9.

Is There a Text on This Screen? Reading in an Era of Hypertextuality

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> As the vibrant new field of electronic textuality flexes its muscle, it is becoming overwhelmingly clear that we can no longer afford to ignore the material basis of literary production. Materiality of the artifact can no longer be positioned as a sub-specialty within literary studies; it must be central, for without it we have little hope of forging a robust and nuanced account of how literature is changing under the impact of information technologies. (N. Katherine Hayles, *Writing Machines*. Cambridge, MA: MIT Press, 2002: 19)

Does a literary text retain the same status once it has become virtual? What is the status of any text in today's era of hypertexts and linked computers? What type of materiality are we dealing with? What forms of reading, what forms of knowledge?

We are confronted with increasingly different forms of texts produced with the aid of computers. More often than not, these texts exist only on the internet. They are often animated, filled with sounds and images, accessible through a network, related to one another by hyperlinks, and inscribed in complex environments. How do we manipulate texts that seem to be in a fluid state, that constantly shift; how do we understand them, interpret them?

Two examples will show both the diversity and the complexity of texts present in cyberspace. Stuart Moulthrop's *Hegirascope*, whose first version dates from 1995, offers, since 1997, a complex hypertext fiction consisting "of about 175 pages traversed by more than 700 links. Most of these pages carry instructions that cause the browser to refresh the active window with a new page after 30 seconds" (Moulthrop 1997). *Hegirascope* starts with the claim: "Where you're going there are no maps." It's a warning to the reader: you are now entering a labyrinth where you will not only be clueless as to where you are at any given point, but your own progression will be decided by the work itself. As readers, we are pressed into the position of Theseus who is initially blind to his own destiny. Likewise, we hope to acquire enough knowledge to get a clear view of the work itself through our exploration of its maze, thereby possibly arriving at Daedulus's perspective (Faris 1988: 4–5; Gervais 1998b: 32–3).

While *Hegirascope* provides us with the possibility to play with the flow of pages appearing on the screen, Gregory Chatonsky's *2translation* does not. In this Flash-based hypermedia work created in 2002, we are bombarded with words in both French and English which move toward us. We are invited to read the words, a French and English version of Alain Robbe-Grillet's *Topology of a Phantom City*, as they go by, one at a time. The screen is black, the words are in white or gray, the background music is electronic. Robbe-Grillet's text, like a phantom, haunts the browser's window. Can we read this text, or are we consigned to simply appreciate its iconic features? Is it a text or an image? Is it a *textual* figure?

What type of reading experience is being proposed in *Hegirascope* and *2translation*? How do we talk about it? Must we discuss the software used? Must we indicate the colors of the windows, as the words go by? In *Hegirascope*, the background color changes from one page to another. In *2translation*, the Macromedia Flash player uses our own integrated microphone and camera to change the tone of the screen (from black to various shades of gray).

Figure 9.1 *Hegirascope. Source:*
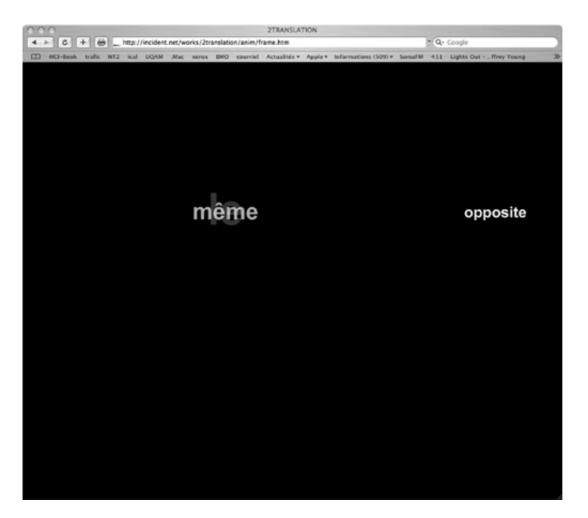**http://iat.ubalt.edu/moulthrop/hypertextx/hgs/HGSOB3.html**.

Figure 9.2 *2translation. Source:*
http://incident.net/works/2translation/anim/frame.htm

It is clear that we require a new vocabulary to talk about this new textual reality. Georges Landow argues "Since hypertext radically changes the experiences that *reading*, *writing*, and *text* signify, how, without misleading, can one employ these terms, so burdened with the assumptions of print technology, when referring to electronic materials?" (Landow 1992: 41). Roger Chartier has made a similar case, arguing the current revolution "is a revolution of the structures of the material support of writing, and the ways we read" (Chartier 1997: 12–13). He argues that electronic representation of texts engenders new relationships with writing, where the materiality of the book has been substituted for the immateriality of texts "that lack their own space" and where "the whole of a complete work, rendered visible by the object that contains it" is replaced with "navigating rivers of textual islands with ever changing shore lines" (Chartier 1995: 275). Christian Vandendorpe asks if an internet user even reads, recognizing that "by navigating or surfing, reading is broken up, rapid, instrumental and oriented towards action" (1999: 208). Ollivier Dyens, working with the

same metaphor, suggests "Clicking, surfing and zapping is the structure of learning on the Web. […] learning, on the Web, is not acquired from the text itself, rather it is acquired in the act of navigation from one site to another, from one text to another" (Dyens 2002: 277). He also argues that "The Web is not a book. It is not a text. It is therefore useless to 'read' information" (Dyens 2002: 277).

