perception” (1962/1967, pp. 84–85). For this reason, Mitchell suggests as a technique that we approach media from “from a high enough level,” where they look like “systems” or “organisms” (p. 3). He points out that recent studies have drawn on systems theory to show that “There is always something outside a medium.... Every medium constructs a corresponding zone of immediacy ... of the unmediated and transparent, which stands in contrast with the medium itself.” He maintains that “every entity in the world, from the single-celled organism to the multinational corporation to the global economy, turns out to be a system that inhabits an ‘environment’ which is nothing more than the negative of the system—an ‘unmarked space’ that contrasts with the ‘marked space’ of the system” (pp. 3; 6–7). Still, Mitchell concedes that certain media will be difficult to isolate for the purposes of analysis because they are

ambiguous, seeming to fit on both sides of the systems/environment divide. He goes on to propose that we think of media for the most part as falling into one of two classifications: 1) they are a system for transmitting messages through a medium that serves as the material vehicle to a receiver; or 2) they are a space in which forms can thrive, like a petri dish (p. 8). This difference between a medium *through which* messages are transmitted, and a medium *in which* forms and images appear, articulates the two fundamental modalities of media (as transmitter and as galaxy/environment/habitat). These modalities are demonstrated in the diagram of systems theorist, Niklas Luhmann, and in the drawing of semiotician, Umberto Eco, both of which are reproduced in Mitchell's essay (see Figures 1 & 2, p. 8).

### **The Message**

The “message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs” (McLuhan, 1964/1994, p. 8). Hence, the message is the “total configurational awareness” of meaning that is signed, signaled, or transmitted by combining all the information encapsulated in the medium into an overall communication. McLuhan's maxim distills the idea that media transmit a range of cultural messages and meanings that can be translated as a kind of cultural code, or the medium provides the environment/habitat in which contents appear and which may then be distinguished for analysis.

McLuhan proclaimed that, “The ‘content’ of any medium is always another medium” (McLuhan, 1964/1994, p. 8). Strate adds that “when one medium becomes another medium's content, it becomes the code, symbolic form, or aesthetic style used to create specific messages” (p. 132). So the poetic forms and rhetorical patterns in the ancient oral medium of speech and oratory became the content of the medium of handwriting. Similarly, handwriting became the content of print, and the many ways in which the printed word can be organized into symbolic forms becomes the content of the medium of the Internet and other digital technologies.

In saying that the “message” is a consequence of the medium—that is, the “total configurational awareness” that “results from the new scale that is introduced into our affairs by each extension of ourselves, or by any new technology”—McLuhan recognized that the problem for human beings is that we have a perceptual gap that prevents us from grasping the total configuration of form and content as well as a bias that makes us tend to notice the content only. “The ‘content’ of a medium,” he observed, “is like the juicy piece of meat

carried by the burglar to distract the watchdog of the mind” (1964/1994, p. 18). The content of media do not shape the form of human association, he emphasized; rather, “societies have always been shaped more by the nature of the media by which men communicate than by the content of the communication” (1962/1967, p. 8). In this vein, Carveth maintains that in the medium of psychoanalysis, “it is not the content of what comes to light in analysis, not so much insight or self-knowledge that is curative, but rather the reliable presence, the ‘holding’ and ‘containing,’ the empathic attunement and non-judgmental acceptance offered [to] the analysand by the analyst” (p. 50). Thus, in psychoanalysis, the medium is central, not the content. In addition, Edmunds presents a clear example of how the form of the medium (in this case, the technology of the record player with the automatic arm that flipped the LP)—rather than the content—altered “the musical sensibility of an entire generation” by shaping the way they understood and interpreted the content of the music (p. 106). The tendency to be distracted by the content and to overlook the form, as well as the difficulty perceiving wholeness, these are proclivities that limit our ability to distinguish a medium from the “unmarked space.” In fact, McLuhan warned that it is precisely the “content” of the medium that “blinds us to the character of the medium” (McLuhan, 1964/1994, p. 9).

