Linkterature: From Word to Web

Or: Literature in the Internet / Internet as Literature / Literature as Internet / Internet in Literature

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Abstract:

This chapter will offer a perspective on the Internet and literature interface, with a special focus on the issue of intertextuality, in an attempt to delimit those issues specific to networked literature, as against digital or hypertextual literature. I will focus on literature as a family of medium-conditioned discursive practices, and examine the consequences of digital networks for a redefinition of these practices. These consequences will be approached from four jviewpoints: a perspective on the Internet *as* literature, and of literature *as* an Internet: together with an examination of literature *in* the Internet, and of the Internet *in* literature. Among the topics addressed will be issues of interactivity, the blogosphere, postmodernist fiction, and the cyborganization of social communication.

Outline:

- The issue of specificity.
- Literature: Voice, Writing, Print, Digital Text, Web.
- Internet and literature: internetference
- Literature in the Internet: The Long Tail of Literature
- Internet as Literature: Blogs.
- *Literature as Internet:* Hypercriticism Interlude: Links. Weaving and webbing.
- Internet in Literature: Dream of the Cyborg

The issue of specificity

I began to write this chapter as a reflection and overview on "Literature and the Internet". Literature is huge, the Internet is probably just as huge, and their intersection, or their addition, is doubly huge and is of course beyond the scope of a single chapter, or a single book for that matter. And we might as well leave it at that. But we can also delimit the topic somehow: "Literature and the Internet" does not mean "literature and computers", or "digital literature," or "electronic literature," or "hypertext." I will therefore focus on issues arising specifically from the network of computers which is the Internet, and perhaps more specifically on the World Wide Web, although those other collateral issues, for instance hypertext, are indeed intertwined and tangled with the web. According to the *Wikipedia*,

Intertwingularity is a term coined by Ted Nelson to express the complexity of interrelations in human knowledge.

Nelson wrote in Computer Lib / Dream Machines (1974):

"Intertwingularity is not generally acknowledged, people keep pretending they can make things deeply hierarchical, categorizable and sequential when they can't. Everything is deeply intertwingled." ¹

One recurring problem for the analysis of cybermedia and literature is that there is nothing absolutely new under the sun. If we analyze any of the communicative phenomena or semiotic characteristics of the new cybernetically mediated discourses, we find that in some way or another they were all always already existing, in different proportions, in different combinations, in the past. Of course, the proportion, and the combination, is all the difference. Cybernetics is a great mixer and combiner, especially when it becomes cyberNetics, with a capital N for Net. The "net value" of computers multiplies as they are connected in networks, to the extent that the Internet has been said to be not just a new medium, but rather the melting pot of all previous media. All the more so as new systems have enabled its recent expansion from text to multimedia.² And more

¹ "Intertwingularity." In *Wikipedia: The Free Encyclopedia* http://en.wikipedia.org/wiki/Intertwingularity - (July 11, 2006).

² "A Fogel, el diseñador francés (ahora se ocupa de *Le Monde*), internet le parece un medio de comunicación. El sexto medio después del libro, el periódico, el cine, la radio y la televisión. No lo creo. Basta con examinar esa lista para darse cuenta de las escandalosas diferencias. Internet es el unificador mediático. El sueño reduccionista

transformations are in the making: the conjunction of Google and the Blogosphere, the convergence of TV and Internet, the coming together of the Web and multimedia cell phones, the convergence of "personal spaces", blogs and telephones...

Intertwingularity is not a product of the Internet. Literature, for instance, has always been deeply intertwingled with other issues, such as writing, or narrative – even though "writing" is not "literature"; "text" is not "work"; "writer" is not "author" and storytellers are not just writers of short stories. But these issues have become even more intertwingled since the advent of the Web. The issue of specificity thus cannot be dealt with apart from the issue of intertwingularity.

Not all literary works which are accessed hypertextually through the web are themselves hypertextual. Not all non-linear works need be hypertextual, or electronic; not all electronic texts are available through the web; not everything which is available through the web is web-specific.³ But any new medium favours new habits and cognitive processes: some things which were possible but not usual in manuscripts became usual and medium-friendly in print.⁴ Likewise, electronic textuality and the Internet favour certain non-exclusive but medium-friendly characteristics. Take, for instance, the issue of videogames: interactivity with a number of participants is possible in some games; but some other games benefit from interaction with an unknown number of unknown participants, something which is possible thanks to the web.

Literature is only a tiny part of what is at stake in this big mix of family resemblances; and there is some concern that it may be dissolved in the process. What is certain is that it will not emerge from it unaltered: we may feed literature into a computer network, but what appears on the screen (possibly not *our* screen) is no longer literature, but linkterature.⁵

aplicado a los medios. Lo que la Física busca respecto al universo. Los periódicos, la radio, la televisión, el cine, los libros, toda la realidad virtual existirá en la medida que internet lo permita." (Espada, *Diarios* 22 Jan. 2005).

³ See for instance Ana María Uribe's *Tipoemas and Anipoemas* online digital poems, which nevertheless are not web-specific or hypertextual.

⁴ As noted by Ong in *Orality and Literacy*.

