This paper introduces a communication theory of a Russian scholar, Yuri Rozhdestvensky, who worked behind the iron curtain and was never published in English. We will argue that Rozhdestvensky has made significant contributions to communication theory. In particular Rozhdestvensky has demonstrated that each new technology added to communication enhances and invigorates rather than supplants previous technologies. In order to demonstrate Rozhdestvensky’s originality, we will compare his theory to that of Marshall McLuhan, whose perspective on the history of communication has been succinctly and clearly summarized in several works (e.g. Meyrowitz, 2005, Griffin, 2009), and is well known in the US (e.g. Strate and Watchel, 2005).

Rozhdestvensky (1926-1999) started his scholarly career writing on Chinese grammar; his second Ph.D. involved the study and comparison of 2,000 grammars and established several language universals; he then moved on to a comparative study of the Chinese, Indian, Arabic and European rhetorical traditions, and began to study history and the general laws of human communication. Discourse and communication interested Rozhdestvensky not so much as a pure science but as tools that could be put to use to serve the needs of people. For example, one of the pressing needs of Russia as a multi-cultural country is to manage and develop its diverse ethnic and linguistic minorities. Rozhdestvensky advocated internal (domestic) oriental studies – he submitted proposals to the government that warned about the precarious situation in the Caucuses. He argued that the rich economic reserves of the region – for instance, oil and gas – conflicted with its unsatisfied spiritual needs in education. The misbalance between material and spiritual culture needed to be addressed. The Russian government authorized Rozhdestvensky to conduct negotiations after the first Chechen war, and in a devastated city on poor paper the Chechens published Rozhdestvensky’s brochure on rhetoric. Later Rozhdestvensky explained to his students, “Their eyes shone when I talked about education”. A group of scholars under Rozhdestvensky’s guidance began to develop a thesaurus for education in Chechen schools, and the university in Grozny was translating that thesaurus into the Chechen language, creating necessary vocabulary in the process of that work. After the war resumed, the dean of the Chechen University fled to Russia and stayed at Rozhdestvensky’s home for a while; the thesaurus project, unfortunately, was a casualty of that war.

Rozhdestvensky served as the Chair of General Linguistics Department of Moscow Lomonosov University, acted as a consultant to various government and business entities, and in his many monographs developed a theory of language in the information age.

The Algorithm

Both Yuri Rozhdestvensky and Marshall McLuhan tell a story of communication beginning with the appearance of our species. Both offer tools to understand and control the pressure of new forms of communication. According to *Gutenberg Galaxy* McLuhan writes: "had we meditated on such basic fact as that long ago, we might easily have mastered the nature and effects of all our technologies, instead of being pushed around by them", implying that a reasonable person would want to be a master, not a toy of communication technologies. (p.6) Rozhdestvensky concludes his preface to *General Language Studies* by stating the goal - "to provide a
preliminary orientation in the ocean of texts and an orientation in the principles of studying them”, implying that a reasonable person would want to navigate the communication ocean with a map, understanding the scope and limits of the endeavor. (p.26) Both men show how we can learn from previous stages of communication technologies to understand and manage issues raised by the current stage. Both focus on changes in media and the role different media play in the functioning of the text (though McLuhan is concerned more with psychological effects on the user and the balance of the senses, while Rozhdestvensky is concerned with the external rules which govern the text's functioning and the genre developments). Both trace the precedents, i.e. changes that happened each time a new technology was introduced to human communication.

McLuhan is pessimistic about the changes brought by new media. While Rozhdestvensky believes that old genera are invigorated and enhanced by new media, McLuhan says: "That each new method of transporting commodity or information should have to come into existence in a bitter competitive battle against previously existing devices is not surprising. Each innovation is not only commercially disrupting, but socially and psychologically corroding, as well". Where Rozhdestvensky sees the interplay between the media, McLuhan sees a civil war raging. (McLuhan, 2003, pp.73, 335) McLuhan imagines us "caught between the Scylla of a literary culture and the Charybdis of post-literate technology"; we are in agony, heading towards a vortex, experiencing a trauma, awakening our archaic animosities, lapsing into primitivism. (McLuhan, 1992, p.77)

In his many monographs (e.g. General Language Study, Theory of Rhetoric, Philosophy of Language, Culture Studies and School Curriculum, Lectures in General Linguistics, etc), Rozhdestvensky offers a detailed account of the four layers of communication history, which presents change as a sort of punctuated equilibrium: quantitative changes accumulate in the system until it erupts into a qualitative boost and passes on to a next level, where it maintains a new momentary equilibrium. These four layers of communication are the oral, the written, the printed and the electronic (Rozhdestvensky terms the latter "the information age"). Rozhdestvensky writes:

"Though commonly accepted, the division of language history into four stages has a number of inaccuracies, both chronologically and in that in various locations the process may skip stages or even go back to previous ones. But the model is more of an ideal reconstruction of a general process and is beneficial because it reveals certain regularities in the process.

