

Ewriting Netbred Processes Challenging Intellectual Property Theories and Statutes

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Abstract- Ewriting (electronic writing) generates theories, practices and computer applications that evolve and continuously redefine our perspective on writing. The genealogy of writing is being redefined considering that mind-net interactions are now prevalent in writing processes.

Texts can be printed, digital, web-present, virtual; they are becoming translocal, collective, distributed, interconnected and hyperlinked. Traditionally considered enclosed objects now they can be seen as potential sources for re-information, matrixes for interrelation and reconstruction. In this writing environment, words, phrases, paragraphs would instantaneously reverberate through massive datastructures. Intelligent agents would interact with propositions to pose questions, to alter syntaxes and to make available complementary data. Writing pertaining to similar categories could be automatically interlinked and aggregated so that new content is generated and communities are formed along interests, styles, abilities or customs.

Ewriting tools will challenge deep-rooted cultural habits at the base of our language and thought processes. An intense focus on language will trigger in-depth research into new forms of textual processing. Ewriting reconceives individual authorship into a multi-divisional, socio-machinic, planetwide process. Once ewriting becomes widespread and acknowledge in theory,

collective web-based writing, machine-assisted and machine-generated authorship will be investigated as human-developmental tools.

Writhing, and by extension, thinking, science, design, expression, artmaking, architecture, economics and philosophy will be more and more understood as a dialogical process between human abilities and machine-mediated actions.

As we let our imagination delve into these future forms of thinking, we come to the conclusion that instituted theories, enforced by legal system, act as insurmountable obstacles to the advancement of creativity, authorship and invention. The problem is that legal theories and legislations, ingrained in almost unchangeable statutes, restrain emerging collaborative authorship model and practices. Thus, current intellectual property values and legal theories will be obliged to readapt to new forms of authorship involving human machine integration.

Keywords- Authorial web-processes, Ewriting (electronic writing) theories and practices, Ewriting Netbred Processes, Intellectual Property Theories and Statute

E-WRITING AS A DEVELOPING FIELD OF INQUIRY

Ewriting (electronic writing) is a developing field of inquiry generating theories, practices and computer applications

that evolve and continuously redefine our perspective on writing.

Computers have definitively transformed writing. However, when first created, they were not perceived as having any relation whatsoever to language, only to calculations. They were seen as purely mathematical tools.

This perception has dramatically changed over the years but the re-perception process is certainly unfinished. Thus, computer-based writing has not yet attained its full potential because computers are still thought to oppose certain human qualities and abilities.

Computers are still seen to be intrinsically anti-human while writing is mostly seen as essentially human, as an activity in which human beings connect to themselves. Traditionally, writing has been perceived as a humanizing activity that should never be corrupted, for instance, by human-machine interactions.

TELECOMPUTATIONAL LANGUAGE-RELATED TOOLS

The whole idea of the computer as a writing tool is now associated with telecommunication. Since writing through the computer cannot be anymore isolated from networking, it is actually telecomputing that will provide for ewriting technology. Writing, and therefore thinking, will acquire new telecomputational language-related tools.

Ewriting has thus become a multi-individual activity even if individual authors do not acknowledge the fact. Writing today can be seen as an activity in which the individual and the social are strongly intertwined. Thus, writing through the web-screen actually resonates with larger networks.

We can certainly observe that the genealogy of writing is now being redefined. Presently, an individual author is or could be in constant contact with social networks, a diversity of writing applications and almost

infinite resources distributed throughout the Internet.

Ewriting design must therefore provide for the writers' simultaneous or alternate interaction with text-processing applications, autonomous machine-writing, distant or local co-writers and large datastructures. The new ewriting technologies would allow for optional or automatic data interaction, text-filtering, textual de-construction and re-construction. Consequently, this would intensify hybrid man-machine dialogues.

Texts will then be analyzed through computer-assisted reading devices that would offer mathematically-based textual analysis for the writer the text through a series of parameters. The improved functionality of those applications and the human-machine dialogue will foster a culture of hybrid textuality; humans will learn new abilities and tools not only for writing and reading, but also for analyzing, evaluating, thinking and inventing.

HUMAN MACHINE HYBRIDITY AS AN EXPANSION OF THE HUMAN MIND

As we approach the concept of ewriting, as we understand the potential for techno-induced writing tools, we will inevitably face the prospect of our human identities being transformed as consequence of the ongoing process of hybrid human-machine co-evolution. This process of hybridization will have consequences well beyond our writing and thinking. It will affect our identity formation since we may not see ourselves any longer as single authors but as participants in collective or machine-sustained processes. We will also gradually assume new authorial identities as designers, coordinators and producers of complex generative systems.