### **Model: Gestalt Psychology and the Figure/Ground Relation**

To explain the “blind spot” or “ellipsis” in human visual perception that makes it difficult for us to see the total configuration of form and content and to discern “the character of the medium,” McLuhan relied on the work of Danish psychologist, Edgar Rubin’s (1915) discussion of the figure/ground relation (McLuhan & McLuhan, 1988, p. 5). The figure/ground relation, which simultaneously models the form/content distinction, makes explicit this lacuna in human visual perception that makes us see figure/form or ground/content but not both at once, as well as the inclination to prioritize content over form. Mitchell presents in his essay a drawing of the figure/ground relationship in the image of the vase and two people (p. 9). Rubin noted:

When two fields have a common border, and one is seen as figure and the other as ground, the immediate perceptual experience is characterized by a shaping effect which emerges from the common border of the fields and which operates only on one field or operates more strongly on one than on the other. (Rubin, 1915)

The figure/ground relation is paradigmatic for Gestalt psychology and became for McLuhan a major tool for the study of media. He took up Rubin's principle that the ellipsis emerges on the border between two different fields. He incorporated this information concerning human perceptual limits as a basic technique for media analysis.

The diagram makes it easy to see how the figure/ground model displays two contradictory but complementary fields or structures that reciprocally imply and annihilate each other. Ambiguity in the figure-ground relation creates a positive-negative sequence *without the possibility of simultaneity*. At the same time, there is on some level an awareness of the unity of the figures in a total configuration. Discriminating one image/field from the other implies the whole relationship because perception maintains and locates the thing to be foregrounded out of the background and then suppresses and hides the background. The shift is a dissociation, one of two phases of a total act of attention in which each stage is complementary to the other and implies it. When perception constructs the figure on the ground or distinguishes the content from form, the way one object or group of objects is organized as either ground/form or figure/content depends on the direction of attention (Sartre, 1956/1966, p. 44).

McLuhan was well aware that the focus of attention involves a perception of discontinuity, "a negative interval" between that which we notice and what we ignore. The boundary line mediates between the two fields; it limits attention by separating the relevant and positive (figure, content) from the unlimited, irrelevant, and negative (ground, form). The positive-negative sequence in the reversible figure/ground or content/form image demonstrates how perceivers group items that seem relevant into bounded figures which lift themselves off in isolation from the totality as the content, whereas the form, seeming irrelevant, does not claim attention and recedes back into the visual field.

The figure/ground relation suggested intellectual techniques or antidotes that can serve as compensation for our inability to perceive a unified field. McLuhan proposes that it is by critically attending to certain thresholds involving a shift from figure to ground, content to form, sound to vision, that we can "momentarily step out of the system," in Strate's terms, and overcome the inherent limitations of the senses. The model from visual perception suggests that alternating modes of attention might be a technique for helping perception to move beyond the focus on content to perceive the unity of content and form. Observing how the line is a "go-between," it then becomes possible to envision the symmetry that binds together the alternative fields. While

physical sight is naturally limited in its ability to perceive the whole configuration, it is possible to retain a mental picture of the “Gestalt” of form and content. By consciously adopting a doubleness of attention that shifts back and forth between content and form, we may take the next step, and mentally put together the two fields to imagine the integral unity of content and form.

### **Examples of Media as Communication**

McLuhan offered examples that demonstrate how to apply the insight from the figure/ground relation to the analysis of a medium: the phonetic alphabet, as an extension of speech; electric light, as an extension of eyesight; and the airplane, as an extension of the human capacity for motion more generally. His articulation of these three media show how the “field approach” from the figure/ground image can be employed to distinguish a medium or systems of media and mediation from their surroundings, their contents, and their effects, even when media function as all-encompassing environments. These examples also show how McLuhan utilized the figure/ground image to secure an insight into the whole configuration of form and content.

Consider the first example: the phonetic alphabet. McLuhan argued that as a medium, the technology of the phonetic alphabet aided accurate transmission of information that extended speech in space and time, leading gradually to the adoption of writing systems as primary technologies for communication in the ancient world. Thus, the alphabet is an instance of a medium as “transmitter.” The rhetorical patterns of speech and oratory were translated into alphabetic notation and so become the content of the new medium. The phonetic alphabet led to the creation of new forms of language, aesthetic styles of writing, new symbolic signs and codes, and ultimately new forms of society and culture—an entire environment—organized around preserving and transmitting communication via the medium of writing. Thus, the message of any piece of writing using the medium of the alphabet, say an essay or novel, is not simply in the content. The ideas and notions represented and expressed in the content of the writing have, as a background, longstanding traditions of essay and novel writing to which generations of people have contributed over centuries. Through repetitions over many instances, a number of aspects of these literary forms became conventionalized. Consequently, the medium itself becomes a kind of language that encodes and communicates meanings.