1. The transition from stage to stage in each case is, so to speak, a triumph over a language crisis, achieved either by imparting a new medium on the language (writing, printing) or by changing the ways of treating the language (in particular the change in education tools - school, literary language and grammar).

2. Transition from stage to stage does not mean setting aside the achievements of previous stages, but includes them in the new whole and reconstructs the whole (barbaric languages as related to the civilized ones, oral unregularized languages as related to regularized oral and unregularized written ones, dialects which have no separate writing systems as related to the literary language and "dead" languages).

3. Transition from stage to stage always includes conscious and purposeful influence of people on a segment of the language process, eventually changing and restructuring the process as a whole". (Rozhdestvensky, 1967, pp. 299-300)
Rozhdestvensky explains that we can learn at least two things from our past. First: changes in communication technologies have happened before; what humankind is experiencing in the "global village" (McLuhan’s term Rozhdestvensky never had a chance to hear, since McLuhan was not available in Russian) is not entirely unprecedented, even if it is faster and more massive than before. Secondly, each time a new stratum forms, the following changes in society occur: new jobs are added, some old jobs die; schools adapt their curricula; language sciences adapt their theories; understanding of authorship changes and with it copyright laws change; new genres of communication appear; and, importantly, old forms of texts do not die - they are enhanced and invigorated as new operations with old texts become possible.

The following graph can illustrate the theme of enhancement:

<table>
<thead>
<tr>
<th>Future</th>
<th>Past</th>
</tr>
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<tbody>
<tr>
<td>future</td>
<td>25 yrs ago</td>
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<td>100 yrs ago</td>
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<td></td>
<td>500 yrs ago</td>
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<td>5000 yrs ago</td>
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<td></td>
<td>50,000 yrs ago</td>
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</tbody>
</table>

(Here the electronic layer is separated from the electric one to illustrate the massive influence of computer technologies, though neither Rozhdestvensky nor McLuhan separates this layer into a “fifth transition”).

Rozhdestvensky's claim that enhancement and invigoration of previous genres is a repeating pattern deserves attention. Derrida (2005) believes that the new overlaps the old without enhancing it to any great degree: “There is, there will therefore be, as always, the coexistence and structural survival of past models at the moment when genesis gives rise to new possibilities”. (p.16) McLuhan postulates the influence of new media on old genres, but his tone is ominous. So do new media bring growth (Rozhdestvensky) or war and destruction (McLuhan)?

**Epochal Historiography at a glance: The Algorithm applied to four transitions**

The presentation below will necessarily be limited, with only selected illustrations, as can be expected when the work of a lifetime is condensed into a few pages and the disciplines of communication, curriculum development, law, psychology and linguistics intersect in a brief overview.

**First transition: from no language to the genesis of oral language**
The first transition occurred as oral language originated and evolved–the transition from no language at all to a communicating human society. Rozhdestvensky calls it a glottogenic process (Language Theory). Both Rozhdestvensky and McLuhan identify this transition as the first important technological leap. McLuhan in Understanding Media explains the significance of the first transition using Henri Bergson's philosophy: "...language is a human technology that diminished the values of the collective unconscious. It is the extension of man in speech that enables the intellect to detach itself from the vastly wider reality... Language does for intelligence what the wheels do for the feet and body. It enables them to move from thing to
thing with greater ease and speed and ever less involvement. Language extends and amplifies man but it also divides his faculties. His collective consciousness or intuitive awareness is diminished by this technical extension of consciousness that is speech" (p.113).