The human mind, as an authorial entity, will be acquiring a different nature. The mind will gradually be redefined as translocal, transbordering the individual, filling a cybrid co-extensive space. In the process, as co-writing develops into a

widespread practice, enabling human thought to be instantaneously disseminated and aggregated, we will see ourselves as trans-individuals.

It could be argued that applications are taking over human functions, that we are being surpassed as creators of texts, as inventors of tools, as perceivers of meaning. Bruce Mazlish points out to that "... a major discontinuity or dichotomy exists in our time: the discontinuity between humans and machines, " caused by "... the human need to be special, to feel superior in regard to the machine." [1] He sees, however, a possibility for re-integration:

"... we are now coming to realize that humans and the machines they create are continuous and that the same conceptual schemes that help explain the workings of the brain also explain the workings of a 'thinking machine.' Human pride and its attendant refusal or hesitation to acknowledge this continuity form a substratum upon which much of the distrust of technology and an industrialized society has been reared. Ultimately this distrust rests on the refusal by humans to understand and accept their nature—as beings continuous with the tools and machines they construct. Once the discontinuity is overcome, we will be in a better position to decide more *consciously* how we wish to deal with our machines and our mechanical civilization." [2]

Thus, we can also argue that the process of human-machine hybridity is an expansion of the human mind.

"Computers have been programmed to decrypt enciphered messages, convert text to speech, parse and act upon human speech, generate fonts, and even design patentable electronic circuits. There remains, however, much computers cannot do and may never be able to do without a body. Despite such limitations the computer is an excellent extension of some deficient areas of human cognition,

such as sorting large lists, mathematical calculations, memory and retrieval, and error correction. If one combines those skills with human superiority in pattern recognition, adaptability, natural language processing, and the ability to distinguish irrelevant from relevant information, the computer and the human have a potentially powerful symbiotic relationship." [3]

Although the human mind is no longer located at the symbolic center, it is being endowed with highly superior abilities, preparing our species for the large-scale global challenges we will have to face in the immediate future.

THE TEXT AS A MATRIX OF INTERRELATIONS AND THE WEB AS A TOOL FOR CONCEPT FORMATION

The text can be printed, digital, web-present, virtual; the text is becoming translocal, collective, distributed, interconnected and hyperlinked. Texts are increasingly available to be read, duplicated, circulated, disseminated, archived, but also abstracted, altered, contradicted and even rewritten by human or machine agents.

The text has traditionally been considered an enclosed object, the fixed conclusion of a strenuous thinking process; but it can now be seen as a becoming entity, a potential source for re-information, an elementary matrix for interrelation and reconstruction.

The new dimensions of texts indicate multiple still unheard possibilities for human machine fusioning, for ewriting and eimagining, opening up mindvenues for rethinking information as a particle for higher aggregation. It will be our reconception of the text as a mindtool, as an object embodying valuable information, as an indispensable social instrument that will lead us to perceive and conceive a completely new horizon for human thought processes.

At the basis of this evolutionary process lies the reperception of information as a matrix. The original text will be seen as more valuable the more it interconnects, the more it triggers a generative process and the more it becomes part of a hybridly constructed informational cluster. Texts should always be available to be analyzed, transformed, translated, reformatted and aggregated.

Reconceptualized information will prompt us to design new tools and processes which would re-inform texts, images, art, culture and science in unimaginable ways because seeing information as a matrix and not as a proprietary, isolated entity has not yet entered into mainstream culture.

The gradual acceptance of the concept of re-information will propel our tools, our writing practices and cultures to a differentiated mindframe. We will have to readapt, to descript and rescript our institutions, certitudes and habits.

In this new writing environment, our words, phrases, paragraphs would instantaneously reverberate through massive datastructures that would provide us with immediate feedback. Intelligent agents would interact with our writing propositions to pose us questions, to alter our syntaxes and to make available complementary data.

At the same time that the web manifestations of our thoughts provoke systemic responses they could also reverberate in a distant writing node. We will be invited to act in different modes, in different levels of language and authorial engagement.

Writings pertaining to similar categories could be automatically interlinked and aggregated so that new content is generated and communities are formed along interests, styles, abilities or customs.

A political movement could be formed to demand that the Internet be turned into a more democratic tool. Sites would facilitate encounters, interactions and collaborations.

They could inform users about the identity, location and interests of other users. Technology could then be a much more efficient tool for community formation and intellectual collaboration.