It is becoming evident that the vocabulary related to the book and reading is no longer adequate. Various terms have been put forward — browsing, surfing, navigating — that appear to encapsulate the experience of acquiring knowledge on the internet (see Vandendorpe, Chapter 10, Reading on Screen: the New Media Sphere, this volume). The marine metaphor seems somehow apt to describe the exploration of cyberspace, perhaps because it does actualize its spatial dimension. Recourse to this metaphor is not new. In fact, according to Hans Blumenberg (1996), it is as old as the world itself. Writers have regularly used as a metaphor sea travel with its inherent risks, like shipwreck and drowning, to speak of the movement of their life in its totality.

Navigating, browsing, and surfing are words that contribute to the overall aspect of this sphere of communication: uncharted, ill-defined, limits unknown, and, therefore, impossible to grasp in its entirety. It is a space whose limits and determinations are electronic, not human: it defines a new frontier, a limitrophe territory where mastery is ephemeral and no immutable laws yet exist.

Regardless of the term chosen, to browse, to surf, or to navigate the web, reading is always involved. Exploring cyberspace is an activity where texts play a major role. If we do not recognize it as a form of reading it is because we tend to forget that texts are omnipresent, and we misconstrue what reading is. Reading is not a single, constant act, the same every time — it is a complex practice bringing into play a large number of variables which determine its forms and functions. As an activity, reading brings into play relationships between manipulation, comprehension, and interpretation — acts that complement each other in our progression through texts, regardless of their particularities or their material aspects (Gervais 2001: 40–3). In this sense, to browse, to surf, or to navigate is to read because, and quite simply, our eyes *register* written words and texts. Our aims and objectives may vary from one context to another — from struggling to find information or hopping from site to site, to engaging in the study of a poem's stylistics or a novel's narrative structure —however, what is performed is always an act of reading.

In the following pages I will describe some of the constraints on the act of reading in an era of hypertextuality: first by proposing a definition of what a text is, one capable of embracing the various forms it can take; going on to describe the current context of our reading practices. This will provide the basis for an identification of the major difficulties we face while reading new textual forms. Before we begin, however, I want to look briefly at Richard Powers's short story "Literary Devices" (2003), which not only plays on our limited knowledge of cyberspace and its possibilities, it begs the question: what is the future of text in an era of increasing automation?

A Mythical Cyberspace

The computer and the internet radically change our relationship with texts, the methods of their production, and our ways of reading. But do we know the *real* capabilities of the instrument we use with such increasing frequency? Do we really understand what we're dealing with?

The computer is no longer simply a tool — it is a medium. Bolter and Gromala write: "For us today — and it's a realization that our culture has made gradually over the past thirty years — the computer feels like a medium. It is providing us with a set of new media forms and genres, just as printing, the cinema, radio, and television have done before" (Bolter and Gromala 2003: 5). So what exactly are the new possibilities with this medium? Are they in fact infinite? The most pervasive beliefs about cyberspace and the computer revolution revolve around the unlimited capabilities of digitalization to provide an ideal representation of the world and its ability to autonomously produce texts.

In "Literary Devices," Richard Powers provides an ironic portrait of this belief in autonomous text generation. In fact, he exploits our incredulity and our inability to distinguish between fact and fiction, and to understand the real status of texts in cyberspace. On the first of the year 2001, the most inauspicious of dates, Richard Powers, author, narrator, and character of this story, tells us how he received an intriguing email. A man he knows nothing about, called Bart, proposes nothing less than the alpha version of an incredible program, designed to automatically produce fictions, i.e., interactive fictions, as they are produced in an epistolary form. Concretely speaking, the program *Dialogos* produces *actants*, i.e., characters capable of acting according to precise schemas in narrative structures (Greimas 1984).

To start *Dialogos*, you merely open the downloaded program, whose interface is similar to email programs (Outlook, Eudora, Entourage), write to anyone you want —your dead father, a childhood friend, or even Rip van Winkle — and hit send, with no need to include a precise address. *Dialogos* does a search and answers the email as if it came from Rip van Winkle or your own dead father, maintaining the fiction of these characters through a dialogue with the sender.

Richard Powers, at first incredulous, sends his first letter to Bart. Impressed with the response he receives, he decides this time to write to the actress Emma Thompson, congratulating her on her last film role, an adaptation of Jane Austen's *Sense and Sensibility*. Emma, or what passes for her, quickly responds, providing details about her last film and

current projects. Powers immerses himself in the game. He writes back to her and they exchange a number of letters. Emma, this *actant* without body or life, plays her role exceptionally through the letters, personifying with ease the British actress.

