

REGARDS CROISÉS

West Virginia University Press, Morgantown 26506
Copyright 2010 by West Virginia University Press
All rights reserved.

First edition published 2010 by West Virginia University Press
Printed in the United States of America

18 17 16 15 14 13 12 11 10

9 8 7 6 5 4 3 2 1

ISBN-10: 1-933202-47-5 (pb)
1-933202-48-3 (elec)

ISBN-13: 978-1-933202-47-1 (pb)
978-1-933202-48-8 (elec)
(alk. paper)

Library of Congress Cataloguing-in-Publication Data

Regards croisés : alternate perspectives on digital literature / edited by Philippe Bootz, with the assistance of Sandy Baldwin.

-- 1st ed. p. cm.

Includes bibliographical references.

ISBN-13: 978-1-933202-47-1 (pbk. : alk. paper)

ISBN-10: 1-933202-47-5 (pbk. : alk. paper)

ISBN-13: 978-1-933202-48-8 (elec)

ISBN-10: 1-933202-48-3 (elec)

1. Hypertext literature--History and criticism. 2. Literature and the Internet. 3. Literature and technology. I. Bootz, Philippe. II. Baldwin, Sandy.

PN56.I64R44 2010

809'911--dc22

Library of Congress Control Number: 2010013498

REGARDS CROISÉS

PERSPECTIVES ON DIGITAL LITERATURE

edited by

PHILIPPE BOOTZ

SANDY BALDWIN

WEST VIRGINIA
UNIVERSITY PRESS



ACKNOWLEDGMENTS

Thanks to Nicolas Cognard who provided English translation of the essays by Alexandra Saemmer, Alckmar Luiz dos Santos, and Philippe Bootz. Particular thanks to Sandy Baldwin and his assistants Tony Clavelli, Lindsey Kay Joyce, and Alyson Murphy, who spent considerable time in meticulous rereading in order to enhance the linguistic fluency of the essays.

TABLE OF CONTENTS

PREFACE	<i>Sandy Baldwin</i>	ix
EDITORIAL	<i>Phillippe Bootz</i>	xv
NARRATIVE MOTORS	<i>Eugenio Tisselli</i>	1
1	The metaphor of narrative motors	1
2	Exercises in style with executable languages	3
3	Combinatory Language Practices	5
4	Process-driven narrations	6
5	Metadata in motion	8
THE UNSATISFIED READING	<i>Phillippe Bootz</i>	11
1	Introduction	11
2	The theses of Walter Benjamin and Mario Costa	11
2. 1	Shared concepts of “distant, however close it may be”	13
3	Presentation as a modality of representation	14
3. 1	The private-reading procedural system operates through displacement	14
3. 2	A seismic event of magnitude 3 on Costa scale	15
3. 3	The procedural work: a “being in itself” deprived of aseity	16
4	The artist’s condition	18
4. 1	“I demonstrate concepts”	18
4. 2	The displaced work and the ritual work	19
5	The recursive loop between presentation and representation	20
5. 1	Presentation differs from representation	20
5. 2	The dialectics of presentation and representation	21
5. 3	The splitting of reading	22
6	Conclusion: the reader as “en-jeu”	25

**“AGENTS PROVOCATEURS”:
CODEWORK INTERVENTIONS ON THE LISTSERVS**

Camille Paloque-Berges 26

- 1 Introduction: a poetics of information? 26
- 2 Agonistic noise experimentation with listserv protocols 27
- 3 Is text-code a critical reproduction
or a speculative reprogramming of discourses? 32
- 4 Observation and tattling in textual situations 26
- 5 Protocols of public community: informatic and semiotic codes 28

**SPEAK, “MEMORY”:
SIMULATION
AND SATIRE IN REAGAN LIBRARY**

Shuen-shing Lee 41

- 1 Introduction 41
- 2 Speak, “Memory” 41
- 3 Notes on the Final Construct 43
- 4 The Mnemonic Simulation 47
- 5 A Surrealistic Satire 55
- 6 “There is no flow chart” 61