E-WRITING AS A HYBRID TOOL FOR THINKING AND DISCOVERY

Ewriting tools will challenge deep-rooted cultural habits at the base of our language and thought processes. An intense focus on language will develop in-depth research into new forms of textual processing.

Ewriting has derived from the dissemination of artificial intelligence research. The further development of ewriting may seek a way for machines to mimic human expression or, on the contrary, it may seek an intelligence that will mark a difference that would create a more autonomous form of computer-generated written expression, or it may even combine both approaches.

The research I have pursued in computer-generated writing (cgw) indicates a possible path to converge natural and artificial language methodologies. The envisioned writing methodology proposes a dialogue between the manifested linguistic structures and the possible modifications that algorithms can introduce.

The 'virtual typewriter' concept, envisioned in the mid-90s, has fostered an ewriting concept in which human-written texts are de-ordered by computer-operated subprograms. Those 'writing machines' were devised to descript words, phrases, and texts in new orthographies and syntaxes.

Theoretical Wind, one of the subprograms, replaced any letter with a randomly chosen consonant, creating deordered words and deorthographic texts that displayed a higher percentage of consonants.

De-scripting would then de-constructs texts, not in a completely random way, but in a specific direction, carefully devised so

that it would introduce in the text a semio-productive noise. The resulting experimental sequences, although not directly conceived by humans, are endowed with emergent meaning, allowing for further interaction with human agency.

The process generates unlimited de-scripted versions of words. 'De-scripting' intends to provoke a cognitive disruption, a linguistic estrangement in the writers' mind that eventually leads to re-construction, to reinvention.

E-scripting is then envisioned as a two-way process of disordering and re-ordering. De-scripting, an automated process, is followed by re-scripting, performed by human agents. They would compare the original with de-scripted versions in order to create a new re-scripted text.

The conjunctive action, the combined effect of describing and re-scripting could be properly called a substantive example of ewriting.

E-WRITTEN AUTHORSHIP AS A PLANETWIDE SOCIO-MACHINIC PROCESS

Ewriting reconceives individual authorship into a multi-dividual, socio-machinic, planetwide process. Once ewriting becomes widespread and acknowledged in theory and practices, collective web-based writing, machine-assisted and machine-generated authorship will be investigated as human-developmental tools.

Writing will no longer be a solitary endeavor. Traditional writing methods in which the mind of an individual conceives sequences of words and phrases will be just one in a sequence of writing phases.

Writing, and by extension, thinking, science, design, expression, artmaking, architecture, economics and philosophy will be more and more understood as a dialogical process between human abilities and machine-mediated actions.

New writing practices involving group integration, specialized role playing,

machine agency and different levels of creative involvement will instantiate emerging theories of authorship. Thus, the reality and potential of machine-mediated practices would have to be taken into account whenever philosophies of authorship are discussed.

In a foreseeable scenario, writing would proceed through networking so that every word sequence, every newly conceived phrase would immediately reverberate through netbases, causing responses in diverse formats.

Present sites are already announcing what ewriting could become in the future. New technologies can direct specific ads to users based on their demographics. Google, for instance, created an automatic response system which displays personalized advertisement according to the specific keywords in the messages.

If writing and thinking communities are formed and empowered, they could use similar tools for non-commercial purposes. Language systems with automated ewriting capabilities would then favor a socially-oriented purpose, enabling re-information, connectivity, aggregation and co-invention. When those ewriting technologies become widespread, we will be better positioned to discern even newer venues for individual and collective expression.

NETBRED WRITING PROCESSES CHALLENGING INTELLECTUAL PROPERTY THEORIES AND STATUTES

As we let our imagination delve into these future forms of thinking, we come to the conclusion that instituted theories, enforced by legal systems, act as insurmountable obstacles to the advancement of creativity, authorship and invention.

The problem is that legal theories and legislations ingrained in almost unchangeable statutes restrain emerging

collaborative authorship models and practices.

But if the vision of writing as a socio-machinic planetwide process prevails, current intellectual property values and legal theories will need to readapt; they should not remain obstacles to thinking.

They need to be confronted in their ideology, assumption to large-scale control, and imposed authority. Finally, they would be proven to be obsolete tenets of an old mentality and would thus have to be rethought.

Current intellectual property values and legal theories will be obliged to readapt to new forms of authorship involving human machine integration.

WRITING THROUGH AUTHORIAL PHASES

Since the ewriting process requires and indeed develops through a series of successive interactions, it re-defines traditional authorship. Theory is called upon the task to provide an overall view of how ewriting can be described and carried out. However, theory is seen as transitional since the proposed ways to write or ewrite are destined to be discussed and challenged. Writing and thinking should always be reviewed and redesigned. We hold that freedom of thought can only be insured if tools, theories and attitudes are renovated.