The term "linkteratura" is used, in Spanish, in another related sense, in Jordi Buch Oliver's website, http://www.jordibucholiver.com/public/P_linkteratura.htm

From Lit to Linkterature: Voice, Writing, Print, Digital Text, Web

Many theorists since Marshall McLuhan have emphasized the intrinsic connections between the medium and the message in the semiotics of communication: the constitutive importance of the medium is the message of this line of reasoning. A new medium absorbs many of the functions of previous media, it enhances some of them, it adds new functions, and, if anything is lost, no sweat: the old media are still there, both in their original form and in their new avatars through what has been called "remediation" or "intermediality"—an aspect of which is the capacity of new media to reproduce and contain old media as one more of their possibilities, in the same way that new interfaces of computers can reproduce the layout and design of obsolete systems.

Some media, of course, are better than others at doing certain things. Print can be reproduced on TV, and pages turned for us in front of the camera, but there is a limited role for that kind of experiment. The digital medium, however, has provided the basis for multimediality: it is such a flexible medium that it can be used, with the appropriate hardware and interfaces, to contain, manipulate and combine in increasingly elaborate and user-friendly ways all previous media: voice, text, images and video, together with all the semiotic sub-systems which may be codified and represented by these (such as cultural subsystems of gestures, languages, fashions, etc.). Every day we learn of some novelty in the treatment and manipulation of digital information: blogs, tags, TIVo, the video iPod, the special-purpose interface configurations known as widgets, web search on cell phones, etc.

Now media have never been static. The printing press of the late 17th century was not the same as Gutenberg's printing press; the techniques for the manufacture of images were a revolution in themselves. But the present-day explosive rate in the development of cybermedia since the advent of the computer, and especially of the personal computer and the cell phone clearly has no equivalent in ealier centuries as to its rate of personal usability, as well as the pace of invention and obsolescence in this field. If novelties create a peculiar double time in which the old and the new coexist, a flood of novelties creates a peculiar no-time, or postmodern time, in which all historical periods seem to be superposed chaotically one next to the other in a jumble, or a jumble sale of cultural modes and last year's computers. The increasing opportunities to travel and, especially in Spain, the suddenness of the recent influx of migrant population, contributes to this sense of a time out of joint, in which the old is partly displaced by the new, but still remains and survives into the new times,

⁶ On the universal semiotic reduction of media in computers, see Hess-Lüttich, "Irrgarten" 218; Rodríguez de las Heras, "Nuevas tecnologías."

albeit somewhat adrift and disoriented as to its proper place and function, if not downright residual.

This is perhaps what is happening with literary studies, with the philologies, with literature, but not only with these practices and institutions. It also happens with newspapers, for instance, who must both endure in a recognizable form and adapt themselves to the new media ecology. Part of the effect of the media revolution is that since many people do not have the time, the ability or the inclination to investigate the new possibilities offered by the media, there is a paradoxical-seeming resilience of some of the old media, not only because of their time-tested virtues but also because of their staying power, or their dominance of important niches in the market, in the institutions, in the cultural tradition and in people's hearts and acquired habits. So: the death of literature? – not yet; the death of the newspaper? — not yet. And yet there will probably be less time devoted to literature as we know it in the cultural habits of future generations. And the role of print newspapers will keep on the downslope as their digital versions or new electronic competitors take a greater share of the paper's staff, circulation and prominence. "Newssites" with no mention of paper or papyrus will also be, indeed are, multimedia sites, featuring digital print and e-mail, but also audio, video and image services, configurable according to the user's preferences.

Internet AND literature: Internetferences

The coexistence or intersection of at least two regimes of production and distribution of text (print and the web) creates peculiar effects: repetitions, contradictions, parallel dimensions which interpenetrate each other without actual contact—which may be called internetferences. For instance, take conferences, like the one where I first presented this chapter as a working paper. It could be argued that the structure of such conferences has a hidden connection to the print mode of the diffusion of knowledge. In an age of instant communications we do not need physical presence at a conference in the same sense that we needed it before. Prior to the conference, I had been writing and posting my lecture in my blog for some months, as a paper in progress open to suggestions from readers. I did not have many responses, but that is purely accidental. Writing my paper on the web before I deliver it may contravene what is, according to Goffman, a tacit presupposition of academic lectures: that the audience is being presented something unique and unpublished. But such experiments are also to be expected in a régime where two principles coexist, in a superposed way—a coexistence which results in unforeseeable effects. The

⁷ Goffman, "The Lecture."

effect of my pre-publishing this chapter on the Internet is unforeseeable, any member of my audience at the conference might have stood up and recited the paper together with me. Such things may happen because in a way we still do many things as if the web did not exist, and in another sense we can only do them precisely because it does exist.

To go back to the transformation of literary studies by the Web. This transformation is multidimensional: the Web transforms the object of study, the subject who studies it, and the procedures and approaches we take to the object. It acts simultaneously on every point of the chain. For instance, I may be analyzing a contemporary novel (take William Gibson's Pattern Recognition), and the world depicted by that novel has already been transformed by the Web, in ways the author may be analyzing more or less consciously and deliberately. But I may have had access to this work itself, or to other materials for its study, thanks to the Web—because I am using it for information, or because my librarian and bookseller are using it. I may be writing a paper on this novel for a conference whose very existence (they proliferate nowadays) is possible thanks to the advent of the Internet and personal computers. And I may be using cybernetic tools which enable me to work in ways barely thinkable before: electronic or online concordancers, word processors, e-mail, electronic journals for publication. Or the author's own blog, in William Gibson's case. But at the same time the institution of literature itself, the discursive niche which allows novels to be written, is being transformed by the long-time effects of cyberNetics, as is our whole social structure, through globalization processes which are nowadays cybernetically mediated — or rather cybernetically driven.

This influence of the Net at all points of our activity, literary or otherwise, produces some peculiar effects or uncanny connections between the different levels of the process—internetferences. An effect of intertwingularity, as it thrives and travels through the web links and other Internet connections.