The “New jobs” of this stage are the roles crystallizing in the first human societies, including those of leaders, shamans, craftsmen, parents, etc. Schools have not yet been formally institutionalized, but children learn through tribal rites and festivals. Syncretic shows –tribal performances involving songs, dance, pantomime, speech, possibly drawing and the use of objects - serve as learning tools for the young generations and as unifying rite for the community (Language Theory). “Language theory” at this stage is inseparable from creating language: “Language theory exists inside the syncretic act as the act of name-giving… A word is postulated to be an attribute of the object, inherent to the object's nature; it determines the object's behavior and the ways to treat it. Thus, language theory directly serves the task of constructing language.” (Rozhdestvensky, 1967) Rozhdestvensky invites the reader to understand the term "language theory" as any act leading to the growth or better understanding of language. Such an act does not have to be consciously "theoretical." The coining of new words, such as "Irangate" during a political crisis or "potassium permanganate" for a chemical substance, is an act of language theory in the same sense as our ancestors' coining words for fire and water). New creations, which would be covered by the term “copyright”, belong to the whole society. Individual creators probably are not allowed copyright protection because "the spoken word does not afford the extension and amplification of the visual power needed for habits of individualism and privacy" (McLuhan, 2003, p.112). The new genres appearing at this stage are the first genres of human oral communication: daily dialogue, news, public address, folklore. Through proverbs, tales and fables, folklore presents traditional wisdom -- the equivalent of contemporary sociology, psychology and behavioral science. Myths offer ideas about the world around (for example, every tribe has myths about creation of the world, the history and the properties of water, fire, earth, animals) -- the equivalent of natural history. There are no old forms of texts to be enhanced.

**Second Transition: The Addition of Writing**

The second transition occurs with the invention of writing. Many new jobs and whole organizations are created: producers of writing materials (clay tablets, parchment, wax tablets, papyrus, sharp sticks, pens, ink); producers of seals, heraldic signs, money (i.e. texts on materials not specifically designed for writing); postal service: messengers and postmasters; organizations for storing texts - collective memory of the society: archives, museums, libraries and scriptoria; offices: special organizations managing document flow. Schools appear for the practical purpose of servicing those new organizations: there is a need to replenish the ranks of professionals. In language theory four distinct grammatical traditions develop - Mediterranean, Chinese, Indian and Arabic. They are distinct because they are formed on the basis of different types of writing (hieroglyphic and phonetic) and on different types of texts (Homer's epos, Chinese Five Books, The Vedas, the Koran). (Rozhdestvensky, 1996, pp.171-176) Copyright does not yet exist as a legal phenomenon; "A desire to correctly attribute authorship exists at the written stage of literature, but an author of a handwritten text has no means to enforce copyright on the handwritten copies". (Rozhdestvensky, 1996, p.208) McLuhan agrees: "Scribal culture could have neither authors nor publics such as were created by typography... Authorship before
print was in a large degree the building of a mosaic... Not only was the assembly of the parts of the book often a collective scribal affair, but librarians and users of books took a large hand in composition since small books which only took a few pages, could never be transmitted except in volumes of miscellaneous content". (McLuhan, 1992, pp. 130-133) New genres develop. With the development of writing the syncretic drama split into separate art forms, each of which could now develop separately: drama slowly begins to separate itself from dance and singing, and schools emerge as a distinct social institution to pass on knowledge. (Rozhdestvensky 1967) Other new genres include money, seals, documents, letters, wisdom writings and imaginative literature (General Language Studies). Old forms of texts are enhanced and invigorated; the achievements of the previous period are preserved. Religious texts and traditions that once were passed on orally are now written down and become the foundation for canonical texts; important parts of folklore, like songs and proverbs, are preserved in a written form. New rules begin to apply to public speaking: political, legal, military and religious addresses are often written down beforehand and then memorized or read from paper because speakers must not only find strong ways of persuasion, but also formulate their ideas according to norms of the standard language (McLuhan captures this in his aphoristic brilliance: "Nobody ever made a grammatical error in a non-literate society". (McLuhan, 1992, p.239)

The interconnection between writing and orality has been and continues to be vigorously studied (e.g. Ong, 2002) and the interplay between orality and literacy forms a significant part of McLuhan’s work. McLuhan traces the dynamics between the oral/aural bias and the visual bias, (Rhodes, 2009). In Rozhdestvensky’s terms, McLuhan describes how writing enhanced and developed more oral types of activity; for example, "manuscript culture is conversational if only because the writer and his audience are physically related by the form of publication as performance" (p.84); "the medieval monk’s reading carrel was indeed a singing booth" (p.92); "in chantry schools grammar served, above all, to establish oral fidelity" (p.93).