Mapping the figure/ground relation onto the example of the work created by the phonetic alphabet, the message of the piece of writing is in the

total configuration of the written words (the medium) organized in certain ways or symbolic forms (the content) both as an original work, and as one instantiation of an essay or novel in their (environmental, historical, social, political, and cultural) contexts. In other words, the study of the medium looks at that piece of writing as a unique expression of an individual person *AND* as one manifestation of an essay within the full context of the essay as a medium for communicating information in that particular place and time. The essay is therefore seen as a communicative form that conveys meaning in the content and simultaneously in the way that the content is arranged in conventionalized patterns (the code or style). Both the essay and the novel are themselves forms that mediate the representation of information and these forms draw on fields of reference that extend outward into many different aspects of culture. The form of the essay, the introduction, the arguments, and conclusion, participate in the formal conventions of essay writing which codify meanings and references that are much wider than what appears in any individual essay. These extended cultural meanings that comprise the background field must be considered in tandem with the meanings that seem most readily apparent in the content that appears as the foreground. So the message of the essay is the total configuration of information that occurs through the interplay of form and content, figure and ground, operating simultaneously.

As another example of a medium, McLuhan mentioned the case of electric light, applying the figure/ground relation to analyze electrically powered lighting as a radically pervasive medium. Electric light is therefore an instance of a medium as “galaxy/environment/habitat.” Light produces an omnipresent atmosphere of illumination that becomes the ground or environment or form that has night baseball as one of its contents. The message of light is “pure information,” McLuhan asserted, it is a medium that is so all-encompassing that it has no message (1964/1994, pp. 6–12). Murray underscores that for McLuhan, media such as electric light comprise “environment[s] of services” (p. 62). That the baseball stadium is filled with light is an environment that remains largely taken for granted and hidden from the spectators. In this example, then, the baseball game is the content, strongest field, or figure, whereas electric light is the form, medium, weaker field, or hidden ground.

The ground of any technology or artifact is both the situation that gives rise to it and the whole environment (medium) of services and disservices that it brings into play. These environmental side-effects impose themselves ... as a new form of culture. “The medium is the message.” (McLuhan & McLuhan, 1988, p. 5)

The figure/ground relation, as applied to this example, illustrates how the mediation of electric light generates networks of services (wires, power plants, poles, maintenance people)—the ground or field on which the content that figures forth is the after-dark baseball game. “Baseball culture” is an effect. Though electric light produces a ubiquitous environment, it can still be distinguished, as a media system, from other, “unmarked” media systems (the alphabet, the railroad), as well as from its contents and effects. The example of electric light clarifies how media create environments and cultures, so that studying them becomes a form of “ecology.”

The airplane is a third example of a medium. McLuhan argued that the introduction and rapid proliferation of the technology of the airplane sped up the rate of transportation and evaporated the forms of social, economic, and political association identified with travel and transportation via the railway and the ocean liner. Whether the airplane is used for travel or transport, these activities are in some respects the “content” of the airplane, since they could not exist without the airplane. The culture of the airplane is made possible by a hidden network of information services. We are dependent on the airline industry to provide the background field that enters into the mediation that allows us to buy a ticket and ride on a jet. Foregrounding the airplane as a medium implies an entire environment of air flight in the background. Consequently, the message of the airplane as a medium is not confined to the aircraft itself. The message of the airplane includes both the stronger and foregrounded field (the airplane), *as well as* the background and weaker field, entailing the flight industry and multiple dimensions of culture simultaneously in the complex networks of association that make travel by airplane possible. It is the total configuration of form and content, foreground and background, that is the message of the airplane as a medium.