Literature IN the Internet: The long tail of literature

One of the most visible aspects of internetference or remediation is the wholesale transposition of physical libraries to virtual libraries and literary websites: Voice of the Shuttle. The Oxford Text Archive. Project Muse. Mr William Shakespeare and the Internet, Google Book Search are so many aspects of this process. Where page was, there file shall be, and with this come the multiple transformations we are aware of: low-cost publishing, universal accessibility, searchability, the difficulty of managing royalties, or indeed of finding one's economic bearings under the new rules of the game.

A new dimension of analysis emerges as the traditional taxonomies of disciplines are cut across by what has been called *folksonomies*— folk

taxonomies which suddenly acquire cognitive significance because of the new medium in which they occur. As it globalizes the globe, the web medium enables these folk taxonomies to achieve global significance. For instance, tags in blogs, or Google search terms, are the building blocks of such folksonomies. Folksonomies create ripples and internetferences in the way we approach our objects of study, insofar as we approach them through the Web.

And the Internet folksonomies will of course have visible effects on the way literature is approached. A dimension of the cultural impact of authors, for instance, can be measured in Google hits. These do not tell us about an author's quality *for us*, but they do tell us about the global weight of an author's presence in the cultural landscape—which is surely an indication of something worth studying, if not worth worshipping.

TABLE 1 shows a selection from the new canon achieved through Google's ranking:

no. of Google search results, Sept. 20

Homer:	21 800 000 results (most on The Simpsons)
William Shakespeare,	5 430 000
Stephen King	4 560 000
Jane Austen	3 480 000
Dan Brown	3 520 000
Dylan Thomas	2 900 000
Agatha Christie	2 890 000
Virginia Woolf	2 110 000
T. S. Eliot	2 000 000
Ernest Hemingway	1 950 000
Miguel de Cervantes	1 760 000
William Gibson	1 660 000
Samuel Beckett	1 630 000
Jacques Derrida	1 070 000
William Wordsworth:	834.000
Ken Follett	814 000
Lope de Vega	731 000
Enid Blyton	717 000
Zadie Smith	609.000
Alexander Pope	598 000
Harold Bloom	525 000
Arturo Pérez Reverte	332 000
A. S. Byatt	276 000
Barbara Cartland	220 000
Northrop Frye	180 000
Javier Marías	141 000

Compare with other non-literary cultural animators:

Disney	74 900 000
George Bush	26 100 000
Jesus Christ The Beatles:	17 300 000 11 400 000
Michael Jackson	11 100 000
Steven Spielberg	5 390 000
Nicole Kidman	5 180 000
Real Madrid	4 440 000
Mickey Mouse	3 760 000
David Bisbal	891 000

As in many other things, there has been a pre-Google and post-Google watershed in the Net's usability for literary purposes. The fate of literature on the web, as the fate of information and communication about any other topic, is closely tied to the development of relevant and user-targeted search. John Battelle's *The Search* presents an informed and insightful account of this development. Battelle suggests that future development of artificial intelligence will rely largely on search-based web systems.

So, as far as literature is concerned, we leave McLuhan's Gutenberg Galaxy and we enter the Internet Galaxy⁸—the age not only of digital literature but of "Linkterature". Our mode of accessing and studying existing literature is transformed, but the substance "literature" itself will be transformed, in three main dimensions:

- 1) *Mimetic:* The world is changed by the web, and literature will reflect those changes.
- 2) *Mediatic:* Moreover, the very material basis of literature, text, is significantly altered by digitization and the web. Text is something that has to be produced, and the economics of text production is changing significantly. The new regime of production will have an economic influence on literature. And
- 3) *Poetic:* If literature is a mode of discourse in which the form of what is said is especially relevant to the content of what is said, so much so that form and content are one, then a transformation of the medium will entail a radical transformation of the meaning of literature.

Mediatically, less money will go from the consumer of electronic text to the provider of text than it does currently to the providers of print. We pay for books, and for e-books, but we don't pay to have access to many websites and

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 $^{^8}$ This is also the title of an excellent book on the Internet by Castells *La galaxia Internet*.

blogs. Free services will keep exerting great pressure on paying ones. Perhaps in what is a significant move, the digital edition of *El País*, initially a free-access site, returned to free access after a failed experiment with paying subscriptions. Obviously it is better for the journal to be read online by many people for free than to lose its online readership altogether. While this strategy makes sense in the short run, it obviously does no service to the print edition of the newspaper and accelerates the process of transfer from paper to screen.

Some time ago, you had to pay for your newspaper. Now in many cities you are given free newspapers (four different ones in Zaragoza). The next step is that you should be paid to read the newspaper. Indeed, you already are. You are meant to read or glance at the advertising which finances the newspaper, and in exchange you are paid with free news. This virtualization of what is sold is of course an indirect effect of the web: there is no making free newspapers in a world without the Internet. The relationship between advertising and text thus changes.

Online commercial sites like Amazon rely for their revenue on the tailoring of their offers to the specific profiles of their clients. When you return to an Amazon website, you are offered similar products to the ones you have been known to buy or browse previously, and these are selected on the basis of other client's analogous choices. The strategy for Google advertisements in personal websites is similar: the company sells its ability to target the specific interests of readers rather than the anonymous public at large. This is a strategy which of course has been used for a long time in print or radio advertisements (whicha are always aimed at a given section of the public), but it acquires a finer edge in digital media.