McLuhan separates the influence of writing in the East from that in the West. For Western civilization, he attributes to writing much more than a quantitative boost in economy and communication. He locates "the hidden cause of our Western bias toward sequence as ‘logic’ in all-pervasive technology of the alphabet" (Understanding Media, p.121), and explains that Eastern alphabetic cultures (e.g. Russia) are less susceptible to this bias because they are "less permeated with the patterns of literate culture than Americans" (p.122). This distinction is absent from Rozhdestvensky's perspective, who, though Russian, was highly "permeated with the patterns of literate culture."

The invention of writing caused an explosive development of society. In Rozhdestvensky's framework, each time a new nation receives a writing system, a similar explosion takes place. Rozhdestvensky called languages that possess writing systems civilized; he called purely oral languages barbaric or vulgar.

**Third transition: addition of printing**
The third transition occurs with the introduction of printing. McLuhan attributes the economic and industrial growth of the 18th-19th centuries to the influence of print: "breaking the individual out of the traditional group while providing a model of how to add individual to
individual in massive agglomeration of power" (p.235); Rozhdestvensky is more conservative in noting that chronologically the move to writing coincides with the development of capitalism and the growth of "goods for money" relationship. McLuhan highlights also the psychic effects of "the linearity, precision, and uniformity of the arrangement of movable types": "perhaps the most significant of the gifts of typography to man is that of detachment and noninvolvement - the power to act without reacting" (p.235). Both thinkers demonstrate that during this transition speech becomes a product that is manufactured and sold. In McLuhan’s words, "typography tended to alter language from a means of perception and exploration to a portable commodity" (Gutenberg Galaxy, p.161).

The algorithm applies at this transition, too. New jobs are created, e.g. editors, type-setters, printers, publishers. Copyright is established: authorship now can become a vocation rather than an avocation, and professional writers learn to band together to protect themselves legally. In addition, the relationship between reader and writer now takes on a financial dimension, which leads to the "requirement of maximum variety of content imposed on text producers. Hence - text producers are prohibited from repeating themselves or other authors". In other words, one of major requirements to a printed text is that it contain added value - new ideas or new stylistic approaches; this leads to developing citation rules and means of identifying plagiarism (General Language Studies, p.207-208). McLuhan agrees with this: "That it [typography] should have been the means of fostering habits of private property, privacy, and many forms of ‘enclosure’ is, perhaps, more evident. But most obvious is the fact of printed publication as the direct means of fame and perpetual memory" (Gutenberg Galaxy, p.131). Rozhdestvensky attributes the development of copyright to economic needs and to the nature of the new genres (for instance, the requirement that the text contain original scholarship); McLuhan attributes it more to psychological reasons fostered by the nature of the medium (fame and perpetual memory made possible by relatively cheap mass distribution of a text). Schools undergo a drastic change. Growing industry (including printing-related industry) requires educated workers. The tremendous growth in the volume of texts requires more reading skills. Cheaper books in larger numbers offer a chance to spread education. Now that vulgar languages are becoming used more often and are gradually acquiring a prestige equal to the classical ones, they become the language of instruction. Now it becomes easier to standardize text-books and grammar books throughout a nation. The growth in scientific publications, imaginative literature and journalism overwhelms the previous structure of the curriculum: instead of the trivium and quadrivium, schools begin to include sciences and literature, and to follow the social ideology expressed through journalism (in addition to or to the exclusion of philosophy as a basis for structuring curriculum). (Philosophy of Language, Culture studies and School Curriculum). Moreover, as McLuhan points out," putting the same text in front of any given number of students or readers print ended the scholastic regime of oral disputation very quickly" (Understanding Media, p.237).

When vulgar languages entered the classroom, their grammars needed to be formulated and new grammars texts need to be written to describe and standardize those languages (Lectures in General Linguistics, p.277-278). Thus, the new medium requires a development of language theory. Antoine Arnauld and Claude Lancelot in 1660 posit the idea of a universal grammar. (General Language Studies, p.262-264) Grammar becomes redefined and autonomous loses its
old connection with logic. The "creation of national grammars changes the body of language theory. Language theory parts with logic: grammar in its principles becomes not universal but formal. Grammatical formalism needs substantiation. Linguists find such substantiation in the research approach - in comparative-historical and typological methods. Those methods discover the origins and peculiarities of language forms in their national differences and thus fix the national differentiation of languages" (Language Theory). Rhetorical and grammatical treatises are translated from old classical into new languages. Standardization and unification of education create one literary norm on the whole territory of a country. The spread of literature leads to the growth of language: authors create new words and turns of phrase that increase language’s expressive abilities. Even more important than beauty and stylistic perfection is growing capacity for linguistic precision as technical terminology develops.