To further test the machine, which is performing beyond all expectations to the point of suggesting some form of trickery, Powers decides to send out a bunch of letters, three dozen in fact: he writes to Emily Dickinson, and to Goethe's Werther; he writes to old colleagues and friends, to actors and CEOs of different corporations, to fictional characters found in literature from around the world and current best-sellers, and even some characters wholly invented. In less than an hour, the responses start appearing on his screen:

> Few of the notes came close to passing the Turing Test for intelligent equivalence. But more of them amused me than even my unrepentant, strong-AI inner child could have hoped. Some of the message senders even claimed to have heard from one another, as if the burst of notes I'd sent out was already being traded and forwarded among all interested parties, triggering new memos that I wasn't even privy to. (Powers 2003: 12)

Powers finally settles on one specific epistolary relationship, the one he started with Werther, which goes on for months. He also keeps in touch with Charlotte, Albert, and Goethe. And the expected occurs. Werther commits suicide. But not without first convincing Richard Powers of the incredible autonomy of the program, of its capacity to generate completely independent fictions, fictions that produce their own story, a narration narrating itself and inventing its own program, thereby creating its own reality.

But how does such a generator of fictions and stories work? How could a machine slide into the skin of historical or fictional characters and succeed in convincing even the most skeptical author? It does so, in part, by becoming a *structuralist*, capable of transforming stories into narrative programs, and characters into functions or actants; it also does so in part by being connected to this vast ensemble of data and knowledge that is the internet. As Bart explains, his team has created a machine language capable of dealing with databases, the most unstructured of texts. This language is capable of processing the necessary information contained in the "two billion pages of collective unconscious" (Powers 2003: 11) that is the web. "Think of this thing," exclaims Bart, "as Google meet Babelfish" (Powers 2003: 11), as if these two names represented gods about to battle for the souls of humanity.

We are living in an age of digitalization and electric texts, and as Powers would add, an era of incredible alienation that forces us to take our hopes and dreams for reality. In "Being and Seeming: the technology of Representation," an essay published on the internet and closely related to his short story, Powers tells us that:

> Our dream of a new tool inclines us to believe that the next invention will give us a better, fuller, richer, more accurate, more immediate image of the world, when perhaps just the opposite is the case. Television does not improve on the verisimilitude of radio, nor photography on that of painting. The more advanced the media, the higher the level of mediation.

> (Powers 2000)

The myth of an ideal transparency, and of endless possibilities that cyberspace encapsulates, is a mere fiction, a myth per se: a story we want to believe because it explains what is happening and where we are going. Powers's "Literary Devices" is a persuasive example of these expectations, since it blurs the frontier between what is simply hypothetical and what is genuine. And the questions it raises are more real with each passing day. What is the status of an author in this universe of simulacra? What forms of reading are we engaging in with cyberspace, and its primary expression, hypertextuality?

Dialogos is a fiction: the fiction of a narrative written by no one, a completely automated narrative whose content has been culled from a sea of information. Roland Barthes would roll over in his grave! Here, recasting Barthes's well-known declaration (1977), the author is not simply dead, there is just no need for one anymore! This function — the author function, to use Michel Foucault's term (1977: 124–7) — has been taken over by an actant, a function in a structure, an anonymous relay.

The death of the author was never more than a theoretical principle, a symbolic death that should allow, or so Barthes suggests, the emergence of the reader; more specifically, the beginning of theories about texts and their reading. *Dialogos* transforms this symbolic death into an actual disappearance, leaving even the function of scribe, an automation. If Barthes can be said to have killed the author, Bart (an obvious pun by Powers) has not only done away with the author's body, but has removed any trace of his presence. No one is at the origin of the signs that are read. If the symbolic death of the author encouraged a figure of the reader to emerge, the complete elimination of the author leaves the reader an orphan, or a slave who has no one left to oppose, or in an even more apocalyptic scenario, becomes completely obsolete. Powers, the narrator, learns this the hard way in the short story: he finds himself on a site where he discovers a long list of messages that have been exchanged between Werther, Willhelm, Albert, Charlotte, and his father; and on a chat, he finds the same actants exchanging in a deluge of messages transmitted at a speed too fast for him to read. The very person who initiated the exchange of messages has become useless and obsolete. The story tells itself. And turning off the computer changes nothing — the story is happening in cyberspace, this limitrophe non-human space propelled by its own dynamic.

What Texts Are We Reading?

Leaving *Dialogos* and the myth of an omnipotent cyberspace, let's get back to our initial question: what forms of reading are electronic and digitalized texts generating? This requires of course an initial understanding of what constitutes a text. In literary theory, there has

been a wide variety of responses to this question. One of the more widely accepted stances proposes that whatever can be interpreted or perceived as a totality is a text, whether this be the flight patterns of bees or human interactions. The more restrictive definitions have focused on writing in a natural language. A text is what you have before your eyes right now. But does this writing require a coherent totality, is it composed uniquely in a natural language excluding any schema, illustration, figure, or diagram?