Digitisation of news also means globalization, and globalization goes along with the standardization (or macdonaldization) of products, including the media. Print, of course, is not foreign to this process. Publishers also live in a digital medium, even if the end process of their activities is still printed and carried in vans; and publishing houses have experienced a process of concentration and globalization. (Alternatively, one must say there is also a race of small publishers and booksellers who have been able to exploit the web ecology to their advantage). But we all know the fate of most bookstores in small towns: they become toy shops or close down, and anyway they end up selling the same books as the newsstand, those that are mass distributed.

It is not clear that there will be more money for the part-time writer/journalist in this new web ecology. On one hand, the concentration of media seems to work against their getting well-paid contributions in the big sites; on the other, the proliferation of free online journals and blogs substracts

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On standardization, rationalization, and McDonaldization, see Ritzer's *The McDonaldization of Society*.

reading time from the big sites. With blogs, many more writers, home journalists who are said to write in their pyjamas, or amateur poets, are allowed an audience. And while each blog has only a few readers, from a handful to a few hundred every day, their sheer number suggests that in a few year's time a significant part of the time people devote to reading will perhaps be devoted to reading blogs: by friends and acquaintances, by interesting or curious people, by aspiring writers, by famous journalists and by the elite of the blogosphere alike.

Yet more significantly, the availability of massive access to instant publication and to an audience, will result in a major rearrangement of the ecosystem of writing. There is a statistical phenomenon well known to market analysts, "the long tail.". (FIGURE 1). A few, very few, products sell in the millions. A bigger number sell in the thousands. A much bigger number sells in the hundreds. But the market share of the hundreds is bigger than that of the millions, because of the long tail of the graph:



FIGURE 1: The Long Tail. From Dominic Muren, "Design and the Long Tail," in *IDFuel.com* Jan.4, 2005.

http://www.idfuel.com/index.php?p=429&more=1#more429 July 16, 2006.

Literature, too, has always worked, like any other mass marketed product, through the dynamics of the long tail. Globalization simply means that the tail becomes longer, and its head becomes taller as well. (Actually, "globalization", while it is a buzzword for the late capitalist millennium, only means "increased globalization" — because the creators of money, markets and cities in antiquity, the builders of the Roman Empire and the long-distance merchants of the Modern Age, or the industrialists in the nineteenth century were indeed always

already globalizing the globe). It is to be expected that the social use of literature will follow the pattern of other marketable items as the shape of the market is modified by the Long Tail: ever bigger blockbusters (take the *Da Vinci Code* phenomenon) and a niche in the long tail, because of the new opportunities in access and distribution, for an ever increasing number of minority items.

The Internet AS Literature: Blogs

Let us go now to my third point above, the *poetic* transformation of literature: the internal, structural transformation of literature when it becomes networked literature. There are many ways in which the specificity of the Internet as a medium may develop new literary genres. Hypertexts, for instance, or online computer games, may have an important literary dimension, and many webspecific forms of these (non-web-specific) electronic genres have appeared.

An example of collaborative intertext: *Historias interactivas multifurcadas*, http://www.cositos.com.ar/historia/ (accessed 2006-07-14). This online hypertext, designed and started by Marcos Donnantuoni, Buenos Aires, originally began as with three simple sentences:

La noche anterior debe haber sido realmente pasmosa. No recuerdo nada, y me duele mucho la cabeza. Me levanto lentamente, buscando un apoyo en la oscuridad.

Online readers then wrote their own continuation to the story following the paths initiated by previous reader/writers. So the story becomes an endless and endlessly branching one, but still preserves its unity as a communal narrative work: something made possible only by all readers sharing a common interactive space: the World Wide Web.

Note that there are two levels at which such a work may be evaluated: each of the strands may be evaluated at a purely fictional-literary level, but the overall structure of the story needs another level of treatment, a cyberpoetical level, which assesses the overall structure of this particular text and its specificity as a cybertext.

The new directions in which such a hypertext, or indeed hypertextual literature, may develop in the future, are endless, and largely unforeseeable. But to cut a long tale short, I will concentrate on a specific Internet genre, blogs, and their literary significance.

Perhaps the most characteristic development of the Web in the early years of the 21st century, along with the supremacy of Google, has been the spectacular development of the blogosphere. According to Technorati, the main site for blog tracking so far, there are about 48 million blogs on the web (as of July 2006), with specific connections between them which make them constitue

an open subsystem of the Web, known as the Blogosphere. A more likely estimate would perhaps be something like double that figure; a more reliable estimate by Technorati shows that the blogosphere multiplied its size thirty-fold from 2002 to 2005. A blog, in the sense of a regularly updated website with an automated system for publication and two-way communication, is different from other websites. Although many sites were and are, presumably forever, "under construction", a blog abandons the model of the Work, or finished artifact, and gives us instead a Text, a fluid process of writing which is provisional, interactive, collaborative: in this sense the blogs provide the best example of Roland Barthes' dichotomies in "From Work to Text" and "The Death of the Author."10 These celebrated articles, which served as manifestoes of poststructuralist critical thought, are web-haunted essays, blog theory avant la lettre. Blogs work through references to posts in other blogs, through the exchange, referencing, commentary and transformation of information, not so much through supposed originality in authorship: and what is paradoxical is that there is probably just as much originality in blog writing as in any other kind of

In his early discussions of hypertextual writing, George Landow coined the term "wreader" to name the interactive reader who actively takes a path through a hypertext and is thus an agent in its construction. A wreader was for Landow a writer/reader, and signalled the end of the barrier set between authors and readers by classical literary aesthetics. Now Landow's w-readers didn't actually write, but wreaders in blogs do not just follow their individual course through the blog; they respond to the writer, they write, they may become the protagonists of their own story-line, they may even hog the blog. Each blog has its faithful followers, who may become co-authors by adding commentaries (and blogs may of course be collectively authored to begin with, with several people, or just anyone, having the privilege to post). José Antonio Millán commented a case in point recently, with respect to one of the most popular Spanish blogs, by the journalist Arcadi Espada. Millán notes how many people take part in the blog, some of them commenting the author's post, others simply chatting, telling news, publishing their own verse or advertising their own blog: a fascinating case study of a new genre of polyphonic writing which might well become the topic of a Ph.D. in literary studies.