New genres develop. For example, the requirement to verify new data and to cite old data creates new scientific genres which grow into a separate sphere of writing; scholarly journals come into being. The speed and relative inexpensiveness of print create a market for journalism, which in turn helps encourage advertising (Philosophy of Language). In the imaginative literature, the novel becomes a new popular genre.

Old forms of language – both oral and written - are enhanced and invigorated. For example, money once minted is now printed and produced in larger amounts. Documents can now be multiplied (for better or for worse, which creates the foundation of bureaucracy). Manuscripts receive footnotes, tables of contents and standardized orthography because the recipients of a printed text are a broad group of readers, and one of the major requirements is that the text be understandable to every recipient; i.e. a manuscript must adhere to the norms of the standard language and be easily readable. Obscure and forgotten texts can be revived and preserved which creates a new sense of history and national heritage and identity. Oral texts too can now be captured and preserved in the form of myths, legends, fairy tales and other pieces of folklore, including the works of verbal art that were created in vulgar languages at the stage of the dominance of canonical texts - folk dramas, satirical verses, songs, etc. Once printed, they re-enter the language as precedents to be followed. Once the new languages receive their norm, oral speech has to follow it. Oral language is enriched as it borrows many expressions from published printed texts.

McLuhan claims that print developed a visual bias which dominated the Western mind from the early modern period until the twentieth century, and this bias developed a logical, linear way of thinking. "As Gutenberg typography filled the world the human voice closed down. People began to read silently and passively as consumers. Architecture and sculpture dried up, too" (Gutenberg Galaxy, p.250). Ong sees the print era as silent (2002), and later studies of orality which include residual-manuscript (from written texts), secondary (broadcast media) and digital (CMC and SMS), agree (Soffer, 2010). Rozhdestvensky, however, demonstrates that people did not cease to speak during the print era, but on the contrary refined and expanded the expressive abilities of their oral language. While McLuhan laments the degradation ("In literature only people from backward oral areas had any resonance to inject into language - the Yeats, the Synges, the Joyces, Faulkners and Dylan Thomases" (Gutenberg Galaxy, p.250)), a student of Rozhdestvensky would see an invigorating connection: "people from backward oral areas" enrich
literary language.

Fourth transition: addition of electric and electronic media
With the invention of electric and electronic means of communication we enter the information age, the stage of languages spilling beyond national borders and employing electronic means for recording and broadcasting texts. This age gives us new jobs, such as database manager or search engine optimizer; new copyright issues, such as online music downloads; new developments in language theory, such as grammars of computer languages and lexicography for computer purposes (Lectures in General Linguistics; e.g. also Gliozzo, 2006). New genres develop: for example, blogs, text messages, video games, a slew of TV genres, including news programs, new modes of advertising, trivia games, etc.

McLuhan attributes the "psychic and social disturbance created by the TV image" not to the content of TV programming (i.e. not to the genres themselves) but to the nature of TV image: it is fluid, "a ceaselessly forming contour of things", "a mosaic mesh of light and dark spots", it "rejects sharp personality and favors the presentation of processes rather than products", and requires instead of analysis a synthesizing experience of "unified sensorium" - all these features challenging the old "Western way of life attained centuries since by the rigorous separation and specialization of the senses". (Gordon & McLuhan, 2003, pp.414-421) Rozhdestvensky also considers psychological effects of TV, but he looks at program content as well as the nature of the medium. He focuses not on to the tactile and fluid nature of the TV medium, as McLuhan, but on its fleeting, transitory nature. In Philosophy of Language, Culture Studies and School Curriculum, Rozhdestvensky presents the effects of the new genres: mass information, mass entertainment, mass games and mass advertising.