Again, using the figure/ground relation as a model for delineating a medium, we have the medium of the airplane which is a figure on the ground of flight services. Air travel and transport are other contents of the medium. Disorientation from changing time zones after long flights would be an effect of the medium of the airplane. To develop a total picture, we look at the airplane (figure) and air travel and transport (contents), and their effects (jetlag) in the context of the network of services provided by the airline industry (form, ground). Though the medium of the airplane entails complex networks that reach into many aspects of society and culture simultaneously, McLuhan showed it was still possible to identify the contents and effects of the airliner and, in addition, to distinguish the airplane as a system from other media systems.

The alphabet, electric light, and the airplane—these are just three of the many examples McLuhan offered as explanations for how to employ methods from Gestalt psychology to tease apart the complex facets and dimensions of even diffuse media systems.

### **Break-boundaries and Revolutionary Turning Points**

Having employed the figure/ground relation over three cases to explain how to separate a medium from other media systems, the form or ground from the figure or content, and all of these from their effects, McLuhan went on to explicate an example of the “break-boundary”—that ambiguous line that mediates between the two fields in the positive-negative sequence of the vase and two faces in the figure/ground relation. Again, McLuhan cites the example of the airplane. At certain key points in the growth of a system, he explains, there is a shift and this change makes it easier to detect the various phenomena at play in the process of transformation. “Just before [the jet] breaks the sound barrier, sound waves become visible on the wings of the plane. The sudden visibility of sound just as sound ends is an apt instance of that great pattern of being that reveals new and opposite forms just as the earlier forms reach their peak performance” (1964/1994, p. 12). For McLuhan, it is precisely this “sudden visibility” of change that makes the break-boundary so useful for the investigation of media and their effects. He points out that when the airplane (an extension of the human being), breaks the sound barrier, there is a shift in sensibility, as the sound of the engines turns to the vision of waves. This shift from the acoustic to the visual, from the sense of hearing to the sense of sight, from the ear to the eye, holds immense significance for McLuhan. Tschofen’s close reading of McLuhan’s arguments concerning the break-boundary illustrate how these threshold moments (where all the ingredients in an interaction are heightened so that the processes involved are made manifest) can be employed to develop a detailed analysis of the interaction and shaping forces along the borders of two different media systems (pp. 20–21).

In addition, the break-boundary that renders noise visible at the sound-barrier was a heuristic for understanding history as a succession of various communication media. McLuhan argued that there have been three fundamental transformations in communication technology: [1] *The Literate Revolution* following the adoption of the phonetic alphabet by the ancient Greeks, which “flipped” humans out of oral patterns of speech and thought and made way for the dominance of literate forms of communication (a shift from the ear to the eye); [2] *The Gutenberg Revolution* that came in the wake of the introduction of the movable type printing press by Johannes Gutenberg in the fifteenth century,

which sped up all these processes and effects; and [3] *The Electric Revolution* presently underway as a consequence of developments that began with the invention of the telegraph in 1844, followed by radio, film, telephone, and finally, the computer. Edmunds's paper offers a useful diagram of "McLuhan's Media Stages" (p. 105). The use of electric media, McLuhan argued, "constitutes a break-boundary" between the mentalities of print and electronic media cultures, just as phonetic literacy was a break-boundary between the oral and literate mentalities and cultures (McLuhan, 1995, p. 245).

The method assumes that the social and cultural changes that accompany revolutionary turning points in dominant modes of communication have common features and follow forms and patterns that make them in many respects analogous. The changes in "social structure and knowledge systems" currently underway in the shift to computer-mediated communication are not unlike patterns of change that emerged when Greek culture modulated from oral to written media, and Renaissance cultures switched from handwriting to print technology (Danesi, 2008, pp. 115–116). These three technological break-boundaries in the history of communication display similar patterns in the way that each innovation combined with other social, cultural, and political factors to enable new modes of cognition, organizations, and institutions designed to preserve and transmit information via the new medium. Thus, the processes involved in any one of the three revolutions may serve as the basis for examining social and cultural developments in the other two revolutions.

It would be difficult to overestimate the value of McLuhan's insight concerning the comparability of the three historical turning points in dominant media systems. The reconfigurations of society and culture we see underway as a consequence of the arrival of the Web society, which seem to many to be without precedent, are shown by McLuhan to conform to patterns and processes that have two other historical precedents, making it possible to diagnose and *propose solutions* to problems and tensions surrounding technological change—based on solid research concerning changes that came in the wake of *two* previous and analogous incidents.