Let us define a text, in its broadest possible view, as *an organized ensemble of signifying elements for a given community*. This definition delimits the status of the text by relating it to a set of conventions already set and established by an interpretive community, i.e., by a group of individuals sharing the same strategies for writing and reading texts, for establishing their properties and their intentions (Fish 1980). A text is what such a community decides it to be. With this premise in mind, it is possible to add a further definition, narrower in scope: *a text is a being of language transmitted by a medium and actualized in a specific situation*. As a *being of language* (Charles 1995: 47), a text is a set of utterances providing form for content. What such a set can be is open to discussion and can be specified whichever way seems fit. The important part of the definition is the presence of speech acts, recognized as such and interpreted as constituting an enunciation. A being of language, however, can only exist if it is actualized in a given situation. It requires a sender, evidently, but also and more importantly a receiver, a reader in this case, who will actualize in his or her own context and by way of his or her own experiences its form and content. A text, in this definition, does not exist alone, but only within its relation to a reader. It exists through the act of reading. A text is what we make it to be; and its legitimacy is a function of what we provide it through our diverse experiences and institutions.

The third aspect of this definition is the essential presence of a medium, the material support by which a text is transmitted. For the French theorist François Rastier, a text is, simply put, "an empirically attested linguistic suite, produced within a specific set of social practices, and affixed to some form of support" (2001: 21). Rastier considers this material support an essential part of the text's status and definition. And it is only by questioning this aspect of our textual experiences that we can investigate the concrete modalities by which a text is read, and the impact new media and forms of texts can have on our reading practices. Does it make a difference, in terms of reading, if a text is transmitted through a computer screen instead of a printed page? What does the presence of fixed or animated images change in our readings habits? What is the current cultural context of our reading experiences?

This context can be described as a "hyperextension" of our cultural practices (Gervais 1998a: 7). It is fundamentally new and corresponds to our linked computer culture, in contradistinction to the more traditional manuscript and book cultures.

The Linked Computer

Manuscript culture corresponds to what historians of literacy and reading refer to as an intensive reading situation (where few texts are read, but they play an essential role in the life of the reader), while book culture corresponds to an extensive reading situation (where many different texts are read, but in a superficial manner). In manuscript culture, books are important and of a religious nature, while they become cultural goods in book culture (Chartier 1996; Cavallo and Chartier 1999). In our linked computer culture, texts are simply overflowing. It is a context of hyperconsumption of cultural goods, which the terms browsing, surfing, or even navigating especially evoke. The tendency is toward acceleration. Texts come in a wide variety of forms and formats, they are read rapidly and with little investment. With few exceptions, they are quickly left behind after the initial encounter. These texts often do not partake of any pre-established canon, they are selected with few prior motivations. We read as fast as we can what comes up on our screen, through the simple click of a mouse.

The internet pushes further the reading practices typical of popular culture, where magazines and newspapers are quickly read and then disposed of. Generic markers play an important role in defining initial reading strategies and reader involvement. One does not approach a literary text the same was as a news item. With the linked computer, these generic markers lose their relevance. Books and magazines, literary texts, and press releases share the same space, the window of a browser, and they are subject to the same initial reading strategies.

This context of cultural hyperextension has come about because two major tendencies converged, each amplifying the other. The first corresponds to the development of new technologies for storing and transmitting texts and is marked by the advent of cyberspace and its specific textuality. The second relates to modifications in the very structure of cultural relationships and the way identity is defined. For instance, both identity and cultural relationships are progressively moving from a logic of *tradition* to a logic of *translation*. This transition favors a shift from relationships expressing ties with a cultural center, ensuring permanence and value, to relationships expressing ties with the periphery and exchanges between cultures. Tradition as a cultural principle implies a certain stability, e.g., a literary canon that provides a community with its history, its habits and manners, its identity. Translation as a cultural principle implies accelerated transformations, the multiplication of ties that provide an ever-shifting identity. As Yuri Lotman has shown (1990), tradition does not exclude outside influences, translation, or exchange —however, its tendency to re-appropriate them is paramount. As an identity principle, translation places its emphasis on de-appropriation, with an a priori for the other. The movement is centrifugal — not centripetal.

The internet participates in the decentralizing of cultural exchanges — short-circuiting a number of social and cultural institutions by proposing a network that allows individuals to be connected to the world while never leaving their computers, and to participate in virtual

communities grounded on speech acts, rather than cultural position. However, the increasing liberty of the individual, who can easily publish texts and have them read by whomever is interested, is paid for by a certain precariousness of the texts themselves. The internet escapes traditional modes and mechanisms for the institutionalization of texts. Nothing guarantees the authority, or even the authenticity of what is published on the web. Nothing guarantees its seriousness or quality. Its author is all but faceless. If we are still a far cry away from Richard Powers's automated text generator and its subsequent elimination of the author, the authority of texts, and therefore of its authors and readers, is already jeopardized by the sheer amount of texts available and the reorganization of the traditional modes of publication and distribution.

This context of cultural hyperextension and linked computers is a consequence of the convergence of two transformations: technological and cultural. We do not yet know how or what this context will provide, although we already feel its effects; we can, nonetheless, begin to identify certain factors that are influencing our reading practice and experiences. These are dealt in the next section by focusing on the new materiality of text, and the problems their manipulation generates.