Mass information is characterized by daily variation, timeliness and factual correctness. It creates a constant backdrop to people’s lives – we are used to a continuous stream of news collages. The collages of mass information are designed to make an aesthetic and emotional impact, and thus they are not organized logically. The only part of mass information subject to logical analysis is information strategy, which needs to be constantly evolving because of recipients’ tendency towards satiation: when themes and commentaries have been repeated in mass media too often, recipients begin to reject them. Then a new information strategy must be developed. There is a continuum in mass entertainment with mass spectacles organized by professionals on one end and amateur talent shows on the other, with many intermediate stages in between. Because mass entertainment is inexorably linked to mass information (being dependent on TV, newspapers, radio) which is transient, mass entertainment becomes equally transient, oriented to the style of one particular generation. Mass advertisement is also dependent on mass information and is influenced by its collage and figurative structure. Its goal is to cause a desire in recipients, which requires an appeal to the rational, the emotional, and the unconscious. This is why mass advertisement turns to research in animal psychology: tropism and taxis, knee-jerk reflexes, instincts, conditional reflexes, rational behavior demonstrated in an individual’s learning, e.g. a mouse memorizing through trial and error the shortest way to food in a labyrinth; and finally conscious behavior, i.e. solving new problems in new situations, e.g. a cat rolling its toy under a closed door and walking around through a second door to reach the toy. Advertisements frequently use paradoxical images to attract attention. They also change the
notion of “value” from a philosophical and ideological notion to an object of desire. Advertisement creates values in the sense that it causes recipients to desire additional objects. While games have folk origin, mass games (lotteries, TV word-guessing games, trivia games, erudition competitions, and others) depend on mass information. The games include prizes, i.e. financial interests, not even excepting children’s athletic competitions. This creates an ambiance of gambling and chance, where taking a risk or subjecting oneself to public embarrassment may suddenly result in a windfall. Many such games are fairly plebeian, e.g. eating competitions or public undressing and dressing; all are based on a desire of a chance reward. Amplified by mass media, they encourage a cultural primitiveness and randomness.

Together, mass culture, mass advertisement and mass games produce an illusion of liberation and a belief that success is necessary and can be achieved without effort. If this gamble does not pan out, one can simply gamble again. Life in this culture is shaped in a sequence of stages: carefree babyhood; studying for the sake of future earnings; earnings; and, thanks to the earnings, carefree idleness after retirement. This sequence contrasts with the dark news of mass information – someone else’s disasters like airplane crashes, famines, arms race, etc.; those gloomy events underscore the joy of entertainment, game, freedom and intuitive good guesses. Audiences are taught to understand themselves as consumers and are accused by analysts like McLuhan of somnambulism and being “zombie-eyed spectators." The traits encouraged by this undercut spousal fidelity, love towards parents, tending to children. Rozhdestvensky teaches that people steeped in mass media are seized by a desire to acquire valuables and by the fear of losing those valuables as accidentally as they were acquired. Beyond such state of mind there are, of course, family, creativity and professional achievement requiring consistent work and real feelings. In Rozhdestvensky’s view, productive activity is problematic for individuals limited to mass media culture and oriented to quick changes of fashion.

*Schools* need to adjust to the needs of this society. Unfortunately “those most deeply immersed in a revolution [are] the least aware of its dynamics”; therefore, changes required in education philosophy, content and instructional methods have not yet been clearly identified (e.g. Apple, 2010). (McLuhan, 1992, p.274) Some possible changes are disconcerting. For example, the tendency to prepare students to the job market has been criticized by Neil Postman in Technopoly (1993): “The curriculum is not, in fact, a “course of study” but a meaningless hodgepodge of subjects. It does not even put forward a clear vision of what constitutes an educated person, unless it is a person who possesses “skills”. In other words, a technocrat’s ideal – a person with no commitment and no point of view but with plenty of marketable skills”. (p.186) McLuhan develops a sample syllabus within Project in Understanding New Media, which says: "Must they [teachers and students] now study the action of media upon our habits of perception and judgment, in order to remain reasonable and autonomous? Can we escape into understanding, as well as into success, as it were?". (McLuhan, 2003, p.516) Rozhdestvensky develops a course of study that addresses genres of human communication, claiming that a truly educated person should have command of all *stages* of communication; he also identifies four trends that might help to mitigate the somnambulizing effects of mass media: heightened interest in religion as the bearer of more solid moral values; heightened interest in health and activity in the adulthood and old age; heightened interest in the effects of games and winning; heightened interest in world culture, its logic and typology. These new subjects would offer a framework
through which students could see their real relationship to their culture.