**DIGITAL POETRY BEYOND THE METAPHYSICS
OF “PROJECTIVE SAYING”**

Janez Strehovec 63

- 1 Introduction 63
- 2 Mutations in Poetry 64
- 3 Cybertextuality Attitude 69
- 4 Multimedia shaped text 74
- 5 Thanks for watching (a poem) 76

HOW TO READ WORDS IN DIGITAL LITERATURE

<i>Alckmar Luiz dos Santos</i>	84
1 Introduction	84
2 An example	87
3 Toward a rhetoric of brevity	90

TEXTUAL MATERIAL IN THE DIGITAL MEDIUM

<i>Alexandra Saemmer</i>	93
1 Introduction	93
2 Reflexive, immersive, contemplative readings	93
3 A new semantic proximity between words and images	94
4 Animated calligrammes	96
5 Limits of the calligramme	97
6 Toward the opening of the semantic and graphic potential of the text	101
7 The metonymic action of hyperlinks	102
8 Metaleptic effects	103
9 Animated hypotyposes	103
10 Metaphorical animations	104

LIST OF FIGURES

Figure 1: Listserv posting by Netochka Nezvanova, 2006.	31
Figure 2 : Listserv posting by JODI, 1998.	38
Figure 3: Screen shot from Stuart Moulthrop's <i>Reagan Library</i> , 1999.	45
Figure 4 : Screen shot from Stuart Moulthrop's <i>Reagan Library</i> , 1999.	46
Figure 5 : Screen shot from Stuart Moulthrop's <i>Reagan Library</i> , 1999.	51
Figure 6: Screen shot from Stuart Moulthrop's <i>Reagan Library</i> , 1999.	52
Figure 7 : Screen shot from Stuart Moulthrop's <i>Reagan Library</i> , 1999.	54
Figure 8 : Screen shot from Stuart Moulthrop's <i>Reagan Library</i> , 1999.	56
Figure 9: Screenshot from Claire Dinsmore's <i>The Dazzle as Question</i> , 2000	80



PREFACE

Sandy Baldwin

Crossed *Regards*, one English title explored for this collection, was accurate enough but awkward. Philippe Bootz gathered these essays under the French title *regards croisés*, which nicely emphasizes a crossing and intersection of perspectives or viewpoints. The English word “regards” seems the easiest translation of the French *regards*, except its contemporary use lacks a sense of observation and interpretation. I can offer you my regards or I can regard you across the room, but the first seems overly formal and the second too passive. The English “crossed” is little better, even if it seems to capture the sense of “*croisés*” as a physical intersection, and perhaps the connotation of a dispute or opposition in the sense of crossed swords or simply being “cross” as ill-humored and contrary. Overall, the English connotations are suggestive but hardly work as “crossed regards.” Another possibility was the title *Alternative* or *Alternate Perspectives on Digital Literature*. This preserved the connotations of direction and intersection in “crossed,” along with the connotations of the scopic and interpretive in “regards.” The ultimate choice of *Regards Croisés: Perspectives on Digital Literature* succeeds by capturing all these aspects while emphasizing the book’s cross-cultural and multilingual exchange.

To give a book a title may be a long process or take only a moment, but doing so passes judgment on the book. The language of a title is a national and historical reference point. Titles are registered and copyrighted. They situate the book in legal and discursive networks.

The translational difficulty of this book’s title underlines the terminological flux and vagueness of discussions of digital literature. No agreed-upon terminology exists for this emergent field, as is made clear by publications with titles *New Media Poetics*, edited by Morris and Swiss or *Electronic Literature* by Katherine Hayles: the titles indicate very different fields, while the contents in

fact deal with overlapping domains of practice and criticism. As with any relatively new cultural domain, there are communities and discourses surrounding digital literature, within and without the academy, where evaluation and practice are codified and debated. The point of this collection's title is not simply a typical and necessary jockeying for position, however, but a new coming to terms with digital literature.