¹⁰ In Barthes, *Image-Music-Text*.

^{11 &}quot;Mucha gente se ha colado en la zona de comentarios del blog de Arcadi: algunos para comentar el post del día del autor, pero en su mayoría han acudido a ese espacio abierto (especie de patio trasero sin vallas de la escritura de su dueño) para charlar entre ellos, opinar, contarse cosas, hacerse publicidad, publicar sus versos o contar que -ellos también- han abierto un blog. Como ocurre en los espacios abiertos y sin moderación, se puede ver cualquier cosa, pero en honor a la verdad discurren por el sitio materiales de

Here, conversation, real and actual interaction, leaves a written trace, it doesn't vanish like telephone conversations, it does not become another genre as TV or film conversations. Conversation becomes collaborative writing, sometimes a new species of literary dialogue, sometimes an improvised living drama—because writer and reader interact in a common context, not in the aseptic context of a decontextualized fiction.

As I've said, I wrote this chapter online on my blog, and asked the readers for some suggestions on what I might say on the topic of Internet and literature. Actually, I did not have many commentaries. But one of my readers, Luisja, added this comment:

Literature is the water of our life. Written literature is like ice. The internet gives literature a more fluid nature; that is, it thaws the ice and turns it into an ocean, with its streams, tides and dynamism. (*My translation*)

There are literary blogs (creative, critical or journalistic); but there as well a literary, poetic or rhetorical dimension in non-literary blogs—even in the most hard-line technical ones, such as *Barrapunto* (the Spanish version of *Slashdot*). Not to mention the most abundant species perhaps: the personal blog which is a mixture of intimate diary, commonplace book, photo album, social salon and individual newspaper and appointment book. There is a lot of writing going on in all those millions of blogs, although many are multimedia blogs, with photographs, illustrations, videos or podcasts—they become not just individual journals, but individual (or collective) radio stations, ongoing exhibitions and media centers. The close interpenetration of creative and journalistic writing with these other media, within this new context, is in itself a transformation of the literary landscape. Even if a blog is a "literary" blog, the literature it focuses on has become something else in this new medium.

interés, y se desarrolla constantemente un divertido juego de nicks (apodos), contra-nicks, suplantaciones, heterónimos, homónimos y falsos anónimos. El efecto coral es sorprendente y el juego entrelazado de ataques o de complicidades recordadas y continuadas puede durar meses. Si alguien alguna vez dudó de si la red podía producir géneros de escritura realmente nuevos, ahí tiene (si se los imprime) unos millares de folios de polifonía a su disposición. Si yo fuera profesor universitario le recomendaría a algún doctorando brillante que -si se atreve- les hincase el diente." (Millán, *Blog de libros y bitios* 9 oct. 2005)

Literature AS internet: Hypercriticism

To some extent, criticism has always seen literature as a galaxy of interconnected texts: and this intertextuality intrinsic to literature is enhanced by the Web. There is a potential hypertext in any critical commentary, as happens perhaps with any inherently intertextual genre. This potentiality inherent in criticism could be named its hypercritical dimension. Criticism is a dialogue not just with the work being analyzed, but also with the implied audience's presuppositions, and with previous readings of the work under study. What makes a classic a classic is, perhaps, the pedestal-like heap of commentaries it rises upon and which keep it visible. A dense hypercritical web has been woven especially around the sacred texts of civilization, the literary and philosophical canon, and other culturally significant texts. 12 To really know them is to know at least in part the web of commentaries, critiques, intertextual analyses, histories, source studies, refutations and counter-discourses. a web before the Web which is, short of cybernetic linking, an interWeaving of thought, text and discourse, only waiting perhaps for the next version of GooglePrint to emerge as an important structuring element under the Net.

The hypertextual format is especially user-friendly in critical essays which weave a net of hypertextual references around the text of their choice, or rather between a number of texts (as. by nature, webs tend to spread out beyond central nodes). Wikipedia is perhaps the most comprehensive hypertextual "work" with internal links referring to other parts of itself — although there are of course other phenomena we leave out here, not "works" but "texts", as Barthes would say—such as the massive hypertextual webs created by users's choices in a cybernetic environment, for instance in the databases of Amazon, Yahoo or Google. This is not literature, of course, but there is a lot of text in there which is raw material for cultural studies, both classical cultural studies and cybercultural studies. Cybercultural studies, by the way, is developing as a discipline of its own to analyze the development, social impact and usability of information and communication technologies. I suppose we could classify these cybertheorists in the way one classifies science-fiction novels, into "hard" and "soft"—the hard line dealing in this case both with hardware and software, and the soft dealing with the social attitudes to technological developments.