**Old genres** are enhanced. For example, "blogs, after all, generally fit quite comfortably into the genre of the old-fashioned journal". (Landlow, 2009, p. 443) Scholarly journals are invigorated by online technologies (even if they fail to take full advantage of hypertext possibilities (Landlow, ibid)): the number of publications grows; access to published papers is improved through search engines; fields of academic attention expand e.g. to digital orality (Soffer, 2010) or to the study of video-gaming experiences (Williams, 2010), etc. Printed books are digitalized which makes them more accessible. The old genre of novel expands its boundaries and stylistic palette when writers experiment with new forms influenced by mass media collages (McLuhan’s term “mosaic”): new compositional schemes of novels emerge in the 20th century, where the characters may not meet in the space of the novel, or the same character may exist in different times (see the works of John Dos Passos, Milorad Pavich, Boris Vian). Movies, which McLuhan identifies as a “novel” genre, also expand their repertoire of compositional schemes and stylistic devices, drawing on videogames and mass media. (McLuhan, 2003, p.393) For example, *Run Lola Run* is structured as a videogame, with spare lives and opportunities to re-play (Cloud and Gunn, 2010); in the same way, *Love, Actually* presents a mosaic of stories, much like a newspaper, a magazine or a TV program; the characters are not connected, or not aware of their connection, and/or do not meet in the duration of the movie.

**Invigoration or death? Triumph or vortex?**

Scholars speculate about the effects of electronic technologies. McLuhan, who believes that "A new medium is never an addition to an old one, nor does it leave the old one in peace" (2003) predicts that "Henceforth, literature will be at war with itself" (1992), that children who grow up with TV will not be comfortable reading (2003), and that a new form of "non-books" (Leverette, 2007, p.348) will appear. Derrida writes:

Now, what is happening today, what looks like being the very form of the book’s-to-come, still as the book, is one the one hand, beyond the closure of the book, the disruption, the dislocation, the disjunction, the dissemination with no possible gathering, the irreversible dispersion of this total codex (not its disappearance but its marginalization or secondarization…); but simultaneously, on the other hand, a constant reinvestment in the book project, in the book of the world or the world book, in the absolute book…, the new space of writing and reading in electronic writing, traveling at top speed from one spot on the globe to another, and linking together, beyond frontiers and copyrights, not only citizens of the world on the universal network of a potential universitas, but also any reader as a writer, potential or virtual or whatever. (The Book to Come, 2005, p.14)

Leverette claims that writing is no longer linear: "It is not simply about mimetic objectivity, linearity, rationality. It is about producing, desiring, images, flows, lines, tangles, "thithaways" and "hithaways", effects and affects". (p. 357) Teachers of composition "have called for a move from analysis to design". (Brooks, 2009) Aarseth (1994) has collected "the somewhat eschatological claims of the proponents of the so-called new media: "the book is dead", "this is the Late Age of Print," "the electronic text will free us from the tyranny of the paper," and "in the future, everyone will be a writer". No doubt, these are interesting times". (p.57) *The Medium is
the Massage by McLuhan and Fiore, Glas by Derrida, Mutatis Mutandis: Writing (After Derrida [After McLuhan [After Joyce]]) by Leverette or The Victorian Web by Landow demonstrates that new forms are developing. However, the book did not die. And one occasionally can find an article which adheres to the standards of linear logic.

The best-selling literary genre in the past few years has been the romance novel: “in the year 2000 … 55.9 percent of popular paperback fiction sold in North America was popular romance”. (Regis, 2007, p.108) Regis demonstrates that this genre has maintained its popularity for almost 400 years in its old form – a printed book. Although The Medium is the Massage has sold more than a million copies worldwide since first published in 1967 (according to the book jacket of 2001 edition), Daniel Steel's website tells us that "more than 580 million copies of her romance novels are in print, and every one of her books is a bestseller" (“About Danielle”). Fantasy and adventure books are also growing in volume, not dying out. Scholastic, the publisher of Harry Potter and the Sorcerer's Stone, confirmed in a phone interview that it has sold over 125 million copies since 1997 in the United States, and Wikipedia informs us that from 1997 until “June 2008 the book series has sold more than 400 million copies” (“Harry Potter”). Such success indicates that the public, including a hundred million TV-generation children, is still interested in traditional linear plots and forms of reading. It is likely that computer technologies will allow more of such books to be produced and read online. Derrida (2005) suspected that “the book isn’t simply going to disappear. For any number of reasons, it is not even certain that in terms of volume its market production is not destined to remain stable, and even to increase”, but he attributed this survival to a “fetishistic impulse”: the book “will be revalorized and overvalued exactly according to the possibility of its becoming scarce, not to say commercially secondary or in decline” (p.16-17). Current book market does not seem to support this suspicion.

In the cinema, new technologies are used to tell good old-fashioned linear stories: Toy Story, Shrek, Avatar, Harry Potter, The Iron Man, The Dark Knight. The box office success of these movies indicates that general public did not stop enjoying traditional story-telling.