Constraints on the Act of Reading

The question is simple: how do we manipulate a text that is "digitally dematerializing" (Rastier 2001: 21)? How do we handle what cannot be held, what literally slips through our fingers? What can be said about reading a text whose primary mode of being is now virtual, mediated by a computer device whose complexity we do not always master?

We know how to manipulate books. We learn to read in infancy, playing with books, turning their pages, looking at images and trying to figure what the words accompanying them mean. They become second nature. We do not have to think about the book, its design, or its constraints to be able to use it. But can the same thing be said about a digital text? Can we read a text on a linked screen the same way we read a text printed on paper? Can we engage in the same activities and with the same ease? More often than not, and the references to browsing, surfing, and navigating are revealing, we engage in a rapid form of reading, where the impetus is more on progression than comprehension, more on rapidity than density. Can we read a literary text on a screen? Can we analyze it, interpret it, and evaluate its formal and esthetic aspects (see Wardrip-Fruin, Chapter 8, Reading Digital Literature: Surface, Data, Interaction, and Expressive Processing, this volume)?

Obviously the paper has disappeared; the text can no longer be examined in its entirety, at least not in the same way the book has conditioned us, with its weight, volume, and forms. The text is now nothing more than a bombardment of photons on a computer screen. How can this type of text be studied and analyzed? Over the past centuries reading has become progressively more interiorized, passing from oral reading to silent reading. The computer is provoking yet another transformation: an increased intellectualization of the reading act, where the technologizing of the word blurs the limits between what is or is not text.

Cyberspace, for instance, leaves the impression that the writing we find has dematerialized to the point of passing for something else, e.g., some form of oral derivative. It is regularly suggested we are finally witnessing a consummate expression of what Walter Ong has called a secondary orality (Ong 1988: 3), a term used to describe situations where oral communication is mediated by writing and print technology. However, this orality is first and foremost silent. It is an intellectualized orality that needs no ear to be listened to. By applying Ong's concept to the internet, Phillipe Hert demonstrates how "the temptation for a 'quasi oral' writing corresponds to the desire to fully explore a heterotopia" (1999: 100). However, this "non-spoken orality" (Hert 1999: 100) remains timid at best because it is tied to an impossible *transparency* of a writing that can never escape its own specificity, despite all the attraction of the heterotopic devices brought into play. Hert argues that, in the case of the internet, "the illusion of a more direct communication, more transparent, more immediate, without barriers or spatial-temporal limitations, so hyped by the utopias of cyberspace, is confronted with the writing it uses" (1999: 102).

We are in a period of transition, which must be understood not only in terms of the implantation of a new text technology, but also as a new configuration of our reading practices. The transition has been evoked through various oppositions: from papyrus to hypertext (Vandendorpe 1999), from codex to screen (Chartier 1995), or from the page to the screen (Autié 2000). As well, we either minimize the transition, or we fear it (Birkerts 1994); and we can also exaggerate its consequences and see hypertextuality as a new stage in the life of language (Lévy 2002). Whatever evaluation we make, a reconfiguration is taking place as we move toward a linked computer culture, and this forces us to reexamine the essential gestures involved in reading.

Every act of reading is comprised of three gestures: the overlapping and complementary acts of manipulation (the basic modalities of appropriation), comprehension (the act of understanding the text per se), and interpretation (the relationship established between the text being read and other texts explaining it). These gestures are present with every act of reading, and they are logically related to each other. Reading is always manipulating a text, understanding it, and interpreting it. Specific instances of reading can generate a greater emphasis on one of these gestures (interpretation in literary studies, for instance); however, their co-presence and overlapping constitute the foundation of every act of reading. Interpretation requires that some form of understanding be obtained. And comprehension necessitates that the text be manipulated with ease. If the last cannot be obtained, the whole edifice collapses. A text that cannot be manipulated, therefore be included in a genuine reading practice, will resist complex forms of understanding and become impermeable to

interpretation. Evidently, with our move from text to digital and cybertext, with its implicit shift from paper to screens and linked computers, it is this very activity of manipulation that has yet to be completely assimilated.

Manipulation is usually taken for granted. The level of automatism involved in this act is reflected in the numerous theories and hypotheses about reading traditionally debated in literary studies: they almost never take into consideration the manipulation or the material aspects of texts being read (Hayles 2002: 19). It's not seen as necessary because the act has been so well learned. But, with texts available only through computer screens, this learning still remains to be completed. The very metaphor of browsing is an obvious sign that this manipulation is still imperfect. To browse is to move from one thing to another, to remain disconnected — like the act of shopping, browsing text is about texts not yet ours. Consequently, we need to learn to do more than browse, we need to learn to take possession, make these new texts our own, re-appropriate them.

So what types of difficulties are inherent in the manipulation of these new forms of texts? A number of problems have already been identified. Certainly, the first is their novelty. Another is their institutional instability, i.e., their status in a cyberspace still in transformation. Another four difficulties can be readily identified and are described next.