To return to the *Wikipedia* and its links: here internal links, in the body of an article, are clearly distinguished from the "external links" in the final section of each article. In many other hypertexts the difference is far from being so clear, so that the hypertext merges seamlessly into the World Wide Web, linking

¹² Cf. Hess-Lüttich, "Irrgarten" 222. *Hypercritica*, by the way, is also the title of a hypertextual history of literary criticism I began to write and may perhaps continue some day. I took the title from Edmund Bolton's 17th-century work on historiography.

promiscuously both to the same website ("work"-like links) and to other websites ("text"-like links). The Web is then, actually, in a way the collective Work of mankind, or rather the Text to engulf all previous texts.

A typical literary work recycles many previous texts and discourses, but does not name all of them: only a tiny fraction, if any indeed. Literature only gestures towards itself, but criticism tries to transform those gestures into articulate language. Criticism is an exercise in explicit intertextuality. It emphasizes the intertextual quality of literature by relating the text to its pretexts and its subsequent readings, to parallel cultural phenomena which may throw light on it, to predecessors and sources.

For instance—Samuel Taylor Coleridge wrote only a few outstanding poems; among them is "Kubla Khan". The text, a fragmentary poem, alludes to poetry, history and myth in a vague and suggestive way—"In Xanadu did *Kubla Khan* / A Stately pleasure-dome decree / Where *Alph*, the sacred river, ran / Through caverns measureless to man / Down to a sunless sea"... The poem was published together with a preface by the author explaining the circumstances of its genesis in a drug-induced dream, and the reasons for its incompleteness. The preface speaks more openly in the voice of writers and readers, rather than the voice of poets and audience, and it alludes explicitly (not just implicitly) to other literary works. The poem proved a critical success with time, and has attracted countless commentators, who have investigated many other aspects of the poem and related it to further texts and cultural contexts.

The most exhaustive among Coleridge's critics was John Livingston Lowes, the author of a memorable piece of criticism many hundred pages long on two poems by Coleridge, "Kubla Khan" being one of them. Lowes relates every detail of the works to the tangled web of associations formed by Coleridge's reading and experience. Every word of the poem becomes in Lowes's work a virtual hypertextual link taking us to other texts, other pages, other worlds, even. Dreams, myths, motifs, literary works, form a dense cloud of texts around Coleridge's poem "like chaffy grain beneath the thresher's flail". Lowes's book is therefore a masterful combination of the practice and analysis of intertextuality before the term was coined. It also inspired Theodor Holm Nelson with the idea of a "hyper-text", a cybernetic connection between texts in their digital or dematerialized form. The title of Lowes's book, from Coleridge's poem, had been *The Road to Xanadu: A Study in the Ways of the Imagination*:

¹³ I point here to an understanding of the relationship between gesture and languagea, and between literature and criticism, within the framework of a theory of emergence, such as G. H. Mead's. For further suggestions along this line of thought, see my paper on "The Hermeneutic Spiral from Schleiermacher to Goffman: Retroactive Thematization, Interaction, and Interpretation," *BELL (Belgian English Language and Literature)* ns 2 (2004): 155-66.

Lowes' book itself is a gigantic hypertext, linking sources in Coleridge's reading... and along the way touching on an extraordinary variety of topics. Lowes' book is, when all is said and done, one of the greatest detective and scholarly hypertexts of all time. (Pam 2004)

For Theodore Holm Nelson, one of the fathers of hypertext, "hypertext is fundamentally traditional and in the mainstream of literature." Hypertextual linking favours the process of rereading and and rewriting which is intrinsic to literary production; it is all part of a process of recycling which transforms ideas through their connection with other ideas, and the Internet and blogs are great for connections (we might here remember E.M. Forster's phrase in *Howards End*, "only connect!").

Interlude. Links: Weaving and Webbing

Sometimes we think of hypertext as just a slightly enhanced text, in which the clicking of links simply replaces the turning of pages. But of course links are more than a convenient (or inconvenient) page-turning device. To begin with, external links dissolve the text's borders and integrate it with the collective Web, literalizing and making active some of the intertextual connections which make up the Noosphere, or the human sphere of thought. Of course, links only activate *some* of these intertextual connections, and may well obscure those which are not linked... but still, they enhance the reader's power to read once again a connexion between texts which has been established by someone, and read it from a new perspective, achieving different insights. In this way, links promote the dissemination as well as the transformation of ideas and information.

In the Internet "the term meme often refers to any piece of information passed from one mind to another." And there is of course a connection between memes and links. According to the Spanish *Wikipedia*, "while evolutionary processes are ruled by the Darwinian model, the evolution of culture, with direct human intervention, seems rather to follow a Lamarckian model of transmission of acquired characters, which allows an extremely fast evolution, a speed enhanced by the nearly instantaneous speed of media, as compared with Darwinian processes." Hypertextual links are indeed a most

¹⁴ Nelson, *Literary Machines*, qtd. in Hess-Lüttich, "Irrgarten" 217.

¹⁵ Wikipedia, "Meme" (Oct. 24, 2005).

^{16 &}quot;Mientras los procesos evolutivos biológicos se rigen por el modelo darwiniano, la evolución de la cultura, con intervención humana directa, parece seguir más bien un

effective device for the dissemination of memes: for instance, for the spread of news and ideas through the blogosphere.

The economic potential of this fact for marketing strategies is right now a big issue among theorists of economics and market studies (see e.g. Torio 2005). But the diffusion of relevant information to the right context through adequate linking is just as important in any field of human activity influenced by the Web: cultural products and texts, just like any other commodity, find their niche in the overall economy through the connections of the semantic web.