In sum, McLuhan's application of both the figure/ground relation and the break-boundary to pivotal points in the history of communication media highlights the usefulness of his idea that the cusp of change is an advantageous point of view from which to observe the dynamics at work following the introduction of a new medium.

### Media as a Study of Transformation

McLuhan distinguished the study of media from the study of communication and information more generally, when he emphasized that his “kind of study in communication is a study of transformation, whereas information theory and other theories ... [are primarily] theories of transportation” (1974/2003, p. 230). In the diagram of the figure/ground relation, the shift in attention reverses the two fields (from vase to human profiles or the other way around), which transforms the perception of the image. In the example of the airplane breaking the sound barrier, acceleration turns the sound of the engines into visible waves on the wings, resulting in a transformation of percepts from something audible to something visible. In the historical shifts in dominant media systems—from orality to literacy, from manuscripts to print, or from print to digital media—the change transforms human mentality and reconfigures social and cultural practices. So Strate points out that while there is a tendency for people to think of media “in terms of a pipeline or transportation, something that links or bridges two points,” McLuhan and media scholars who have followed in his stead “have long been critical of the transportation model” (pp. 135–136). McLuhan repeatedly downplayed the transportation model and emphasized a metaphor of *transformation*: “Mine is a transformation theory,” he noted, because it examines how people are transformed by the very instruments they create to extend themselves (McLuhan, 1974/2003, pp. 229–231)

McLuhan’s transformational model of social and cultural change—which must be distinguished from biological theories of evolution concerned with the natural selection of genetic mutations, from meme theory, and social Darwinism— theorizes how each of the three media stages incorporates what went before and moves human communication into new realms of possibility. Thus, the phonetic alphabet of *The Literate Revolution* merged with oral patterns of communication. *The Gutenberg Revolution* incorporated the previous technologies (orality and the alphabet) in the innovation of the printing press with movable type, producing explosive changes that thrust human beings into a new phase wherein all the effects of the previous technologies were amplified. Analogously, *The Electric Revolution* is amalgamating orality, the alphabet, and print media along with home video, audio recording, and other new forms of technology into combinations that accelerate the pace of change still further. In fact, new technologies are producing effects that linguists show us are reshaping languages (Danesi, 2008, p. 120), while other scholars argue that cognition itself is being realigned as our civilization recalibrates around storing and retrieving information via electric and digital media.

According to McLuhan, transformational changes are not simply unidirectional or necessarily positive. Nor does cultural change proceed as a straightforward linear progression. “[T]he power of things to reverse themselves by evolution is evident in a great diversity of observations” (1964/1994, p. 169). When McLuhan examined media over a large time span, he highlighted the facts of historical change that do not fit the “patterns of the linear sequences of social and economic evolution” often envisioned by historians (1995, p. 102). He pointed out that seemingly progressive sequences may terminate abruptly and turn into the opposite, a regression (1964/1994, p. 12). Thus, increased velocity in the shift from the printing press to electric media “reverses explosion into implosion,” so that the energies of the electronic world collapse inwardly with great force and in direct opposition to traditional and expansionist structures of organization associated with print (1964/1994, p. 170). Numerous examples of similar “reversals of form and dynamic” led McLuhan to dismiss linear concepts of change in favor of a view of cultural evolution as a “multilinear process” involving “a progressive integration of many separate elements” that proceeds in fits and starts, and encompasses both advances and setbacks in the course of a chronological progression through history (1995, p. 102).