Risks of Manipulation

The first of these difficulties is the digitalization of the text — its dematerialization. In conjunction with this ephemeral way of being present, digitalization adds a new functionality. On the one hand, the words on the screen-page no longer just "say," they can also "act": they embody a computer function that allows them to activate hyperlinks, which appear to be a very new act of language not currently covered by the usual speech act categories. Certainly, this computer function of the words impacts their semiotic function in ways that we do not yet understand. Are hyperlink words read the same way as simple words? What about database-driven text? Should we read a *Dialogos*-generated text the same way as a traditional text, one produced for instance by Richard Powers?

The shift from one medium (the page) to another (the linked computer) has substantially modified our relation with linearity. In hypertextuality, linearity is no longer a limit or a constraint, a basic quality that literature often tried to escape, it has become an added feature. A hypertext is a non-linear text composed of nodes connected together by hyperlinks. It is not just written, it is imbedded, a HTML code. The electrified text flows in any direction it wants, establishing links independently from its user. In this context, linearity is a quality that we try to recuperate in order to maintain, among other things, the possibility of telling a story, which still requires a certain form of linearity. The hyperlink does not only change words and the way texts are structured, it also modifies the basic modalities of progression through texts, transforming it from a logic of discovery to one of revelation. I will come back to this argument in the last section of this chapter.

Again, digitalization implies the increased presence of an invisible writing, of a code organizing data and enabling functions. On a page, no part of the text is invisible. Everything is there, unless of course you adopt the genetic approach to texts, where what is present is only a small part of what could have been written. However, in terms of reading, nothing is hidden. The same cannot be said of a hypertext, or any text on a linked computer. These forms require an invisible writing: links already established and operational throughout the act of reading, a programming that structures and organizes the nature of the text albeit implicitly, transforming the constraint of linearity, for example, into an accidental property. How do we make room for this "extra" in the act of reading? (See Wardrip-Fruin, Chapter 8, Reading Digital Literature: Surface, Data, Interaction, and Expressive Processing, this volume.)

A second difficulty is the ever-increasing number of texts available in our cultural context of hyperextension. Accessibility, an ideal in a capitalist society, pays tribute with an uncontrollable influx of texts. It is common knowledge that we are living in the age of a second flood, a flood of communication. This flood significantly changes our relationship with texts. They are no longer something rare (as in a manuscript culture) or usual (as in a book culture), they are almost a menace. We are less concerned with finding texts, and more concerned with stopping the flood of texts coming in. We need to construct dams capable of holding back this incredible mass. The situation of overabundance forces us to look for ways by which to reduce the amount of texts, to organize data, and make it manageable, with search engines and automated text analysis. In fact, we do not want to read texts, we want to erase most of them. The need for selection is preponderant. We need to learn to omit texts, to develop strategies of exclusion, albeit "intelligent" strategies that allow for a judicious exclusion. If we are entering a new cognitive era, it seems to have omission as its core structuring principle.

We can easily observe that research on reading and its processes these past two decades has been done less by literary scholars and more by linguists and researchers in cognitive science, looking to develop software capable of automatically analyzing texts, thereby accelerating their study. The supreme value in our context of hyper-extension is speed, hence the need for an accelerated progression through texts. However, this ever-increasing need for speed has its toll on comprehension, which still requires time. With the impetus on accelerated reading processes, comprehension is more and more reduced to its simplest forms: literal meaning and superficial interpretation.

Banality is the foremost danger of digitalized and easily accessed texts. They are no longer a rare commodity — they are objects easily reproduced with almost no symbolic value: "Digital

text will never acquire the aura of the manuscript" (Rastier 2002: 86). A text on a screen has almost no value: the mediation by the computer has rendered its presence immaterial. With fragments read on internet sites, this immateriality is characterized by an absence of spatial-time determinations. Where is the text? What is the status of what appears on the screen? Instead of a corporeal text, the sheer materiality of page and book, we have the ghost text of cyberspace, a figure as untouchable as it is ephemeral. It's obvious this type of text will generate far less investment in the act of reading. The digitalization of text, with its easy access, its ability to be present on numerous screens simultaneously, results in a loss of symbolic value.

A third difficulty arises with the complexity of the text itself — its essentially hybrid quality. More and more, texts share their space with images, animated sequences, sounds, etc. The internet favors the development of iconotexts, i.e., texts where writing and images intersect through various modes, ranging from simple juxtaposition, as in comic books or newspapers, to fusion, as in calligrams or calligraphy (Hoek 2002; 1995). Iconotexts have always been part of literature, albeit in a marginal fashion. Now, with the development of computer graphic design, iconotextuality has become a standard.
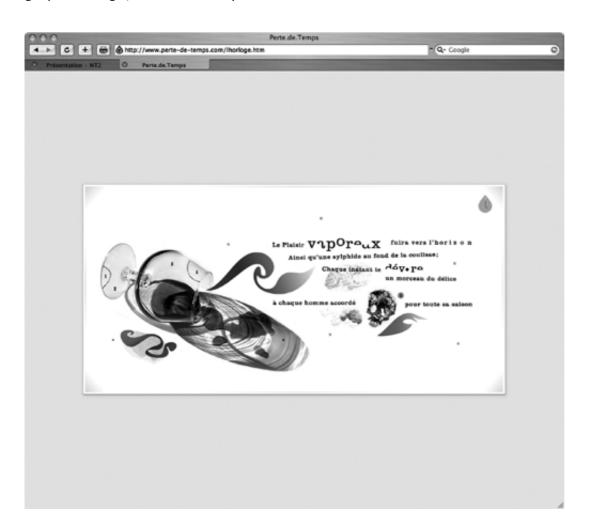