Theodor Holm Nelson found his inspiration for the universal online library he dreamed of, his Xanadu, in the very idea of literature and its intertextual connections:

"Literature" is a debugged system used and understood throughout the world. *Documents* are information packages with points of view, *literature* is a system of interconnected documents. Xanadu is intended to allow millions of points of view and to keep track exactly of all their interconnections.¹⁷

Paradoxically, Nelson's dream hypertextual system, Xanadu, seems to promote a more "organized" and hierarchical version of linking than the simple, "one way" chaotic linking of the WWW.

This system of literature (the "Xanadu Docuverse") must allow people to create virtual copies ("transclusions") of any existing collection of information in the system **regardless of ownership**. In order to make this possible, the system must guarantee that the owner of any information will be paid their chosen royalties on any portions of their documents, no matter how small, whenever and wherever they are used. ¹⁸

The problem seems to be that interconnections are being established all the time; the two-way system proposed by Nelson would seem to restrict the proliferation of links and subordinate them to the issue of copyright. The real practice of the web has reduced this conception to a dead end. The Web is not the well-organized hypertextual library Nelson dreamed of, but rather a savage or feral hypertext (Walker 2005) which grows out of anyone's control. Some of the

modelo de tipo lamarckiano de transmisión de caracteres adquiridos, lo que permite una evolución rapidísima—potenciada por la velocidad casi instantánea de los medios de comunicación—comparada con los procesos darwinianos." ("Meme", in *Wikipedia: la enciclopedia libre,* 2005-10-11).

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¹⁷ Nelson, The Xanadu Ideal: http://xanadu.com.au/general/ideal.html

¹⁸ Xanadu Australia homepage http://xanadu.com.au/

issues Nelson thought crucial, such as copyright, are of course not resolved by the existing state of affairs. But a wild world wide web (to make it four wwwws) has some interesting aspects which were overlooked by early developers. And current developers of social software or the semantic Web are trying to use those very intractable and wild aspects of the Web to extract some kind of order out of it. The "folksonomies" I mentioned earlier are one aspect of this development.

The point is that in a a reticular or weblike structure, the links between the nodes are not just pathways connecting items: they provide additional information on the structure of the web, and this information can be used as relevant data to categorize the websites and look for further relevant information. Google's revolution in web search was based on an intelligent use of the link itself as information, rather than seeing it as an insignificant instrument, an informationally neutral medium. And further refinements in web search and usability appear almost daily.

As I was writing this chapter, I imagined a possible improvement of hypertext, based on the combination of links and search. This could be done by means of a Google-like browser which automatically turned all text into hypertext, searching for single words or highlighted text at a mouse-click on the textual interface itself, instead of having to paste the word or text on a new window or searchbox. (Another improvement would be to automatize the search so as to suppress one or more words of the text being searched for in order to yield approximate results, even if no result for the whole text being searched were available). Such a system would amount to the convergence of search and links on a single interface. I hereby name this hypothetical system hyperhypertext, or search-enhanced hypertext, and I freely give out the idea for development if there is a technologically-minded software developer among my readers. Although no doubt someone might point out there is a lot of hype in my hyperhypertext, I think the common intertextual basis of all text would emerge even more clearly through such a system. It would amount to a hypertextualization of all existing text, blurring the difference betweeen those parts of the text which are hypertextually linked and those which are not.

Borges's Library of Babel was perhaps an adequate emblem of the Web before Google; now there is some concern that the web may become too well organized after all. But while the refinement of web search procedures may help to deal to some extent with the problem of overinformation, it also raises some problematic issues of privacy, intimacy and control.

Google and a few other companies dominate the world's search protocols. And every search is archived and becomes potentially usable as second-degree information. Many critics see here a new kind of threat for human intimacy and freedom. So, a question rears its head in recent discussions. "Is Google evil?" (see Battelle 2005). That is, will the search-related information archived by the

main search engines open the way to manipulation of our data and control of our actions that we might find unacceptable?

The Internet, with its enhancement of globalization, seems to embody apocalypctic nightmares of control, in which the intimate space of the individual is under threat. A cybernetically enhanced State might go beyond any dreams of electronic vigilance imagined by Huxley or Orwell, leading to an apocalypse of total control which has been portrayed in a number of recent films, from *The Net* or *The Matrix* through *Minority Report* to *The Island*. I find the opening words of H. P. Lovecraft's *The Call of Cthulhu* (1926) apposite in this respect:

The most merciful thing in the world, I think, is the inability of the human mind to correlate all its contents. We live on a placid island of ignorance in the midst of black seas of infinity, and it was not meant that we should voyage far. The sciences, each straining in its own direction, have hitherto harmed us little; but some day the piecing together of dissociated knowledge will open up such terrifying vistas of reality, and of our frightful position therein, that we shall either go mad from the revelation or flee from the light into the peace and safety of a new dark age.

All of which is leading us back to literature.

The Internet IN Literature: Dream of the Cyborg

Last, but not least, I will refer to the Internet as a new subject for literature, in the sense that literature deals with human experience, and the experience of cyberNetics is a significant new kind of human experience. Actually, the Internet was invented by literature before it materialized in its present form. For instance, in the science fiction novel *Imperial Earth* (1975) Arthur C. Clarke depicts a 23rd century universal archive of integrated multimedia communications (text databases, voice and sound, image and video, virtual reality...) which is nowadays being actualized.