At the same time, even though there are reversals in the course of a trajectory, McLuhan argued that eventually, change from one media system to another reaches a “point of no return.” Any process of change manifests a break-boundary. Tschofen states: “In McLuhan’s hands, the notion of the break-boundary offers a way to think about the peculiar rhythms of the evolution of cultures and societies, which, after periods of relative stability, undergo periods of radical transformation that yield vast cognitive, psychic, corporeal, and social changes” (pp. 20–21). Malcolm Gladwell (2002) has recently described what he calls the “tipping point,” the principle that at certain key junctures change stops going through regressions, ceases to be steady and gradual, and instead “happens all at once.” The tipping point is the “moment of critical mass, the threshold” when adoption of a new technology “takes off” (p. 12). Gladwell cites as evidence studies of the introduction and widespread adoption of the fax machine and the cell phone during the late 1980s and 1990s. These studies show that innovations in communication technology follow a discernable pattern, seemingly dependent on levels of saturation, adding weight to McLuhan’s observations that at certain key junctures, the factors that combine in the processes of change are more readily discernable. Gladwell’s “tipping point,” like McLuhan’s “break-boundary,” refers to those moments of change when a phenomenon is suddenly everywhere. “The sudden visibility” of change makes apparent the typical patterns of turning points; when the previous

technology approaches apogee, the new medium becomes visible (McLuhan, 1964/1994, pp. 6; 12).

McLuhan's transformational model, then, distinguishes the study of media as a discipline from the study of communication and information, which he argued were rooted in a transportation paradigm. The transportation model in communication is a parallel to the "divisions between composer, performer, and audience" that Edmunds, in his response to Bogdan, calls the "old-world paradigm" of musical performance. When applied to performance, the transportation metaphor assumes that the composer creates meaningful communication which is then transported to the performer who, in turn, transports this communication to the audience (pp. 103–104). Edmunds argues that it is precisely this transportation metaphor that McLuhan sought to undercut in his own media performances. Indeed, the transportation/transformation distinction is vital, as McLuhan stressed:

All the official theories of communication studied in the schools of North America are theories of how you move data from point A to point B to point C with minimal distortion. That is not what I study at all. Information theory I understand and I use, but information theory is a theory of transportation, and it has nothing to do with the effects which these forms have on you. It's like a railway train concerned with moving goods along a track. The track may be blocked, may be interfered with. The problem in the transportation theory of communication is to get the noise, get the interference off the track and let it go through. Many educators think that the problem in education is just to get the information through, get it past the barrier, the opposition of the young, just to move it and keep it going. I don't have much interest in that theory. My theory or concern is with what media do to people.... Mine is a transformation theory. (1974/2003, pp. 229–230)

In other words, McLuhan highlighted his transformation argument precisely because he was aware that it provided the study of media with a separate and distinct identity from the study of communication and information more broadly construed. Further, in deemphasizing the transportation model, and by focusing attention on how people are transformed by their own instruments, McLuhan aligned the study of media with other emergent realms of inquiry and critique, such as "reader response theory, uses and gratifications research, ethnographic research of audiences and consumers, studies of the decoding process, [and] the biology of perception and cognitive science," as Strate

discusses (p. 132). McLuhan's own media performances made tangible these theoretical insights; he satirized previous "old-world" communication models and metaphors (Edmunds, 2008, p. 106).

According to Strate, the "medium is the message" is a "metaphor not a math problem," and it is a "wake-up" call to resist being taken in by the content of the media (pp. 130; 132). In today's world, media bombard us, address us, transport, and transform us. McLuhan's aphorism is, as Strate reiterates, a call to "pay attention to the medium, because it is the medium that has the greatest impact on human affairs, not the specific messages we send or receive. It is the symbolic form that is most significant, not the content" (p. 130). For Murray, too, the medium and the message are metaphors, and "the meaning of a metaphor is always another metaphor" (p. 68). He adds, "metaphor, from the Greek *meta pherein*, means to carry across or transport. And in McLuhan's words, 'Each form of transport not only carries, but translates and transforms, the sender, the receiver, and the message'" (Murray, 2008, p. 68; McLuhan, 1964/1994, p. 90). Murray argues that the metaphor "bridges while at the same time opening up the play of a 'resonant interval' between literal and figurative meanings" (p. 68). And so he insists that "each word, each medium, opens a gap 'for the light to get in,' for further signification, for critique, and perhaps a politics of resistance" (p. 65).