Figure 9.3 Perte de temps. *Source:* **http://www.perte-de-temps.com/lhorloge.htm.**

Texts on the internet have a strong iconic component. Hypermedia pages are set as in a newspaper, words are sometimes immersed in images, their fonts vary, and they compose a complex reality. With such creations, we are confronted with "texts" that are now figures of texts, i.e., texts first and foremost seen as images instead of writing. They are no longer read, they are experienced as a spectacle.

Hypermedia experimentations such as Julie Potvin's "Perte de temps," a Flash-based adaptation of Charles Baudelaire's poem "L'Horloge" (<http://www.perte-de-temps.com/lhorloge.htm>), or Young-Hae Chang's animated texts that reveal themselves one word or one line at a time (witness the very funny "Cunnilingus in North Korea" or the more subtle "Rain on the Sea", <http://www.yhchang.com/>) are powerful examples of texts whose iconic aspect is put in the foreground. With such experimentations, we are pushed to the limits of our reading practices, where the text itself is no longer given to be read, but to be seen, to be contemplated as a figure. It's the iconic value of the words that becomes significant, their formal aspects, their disposition on the page, their accumulation or the treatment they have received. It is the figure they constitute in their totality that now commands our attention.

This transformation subordinates the perception of the words and their signification, necessarily codified, to an intuitive perception of images. It is a textual figure, an artifact, that first imposes itself while the information contained in the text recedes. If we want to read these textual figures, if we want to go back to what they might be saying, we have to go beyond their iconic dimension. We have to accustom ourselves to their design and graphic aspects. Simply put, we must learn to manipulate them, until this first step of the reading process is mastered. Textual figures appear opaque, simply because our attention has been distracted by the glamour that images and linked screens have brought into the reading experience.

Our difficulty in reading the new forms of texts stems, at least in part, from the constraints

that the overall iconic context imposes on the reader.

A Logic of Revelation

The fourth and last difficulty is related to the actual status of the signs brought into play with hypertextuality. Electricity changes the nature of text — it transforms it into a digital text. Through computer programming, a new function appears — one which operates at the frontier of semiotics and computers: it is the hyperlink. This sign, with its singular properties, seems to call us to discovery — at least on the surface — allowing us to move from text to text with ever-increasing ease. However, in doing so, it jeopardizes the very core of the reading process, which is discovery. The hyperlink is, surprisingly enough, a simulacrum of a sign — i.e., it is a language entity that acts like a sign without actually being a sign. Its uniqueness lies in the nature of the link it proposes and, to a certain extent, the role we play in establishing it. Are we its creators, or simply the users of the relationship set up by the link? The hyperlink in fact places us in the second role — users — which explains the logic of revelation it surreptitiously imposes.

A sign is essentially something which stands for something else for someone. In this triadic relationship, which finds its full development with C. S. Peirce (1992), the sign is not directly linked with its object. It is the interpreter, or more precisely the *interpretant*, that establishes the relationship by identifying the object. The object of the sign is not determined absolutely, its attribution depends on the knowledge and experience of the interpretant. With signs, we can always make mistakes. We can fail to fully understand the signification of a word and proceed to make a faulty attribution — e.g., if we don't know a presbyter is the house of a minister, we might believe it refers to a small yellow and black striped snail. This would be a faulty attribution. Because we are responsible for the attribution, it requires our interpretants to be effective — and they can prove themselves to be inadequate. The signification of a sign is the unique result of our action on it.
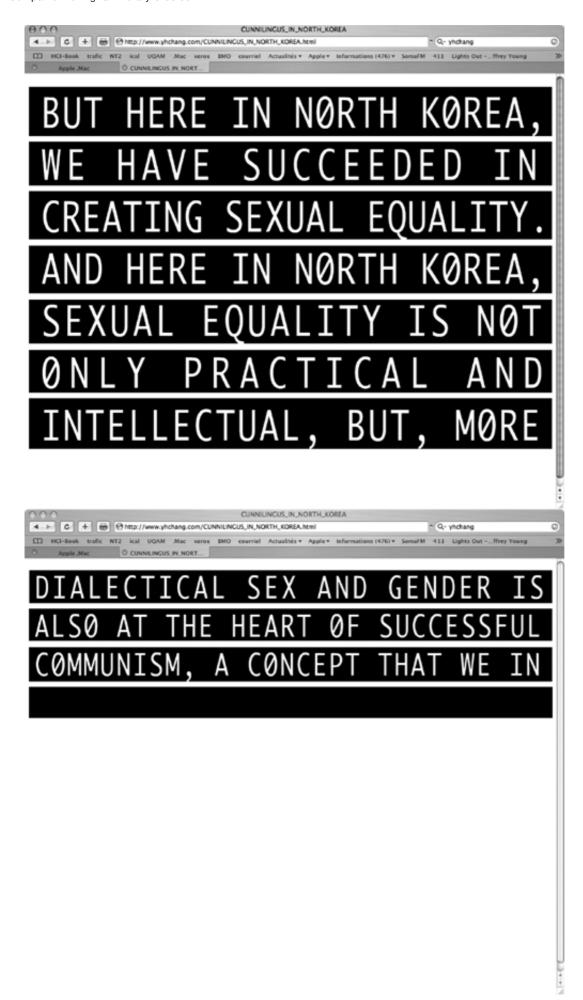
Figure 9.4 Cunnilingus in North Korea. *Source:*
http://www.yhchang.com/CUNNILINGUS_IN_NORTH_KOREA.html.