Implications

McLuhan has no patience with Newton, who is too linear and mechanistic for the new low definition world of cool media. "Newton was quite eligible as hero for The Dunciad and certainly got a place in Gulliver's Travels" (1992, p. 225); "Relativity theory in 1905 announced the dissolution of uniform Newtonian space as an illusion or fiction, however useful. Einstein pronounced the doom of continuous or "rational" space" (2003, p.221). This love of hyperbole is one of McLuhan's hallmarks and part of his appeal, but anyone who ever threw a ball, jumped, watched a space shuttle or a sputnik, or simply stayed on the Earth's surface thanks to gravity would have to admit that Newton's theory, even if old-fashioned and incomplete, explains very much of he world we experience. Rozhdestvensky's theory has also been described as old-fashioned, linear and mechanistic, but these features do not automatically make his approach wrong or inapplicable in modern conditions.

Anderson (1996) is often quoted as having counted 249 communication theories (although he only found 18 mentioned in three or more textbooks). He didn’t count Rozhdestvensky, whose
theory might be added as theory 250; however, we believe Rozhdestvensky offers more than just an additional theory; he offers a way to restructure the field. Craig (1999, reprinted in Craig and Muller, 2007) has offered a matrix of seven traditions of communication theory. Although Rozhdestvensky’s theory placed in this matrix encompasses rhetorical, semiotic, critical, socio-cultural, and cybernetic parts of the field, it, more importantly, offers an organizational principle (by medium and within it by genre) that allows us to make sense of the whole field, providing a kind of “top-down, satellite picture of the communication theory landscape” that Griffin (2009) advocates, but feels is unattainable. (Griffin, 2009, p.41) Rozhdestvensky’s approach is summarized in the chart:

(Rozhdestvensky, 1996)

This chart is open-ended and is meant to expand – new genres which will appear with the invention of a new medium can be comfortably plugged in the chart.

In the information age it is important to study new genres and the influence of new media on old genres. It is also important to understand that the explosion of new technology is not new— it has happened before, with the invention of writing, with printing press, telegraph and radio. Humankind has coped with the previous technological explosions and expansions of genres, and is now coping with just another step on the same road. In McLuhan’s division of human history into tribal age, literate age, print age and electronic age he does not show how the achievements of previous stages were incorporated into the succeeding stages, while Rozhdestvensky argues that one of the vital qualities of communication is that old genres do not disappear but become invigorated by each new medium.
Rozhdestvensky always said that the main figure in human history is the teacher, for example Jesus and Buddha. The goal of the teacher is to give students tools to make sense of the world; this is only possible when the students can see through the seeming chaos around us and perceive a basic structure that underlines it. That “skeleton”, the underlying grid on which the world is fleshed out, will then provide a map for people to navigate the ocean of facts and texts that surrounds them. Without a map, navigating only by intuition, it is easy to lose perspective. In his works, Rozhdestvensky offers several such “maps” which help people keep their perspective. Rozhdestvensky’s classification of genres allows people to take control over the flow of information that assaults us in the modern world, to harness it and thus to become conscious participants and shapers of the process instead of being vessels lost in uncharted waters. For instance, his classification puts TV and literature in perspective, regardless of how hard they threaten to spill over and engulf our whole communication space. It is crucially important to support students’ competency in all genres. True agency is possible only when students understand the place of each genre in the overall scheme of human discourse. For Rozhdestvensky, a truly educated person is equally comfortable with all verbal arts and understands the limitations of each of them. Schools that emphasize new forms of communication at the expense of the old ones might create giants on clay feet, since they will cut off students’ access to the previous fifty thousand years of human intellectual history (of them five thousand years written and five hundred years printed, added to the pre-literary foundation of human culture recorded in folklore).

Rozhdestvensky’s approach is to anticipate changes that the new stage will bring, forecast their results, adjust accordingly, and modify the content of education to prepare people to life at the new stage.

When one studies a section of any subject, it is very easy to get engrossed in one's own "corner of the world" and to lose perspective. Derrida reminds us: “what is changing the face of everything on the face of the world in this way is but a little fraction of a fraction of a second in a history which has been transforming the relationship of the living organism to itself and its environment… It is that much more vertiginous, but we do know it: what we are living through and talking about – at too much length, please forgive me – occupies the time and place of a minuscule comma in an infinite text.” (p.18). Rozhdestvensky offers a map that will allow us to keep one's corner of the world in perspective and the bigger picture in mind.

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“New Millennium”