To set out the difference, first consider one dominant account that goes something like this: Ted Nelson invents the term “hypertext” in a 1965 ACM article, defining it as a system of writings and other materials “interconnected in such a complex way that it could not conveniently be presented or represented on paper.”¹ Nelson's elaboration of hypertext directly influences the development of the World Wide Web in the 1990s, which is fundamentally built around hypertext linking. Hypertext writing emerges as a literary field, starting with Michael Joyce's *Afternoon* in 1987 and subsequent releases by Eastgate Systems. Literary critics focus on hypertext as “the convergence of contemporary critical theory and technology,” as George Landow put it in the subtitle to his 1991 book *Hypertext*.

According to this history, digital literature in the USA is built on and out of hypertext. Nelson's work illuminates the latent serial structure of writing. In his 1981 *Literary Machines*, he defined literature, or what he calls “the literary paradigm,” as a “system of interconnected writings.” It is a “discovered fact” that “almost all writing is part of some literature.”² As a result, literature is already linking, and hypertext, a technical feature of the apparatus, makes the computer a literary machine.

This account is clearly limited, however much of it is codified in critical texts and academic syllabi, and correctives are available in more expansive tellings, such as Christopher Funkhouser's 2007 book *Prehistoric Digital Poetry*. My point is not whether this history is true or false but rather to foreground the perspective that orients it. A technical feature determines the existence of, and the conditions for, recognizing and evaluating digital literature. Regarding the computer as a cluster of features (such as linking) is part of understanding our interactions with the machine. The fact of this “regard” that takes our interactions as based in features is itself a background condition of

these interactions. This is evident in the current interest in “born digital” as a qualification of digital literature or in the Electronic Literature Organization’s “Electronic Literature Directory,” where hypertext is the first choice given for navigating by “Technique/Genre,” with almost 800 hypertext works listed. Of course, there are other options for navigating this useful directory, and the existing directory organization will soon be replaced by Web 2.0 version, but the point is that the dominance of hypertext as a technique in the canonical works of the field gives it a primary organizing role.

Experience may lead us to recognize links through blue underlines, but we also know that a link can be an image, embedded in movies, or pretty much anything in a discernible sequence (including the same object linked to itself). Generalized in this way, the link loses its specificity as a technical feature and can only be understood in terms of human practices—it must be a link for *me* and for the reality in which I move. Borrowing a Sartrean term, a link is “practico-inert,” an object within fields of relations, expressions, histories, and productions. The preconception of a technical feature as an “object” is a condition of disregarding or overlooking such fields. Not technical features but diverse fields of digital literature are the subject of *Regards Croisés: Perspectives on Digital Literature*. This essay collection does not disregard hypertext and earlier paradigms but resituates them in a more heterogeneous and problematic environment of writers, readers, machines, and social systems.

The framework of this collection is set by its editor. Philippe Bootz’s flexible and complex account of digital writing was developed over the last several decades and refined in his current role at the University of Paris 8 (Saint-Denis), and at the *Paragraphe* hypermedia research laboratory. This account, thought, does not provide the methodology for every essay collected here, as Bootz’s own excellent introduction shows. *Regards Croisés* is notable for its diversity, yet key insights from Bootz help frame the importance of this collection.

Bootz’s fascinating approach might be generalized as the concept of “regards croisés,” with the full range of English connotations suggested above. Rather than beginning from a technical angle, Bootz starts from the fact that the computer program is not merely a set of instructions to execute on a com-

puter but also a differentiating temporal event. The event of the program leads to observable forms or signs, to performative outcomes, but does not lead to any single, total observation. The program makes an aesthetic difference beyond any final observation or account. Instead, there are “transitoires observables,” which might be translated as “transient observable states” (following Bootz in “The Problematic of Form”). These could be described as moments or appearances in the execution or running of the computer program. For example, I can observe words or images on the screen as part of the performance of the program, and I can also observe the high-level code as part of the writing of the program, but neither is a total view. Each is one transient observable state within the program’s execution. Accordingly, there is no way to discuss the technical configuration of the machine or the material apparatus without at the same time implying a particular view or regard of the apparatus. Even more: the notion of a “regard” or “view” of the apparatus, the very discourse that theorizes the machine, is a special “critical” case of regarding or viewing. The viewpoint that aggregates these observations of electronic writing, identified as the view of “literary criticism,” is yet another transient observable state.