McLuhan's arguments met with sharply polarized responses at the time they were published and the controversy continues. Critics have stressed that the emphasis on eras of transformation linked to advances in communication technology takes less account of gradual processes of change. McLuhan has also been criticized for offering a theory of technological determinism, as Strate explains (p. 133). However, scholars such as John A. Eisenberg have argued that McLuhan's view of causality "comes closest to an indeterminate position" (1992, p. 3). For McLuhan, media are tools we use to extend the human body and mind that inevitably transform the representations of information we discover and transmit. His arguments were therefore fully in consonance with findings from twentieth-century physics and with research from Gödel, Heisenberg, and others that the instruments we use to seek knowledge inevitably shape the knowledge that we find (McLuhan, 1964/1994, p. 170).

### **Issues in the Study of Media**

The central premise of "the medium is the message" is that the medium communicates meaning. The studies in this issue of *MediaTropes* all look at how the medium informs messages, examining the social and cultural

information attached to the conventions of the medium itself as an object of investigation. Mitchell highlights one of the major points of current debate in the study of media when he asserts that the medium is not necessarily “an object” (p. 18). Carveth maintains that a medium can be a human “relationship” (p. 50). Danesi, by contrast, defines the medium as typically having a “physical means” through which communication is “actualized” (p. 119). Strate, too, mentions that a medium usually has “a physical basis” (p. 131). Along with questions concerning the “objectivity” and/or materiality of a medium, Mitchell raises the question of the distinction between media studies and related fields, such as cinema and cultural studies (p. 4). Strate agrees that the disciplinary boundaries are fluid and acknowledges that the study of media “represents a less mature body of theory than critical theory” (p. 134). He argues at the same time that the interdisciplinary nature of the study of media provides a methodology that is at once more flexible and more concrete than the methods and frames of reference that serve as the focus of investigation in these related fields.

Understanding media as communication entails looking at how the medium shapes messages, examining the conventions and social and cultural meanings that inhere in the form, the messages conveyed by the content, and above all, the communication that emerges through the interaction between the form and the content. Whereas the approach from cinema studies, for example, might cultivate the ground of meaning in the history and development of film, media studies might consider the film from the perspective of the medium, looking at how the shift from the medium of the novel to the medium of film affects the meaning of the story, inquiring into the way messages get translated and transformed in the different instances—such as Murray in this study exemplifies. Media studies look at regularities created by the medium itself as the main focus of investigation, searching for repetitions in the content by pursuing methods that grew out of studies in classics and ancient philosophy in the early twentieth century, combined with techniques that emerged from the study of cognitive psychology and mass media in the mid-twentieth century. Using the medium as a framework for examining repeating forms and patterns of culture provides a way to take advantage of methodologies from diverse disciplines, and to integrate them to examine complex problems and forms of cultural expression.

McLuhan’s employment of the figure/ground relation, taken from psychological studies of visual perception, suggests that alternating modes of attention might be a way to build up a composite and unified picture of the whole configuration of form and content. Repeated observations generate insight into the way that the boundary line is a “middle” between the two fields

or images in the picture. The Gestalt is the insight into the symmetrical relationship that brings the composites into a unity. While physical vision is inherently limited in its capacity to apprehend the whole, it is possible to retain an intellectual insight into the “total configuration” of form *and* content by pursuing a dual focus of attention that alternates between engagement with the medium and a detached, critical awareness (such as Bogdan describes). The figure/ground or content/form relation is directly connected to the “medium is the message” in that the message is neither in the content nor in the form. The meaning is constructed by a kind of *double vision* that alternates between content and form and integrates the two into a unity that involves an awareness of the total pattern of content and form.

The relation between media and messages involves questions that are critical at a time when we recognize the need for various kinds of literacy to interpret different media types and forms of information. McLuhan contributed ideas that founded media studies, and while the discipline is still emerging and seeking an identity, McLuhan in his own works provided the material for this identity. The essays in this volume contribute to the ongoing conversations surrounding the central problems posed by media as communication. The range of these essays reflects the interdisciplinary scope of studies of media and confirms the continuing significance of McLuhan’s central premise that the medium communicates messages.