The described phases are presented to make clear that authorship is not an immobile, unchangeable process; authorship, writing, criticism and dialogue can become concepts-to-be-redrawn.

Ewriting brings forth authorial segmentation, a time-extended sequence of phases. The ewriter's activity is then explicitly partitioned, divided into newly-conceived roles: meta-writing as text planning; actwriting as the actualization of the meta-text, as the act of writing itself; post-writing as final editing of the actualized text.

The author, reconceived in this initial phase as meta-author, is the creator of a meta-text and not necessarily of a final document.

The first ewriting phase, metawriting, indicates concept and planning. It may include or suggest themes, writing tools, text-reprocessing software, networking systems, co-authors, participant institutions, procedural rules and timetables.

The meta-author's control over the final document, over its intended meaning and dissemination is substantially altered; he or she, as an authorial agent, conceives, creates and proposes a writing process. However, he or she cannot be fully responsible for the implementation and dissemination phases in which other authors also contribute. Thus, the meta-writing must always plan for contingencies.

The meta-text may allow or require diverse forms of procedural writing; it could determine or select tools, co-authors, themes, readings, sites, contexts and spaces. The meta-author's creative role is thus enlarged but also substantially transformed. She or he orients a process but cannot completely control its final results.

The meta-author, in the design of a writing process, has also to oversee complex questions of authorial agency. She or he initiates a series of creative acts, which would involve her or him creating alone or a community of authors called upon to act with simpler or more complex tools.

The meta-creative process proposes a series of creative acts, which would involve a single author or a community of authors called upon to act with simpler or more complex tools.

In this new writing context, the meta-author has to address questions of accessibility. The project as a meta-text has to define the ways authors access and edit the texts being produced. It must announce a legally-based policy regarding the rights of

the involved authors to modify, insert or comment on the ongoing texts.

It is also the responsibility of the meta-author to lay-out legal guidelines for everyone's rights and for the resulting documents. This could be a very complex task since the legal concepts, philosophy, legal foundations and even the terminology for the process have not yet been fully conceived.

The second phase proposes actwriting as either a collaborative human process or a machine-assisted activity. That is when e-authors write to actualize the project. They could actwrite collectively through interactive or they would act in the selection and execution of software-induced textual production.

During actwriting, human agents and computer tools will be interacting in a dynamic process, planning forms and producing texts, thus alternating conceptualization and actualization.

Both human agents and machine autonomous tools will perform many creative roles; they will plan, write and edit but also translate, disseminate and dialogue.

The third phase, defined as post-writing, indicates editing, selecting and eventually morphing the e-text into new writing. It is designed to collect, review, classify, archive and select the many resulting discourses.

Usually, the author who has initiated the project would assume the role of the editor, exercising his prerogative to edit the final project, providing a final format, destination and meaning.

However, final editing could also result from collaborators, computer-assisted tools or human-machine interactions.

INFORMATION AS AN INTERCONNECTABLE ENTITY

As planetary net-integration evolves, ewriting processes will make so much use of datastructures that invention will normally

be thought of as and realized through re-invention or co-invention.

Ewriting will then naturally challenge the present theoretical basis of intellectual property and authors' rights since it will need to make full use of proprietary material.

We are now on the brink of a new conception of information which will demand a reconsideration of the underlying philosophies of creative acts, technologies and related rights.

Each new writing, invention, design or proposition is now being sensed, perceived and reconceived through its web-presence as a potential element in a larger textual construction.

Information should be considered as re-information, as data-in-flux. It will therefore be increasingly analyzed within new parameters such as availability, interconnectivity, formatibility, translatability and disseminability.

Consequently, hardware, software, communication protocols and file formats will have to be redesigned to augment, improve and facilitate interconnectivity, aggregation and knowledge formation.

Texts as informational entities will have to be fully interconnectable and legally free to interact so that new propositions can be conceived. Then, the full potential of presently available and yet to be created communication technologies can be achieved.

NOTES

- [1] Bruce Mazlish, *The fourth discontinuity: the evolution of humans and machines*, New Haven : Yale University Press, 1993, p. 14.
- [2] Mazlish, *The fourth discontinuity*, p. 15.
- [3] James J. Pulizzi, *Machine Intelligence and Electronic Literature*, in: [About Electronic Literature: New Horizons for the Literary](http://newhorizons.eliterature.org/essay.php?id=9), <http://newhorizons.eliterature.org/essay.php?id=9>, accessed April 12, 2009.