In short, Bootz’s focus is not on the thing (the link) but on the dynamic coupled relations between reader, computer, and writer. Others can be added to this list: systems administrator, programmer, interface designer, and so on. The list of possible relations is determined only by the scope and extent of reading and the resulting viewpoints on the alliances constituting communication. Highlighting the “regards croisés” as alternative perspectives or views in Bootz’s approach requires some selective emphasis. It is tempting to state (as Bootz does) that the program is inaccessible to the reader by definition, since the reader deals only with the unfolding of the program’s output and never with the program as a “thing” or artifact. Bootz refers to the reader’s inability to perceive the program in its running as a “semiotic gap.” The term is somewhat unclear, since it suggests the possibility of perceiving the program by filling in the gap, perhaps through a special knowledge of the program itself. In this, there is too much weight on the program as “source,” implying a privileged access to the program on the part of the coder or computer operator. Bootz also grants the author a broader, overarching view of the program, but

this too must be seen as another perspective. It follows that the program is not a thing or artifact—it does not exist in this way—not even for the writer of the program, who may write the code but not the results that follow. The program is dynamic, procedural, and it unfolds in time.

A “programmable form” is the emergent set of observations of the program. The semiotic gap is not between the perceived text and the program but within the work itself, from all perspectives. The gap is the differential problem space of the program *as* the readable literary text. It becomes readable in different contexts and through different cultural mediations. Digital literature, as understood by Bootz and other authors in this collection, problematizes and builds on or operates on this gap.

My take on Bootz’s “transitoire observable” is intended to preface and open *Regards Croisés* with a sense of its contribution to the field of digital literature. The task of “coming to terms” with digital literature, set out in my initial reflections on translating the title of this collection, is always a task of codifying, normalizing, and locating the field within communities, nationalities, and geographies. It also means resistance to any codification, location, or normalization, a resistance emerging from the problems or gaps or alternative views on the literary work. Such problems are specific to language, specific to literature as the problem space of language, but also specific to national cultures and other communities. The emphasis on linking following Nelson was one such specification of the social space of digital literature, best represented by the utopian hopes of Nelson’s ambitious Xanadu system. The essays here, with their heterogeneity and dispersed geography, are yet other specifications.

Regards Croisés: Perspectives on Digital Literature presents criticism of digital literature from outside America. In itself, critical work from outside America is nothing new; conversely, there is no particularly American discourse on digital literature. It is too much to claim such an exceptional status. My use of “America” is meant to signal this problem of exceptionalism, since a considerable discourse and practice on digital literature exist in other parts of the Americas, notably in Brazil (and are represented in this book). A quick look shows artists and critics in a constant international exchange process, whether through Net communities such as UbuWeb, organizations such

as the Electronic Literature Organization, international conferences such as the E-Poetry Festival, or other means. Nevertheless, and with notable exceptions, the iconic critical works within this emerging field—such as Jay David Bolter’s *Writing Space* or Loss Pequeño Glazier’s *Digital Poetics* or N. Katherine Hayles’ *Electronic Literature*—come from within American academia. As a collection of work entirely from outside the often self-referencing spheres of American academia, *Regards Croisés* does say something significant. If only the geographic borderline of the USA unites this collection, with no guiding theme or theoretical problem, it also remains the case that national history and aesthetics necessarily mediate the alternative views offered, as Bootz notes in his editorial below: “either because the authors or researchers speak about works resulting from their culture, or because they deal with works resulting from other cultures in the light of their own culture.” It also furthers the case that the uneven distribution of the Net is still directed from the United States. ICANN, the Internet Corporation for Assigned Names and Numbers, remains in California, and while it is a private corporation, in practice it acts in close cooperation with the US Government’s Internet Assigned Numbers Agency (IANA) to oversee IP addresses throughout the Internet and manage the root zones. Electronic culture is neither reducible to nor separable from national cultures. A totalizing view of the Net’s namespace remains very American, but there are other views of the Net, views of the Net otherwise. If “electronic culture” is a persuasive but deceptive synonym for global culture, then digital literature is a viewpoint on electronic culture that is necessarily crossed or alternative. It cites and invents perspectives beyond the existing cultural repertoire. Digital literature works with language as a problem space for electronic culture in general. The phrase “electronic culture in general” is indicative of the problem of literature: neither in nor out of culture, it means “to be determined.”