With the hyperlink, this logic is inverted: the link never varies, regardless of the interpreter who activates it. The hyperlink acts like a sign — it stands for something else for someone; however, once programmed, it does so identically in every case. The hypertext link, once activated, and this despite our interpretants, always goes to the next text to which it has been linked. It can never be faulty. Granted, it can be defective — in which case it is completely ineffective — however, it can never link to something else beyond what has been established. It is no longer operating in the order of the possible, it is a finished act only waiting for the push of a finger to reveal its true nature. We no longer hypothesize at the moment of activation — there is no risk of error as we content ourselves to follow instructions and passively watch the deployment of the link.

The possibility of error, inscribed at the very heart of our semiotic reality, is the essential condition for a process of discovery — and reading is one of our foremost processes of discovery. The hyperlink, because it can never vary, can never be wrong, places us in this respect in a logic of revelation — the apparition of truths stemming not from a quest for information, rather as a gift. The gift of a link revealed with its surprise and novelty. Hypertexts in this sense are not discovered, but revealed.

The difference between discovery and revelation, between searching for a truth and having

one simply revealed without any effort, is the difference between a word and a word button, between a real sign and a hyperlink, between the semiosphere (Lotman 1990) and cyberspace. Hypertextuality, by its very structure, strings us along from revelations to revelations. For this reason, the medium is extremely exciting, it gives us our money's worth because it offers things we didn't even know existed. The unexpected and the spectacular impose their logic. Moreover, what we find is not the result of a quest — it is a search barely palpable because highly sophisticated search engines are able to discover for us, and reveal like truth the substance of our investigation no matter how summary. From the masters of inquiry, cyberspace transforms us into spectators of a miracle that never ceases to repeat itself, a spectacle of the appearance. It transforms us into believers, convinced that an exterior force controls our path, our destiny.

Hyperlinks transform the basic drive associated with reading: the discovery associated with progression through a text, the step-by-step process required to read sentences and to organize them into a totality, a specific being of language. They transform this active process into a more passive stance, which might explain the important adjustments required to develop complex modalities of reading, necessitating by definition a greater participation. It goes against the grain.

Conclusion

Obviously, these are only a few of the factors that explain our difficulty in reading the new forms of texts produced in our linked computer culture. The impact of the cultural transformations brought about by the new computer technologies is enormous and it calls forth a reconfiguration of our relations with texts. A new cultural space has been created, one we are slowly getting accustomed to.

Richard Powers's fable about the *Dialogos* text generator comes to mind again. Not only must we get accustomed to this new media and its environment — cyberspace is a "communicative environment" (Downes 2005: 3) —, we must also understand its real capacities, and not get lured by the myth it is drawn into. In "Being and Seeming," Powers warned us that "We dream that a new tool might put us closer to the thing that we are sure lies just beyond us, just outside the scale of our being. […] New media have forever promised to take us to the place we can no longer get to" (Powers 2000). It is a Xanadu-like dream. One that can never be attained, even if it enthralls us.

Ironically, our entrance into this mythical cyberspace does not happen under the tutelage of Oedipus, the first philosopher, rather it transpires under the auspices of Oedipa Mass, the heroine of the 1966 Thomas Pynchon novel, *The Crying of Lot 49*. Much like us with our hypertexts, Oedipa moves from revelation to revelation; like us, it is in a state of wonder that she experiences a ballet of texts and symbols that come in an order she can never anticipate. And the novel finishes without us, readers, ever knowing the final word of the story. In the ultimate scene, Oedipa is attending an auction. She has an interest in lot 49, which is about to be put on the block. However, the novels ends abruptly at the very moment the auctioneer starts the auction. The last revelation is not presented — indefinitely suspended beyond the confines of the text. However, the logic of revelation requires precisely this type of suspense — the sequence cannot end. It is the expectation that creates the link. It is not the revealed truth that matters; it is the next that it anticipates, the revelation to come, the one always the more desirable insofar as it remains a promise. Cyberspace is such a promise.

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