Why is McLuhan “required reading” for anybody seeking to understand media today? McLuhan is important for drawing our attention to media as communication. He also underlined the need for different kinds of media and information literacy. His arguments continue to offer a way to understand how changes in communication technology impact language, culture, and society. The premise of “the medium is the message” is that the medium communicates meaning and guides interpretation. In centering on media and focusing on break-boundaries as points of overlap between different media systems, McLuhan marked off a discipline, gave it a theoretical basis, and suggested models and interdisciplinary methods for examining media as signs of culture. These are the factors that have allowed McLuhan’s writings to escape the confines of the cultural moment in which they were created and thus to communicate the parameters of media to new generations of scholars. The study of media is McLuhan’s legacy.

## Bibliography

- Bogdan, D. (2008). Music, McLuhan, modality: Musical experience from “extreme occasion” to “alchemy.” In T. Gibson (Ed.), Marshall McLuhan’s “medium is the message”: Information literacy in a multimedia age [Special issue]. *MediaTropes*, 1, 73–101. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Carveth, D.L. (2008). Is the medium the message in psychoanalysis? In T. Gibson (Ed.), Marshall McLuhan’s “medium is the message”: Information literacy in a multimedia age [Special issue]. *MediaTropes*, 1, 42–56. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Curtis, A. (2002). *The century of the self*. BBC Two documentary.
- Danesi, M. (2008). The medium is the sign: Was McLuhan a semiotician? In T. Gibson (Ed.), Marshall McLuhan’s “medium is the message”: Information literacy in a multimedia age [Special issue]. *MediaTropes*, 1, 113–126. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Edmunds, M. (2008). “Flip-side overlap”: The medium is the music. In T. Gibson (Ed.), Marshall McLuhan’s “medium is the message”: Information literacy in a multimedia age [Special issue]. *MediaTropes*, 1, 102–112. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Eisenberg, J.A. (1992). *The limits of reason: Indeterminacy in law, education, and morality*. Toronto: OISE Press.
- Gladwell, M. (2002). *The tipping point: How little things can make a big difference*. Boston: Back Bay Books.
- Lapham, L.H. (1994). Introduction to the MIT Press Edition: The Eternal Now. In M. McLuhan. *Understanding media: The extensions of man* (pp. ix–xxiii). Cambridge: MIT Press. (Original work published 1964).
- McLuhan, M. (1994). *Understanding media: The extensions of man*. Cambridge: MIT Press. (Original work published 1964).
- McLuhan, M. (2003). *Understanding me: Lectures and interviews*. (S. McLuhan & D. Stanes, Eds.). Toronto: McClelland & Stewart.
- McLuhan, M. (1995). *Essential McLuhan*. (E. McLuhan & F. Zingrone, Eds.). Basic Books: New York.

- McLuhan, M. & McLuhan, E. (1988). *Laws of media: The new science*. Toronto: University of Toronto Press.
- Mitchell, W.J.T. (2008). Addressing media. In T. Gibson (Ed.), Marshall McLuhan's "medium is the message": Information literacy in a multimedia age [Special issue]. *MediaTropes, 1*, 1–18. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Murray, S.J. (2008). Psychoanalysis, symbolization, and McLuhan: Reading Conrad's *Heart of Darkness*. In T. Gibson (Ed.), Marshall McLuhan's "medium is the message": Information literacy in a multimedia age [Special issue]. *MediaTropes, 1*, 57–70. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Ontario Ministry of Education. (2002). *The Ontario curriculum grades 11 and 12: Interdisciplinary studies*.
- Rubin, E. (1915). *Synsoplevede figurer* [Visually experienced figures]. Copenhagen: Gyldendal.
- Sartre, J.-P. (1966). *Being and nothingness*. Barnes, H.E. (Trans.). New York: Washington Square Books. (Original work published 1956).
- Strate, L. (2008). Studying media as media: McLuhan and the media ecology approach. In T. Gibson (Ed.), Marshall McLuhan's "medium is the message": Information literacy in a multimedia age [Special issue]. *MediaTropes, 1*, 127–142. Available at [www.mediatropes.com](http://www.mediatropes.com).
- Tschofen, M. (2008). "Agents of aggressive order": Letters, hands, and the grasping power of teeth in the early Canadian torture narrative. In T. Gibson (Ed.), Marshall McLuhan's "medium is the message": Information literacy in a multimedia age [Special issue]. *MediaTropes, 1*, 19–41. Available at [www.mediatropes.com](http://www.mediatropes.com).