For an early literary vision of networked societies, I would refer lovers of science fiction to *Star Maker* (1937), Olaf Stapledon's fantasy in which a kind of radiotelepathy, most uncannily suggesting the future developments of WIFI systems, provides the ever-growing networked organization for individuals and societies. It also portrays the dystopian vision of a totalitarian networked control of human action and desires, and of the virtualization of reality through communications technology. Another impressive version of this nightmare was recently embodied in the film series *The Matrix*. ¹⁹ In *Star Maker*, too, one of the

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¹⁹ See García Landa, "Apocalypse".

decadent civilizations visited by the narrator uses virtual reality techniques as a mode of social control.

William Gibson's novel Neuromancer (1984) is the paradigmatic Internet fiction. It is not by chance that the word "cyberspace" was coined by Gibson in this novel. It still has no parallel as an imaginative exploration of the web and of the oscillations it creates between the real and virtual dimensions of experience. Other novels by Gibson, such as *Idoru* or *Pattern Recognition* explore further aspects of the way human experience is transformed by cybernetics, and the first experience which is transformed is the reader's experience. As the characters confusedly surf channels between their fleshly existence and their cybernetic avatars, the reader has to do cognitive acrobatics to interpret each wordprocessor generated phrase and its peculiar blend of "solid" fictional world and interface en abyme. In Neuromancer we do not find "metafictional" experiments in Barth or Beckett's style, but what Gibson writes is indeed metafiction: the metafiction our cybernetically-grounded web society is itself becoming—the metafiction of the new ways our brain processes information and structures reality as it adopts and adapts its perceptual patterns from computer-mediated environments. Who has not had computer dreams after some hours of web surfing? We are in for more and more computer dreams, and those dreams are spilling out into what used to be called reality.

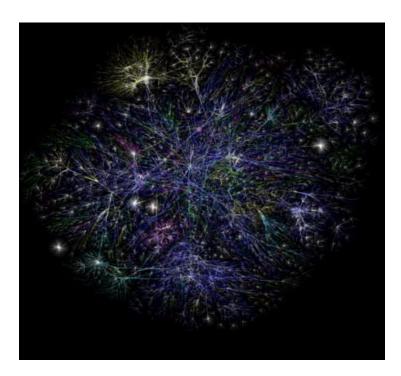
The revolutionary development of articulate language, which gave rise to human cultures, is of course without parallel in history. In the beginning there was the Word.²⁰ But later came the written word, the Book, and the Text. These were also significant revolutions, which gave rise, as a matter of fact, to history: the development of writing was associated with the development of states and commerce, of record-keeping, and of books. It influenced human intellectual processes in depth, separating literate and non-literate cultures and individuals, a division whose significance is still being assessed. The modern period, and the rise of commercial capitalism, went along with the development of mass technologies for the processing of written texts: the printing press and the socioeconomic structures surrounding it was the first medium of mass communication, and the spread of the Book, be it the translated Bible or the Encyclopédie, ushered in the spread of modern thought. A whole institution, or set of institutions, developed around the culture of the printed book—Literature, a complex term for the analysis of which we may refer to the pages of Raymond Williams in Marxism and Literature. Let me only remark that the Word is still with us, even if it is mediated and infiltrated by writing and other technologies (as happens if I read this chapter aloud to an audience).

Of all recent technological avatars of writing in late modernity, its digitization is probably the most momentuous, as it reduces writing to an infra-

²⁰ Ong, Orality and Literacy. See also García Landa, "Lenguaje como tecnología".

writing of digital signals which provide the building blocks for the treatment and transfiguration of information, and the automatic analysis of significant patterns in the flow of data. It is here, in the analytic potential of information patterns, that the most significant developments are taking place today: once human culture has been reduced to the minimum common building blocks of digital information, cultural patterns may reemerge for analysis, at a whole new level of significance because of their networked nature.

It is a safe guess that the ever closer integration between the automatic analysis of data and human cognitive needs and processes is ushering in a brave new world in which increasingly significant areas of social communication and organization are cybernetically mediated—leading to what we might call the cyborganized society. We are already cyborgs when we interact through a computer, and contemporary society itself is a gigantic cyborg whose processes are unthinkable without the web which connects it like a nervous system.



The Cyborg's Brain. A graphic representation of the Internet, from *The Opte Project*http://opte.prolexic.com/

Cyborganization is going to increase, as both the driving force and the product of globalization. The machines are going to think with us, and to some extent for us, we will think and feel through them. So, to the old adage of mens sana in corpore sano we should add the need to be attentive to the right combination of software and hardware. The right use of computers and communications technology is also a matter of health, both bodily and mental—and of ethics. We have always been technologically-minded beings, surrounded by technology, and self-made by technologies, not least the technologies of the word. But technologies should liberate and enhance human life, not diminish and oppress it. Literature, and criticism, have always reflected on the human use of human beings. And they should continue to do so in a rapidly changing technological context, in which there is some danger that, as noted by Matthew Arnold, we may lose sight of the difference between ends and means, or between values and machinery.²¹ We may well be transformed by our technologies in the future—as we have always already been. As Donna Haraway said, we are already becoming cyborgs, and perhaps there are some advantages in this cyberevolution, which we experience as a cyber-Revolution. But we should remain attentive to the use of cyborgs, not just to the human use of human beings, but to the human—and humane—use of cyborgs.

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²¹ "Faith in machinery is, I said, our besetting danger; often in machinery most absurdly disproportioned to the end which this machinery, if it is to do any good at all, is to serve; but always in machinery, as if it had a value in and for itself." (Arnold, *Culture and Anarchy* 15).

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