Look at *Regards Croisés: Perspectives on Digital Literature* as a valuable and necessary work for the scholar and student of the global discourse and culture surrounding digital literature.

EDITORIAL

Phillippe Bootz

One can generally claim that digital literature(s) has an international dimension. But does this mean that digital literature(s) would escape the cultural readings resulting from regional traditions? Or that the creative practices at work would not bring out any cultural identity? The short but already consistent history of this literature(s) demonstrates to us that they do not. It is not a product of chance to claim that hypertext fiction was mainly developed in the United States, or that text generation was mainly developed in France, or that Brazilian digital poetry is concerned particularly with intersemiotic relationships between media. These differences exist because digital literature is rooted in literary problems impelled by developments specific to each culture. Of course, for a long time, the development of communication has allowed ideas, concepts, and proposals to cross through and to influence productions in a global way. But these concepts and ideas were always adapted, reinvented, and/or reinterpreted by the creators according to their culturally distinctive features. Even a movement born of international meetings, like Concretism, presents cultural variance in its origins: the concrete poetry by Eugen Gomringer or Franz Mon is not that of Augusto de Campos. These are the fundamental cultural variants that make the literature rich and keep it safe from the harm of “*pensée unique*” [intellectual orthodoxy] in France.

The first guiding line of this collection is to offer crossed perspectives, either because the authors or researchers speak about works deriving from their culture, or because they deal with works deriving from other cultures in the light of their own culture. There was no question of imposing a set of themes. Leaving the contributors a total freedom of subject matter makes it possible to treat the topical questions—those questions which lead to debates, and which

naturally cause reflection—and brings out coherence from the topical triad of programming/body/informational noise. The contributors were perhaps influenced by the title of this volume, which they knew before proposing a contribution, but more so I think, because the field of research in digital literature(s) necessarily works to constitute a pluricultural and multidisciplinary crossed approach to the diversity of literary digital creation, an approach that is paralleled by this collection.

The term *digital literature(s)* is seldom defined and too seldom discussed, as if a “natural” definition exists that would be essential and would exempt us from questioning it. Not by a long shot! Just as the term *cybertext* is perfectly defined by Espen Aarseth but remains fuzzy—which enables him to include in the same discussion productions that are examples of what I call digital literature(s), along with others which concern videogames—so too does the concept of digital literature remain fuzzy. It is enough to note the diversity and the plurality of the works shown at the various festivals or conferences that claim to deal with digital literature to be somewhat convinced of the fuzziness. The editorial choices that consisted of gathering these contributions here are thus not neutral. They rest on a conception of digital literature(s) that should be made explicit. The various movements or “-isms” of the twentieth century made the conception of literature evolve, breaking the textual medium, and mixing it with a multitude of media and in increasingly complex devices, reinventing an oral character as much as a practice of public presence and display. Digital literary explorations fall within the scope of this historical context. It could just as well have been called “digitalism” to mark its membership in the great influential sphere of the “-ism” and schisms on all sides. History spared us this hideous word which would undoubtedly have made things more clear: digital literature, or rather digital literatures, constitute a set of literary proposals which are neither more nor less fundamental than these other proposals. In spite of the opposite assertions of the majority of their authors, digital literature(s) will undoubtedly damage the literature of the book no more than their famous predecessors did. It is a euphemism to claim that digital literature uses a numerical device for its creation and its reading, without this claim being clarified and used to make actual distinctions. On

the other hand, the term *literature* itself must be clarified. In the logic of the context of “-ism,” I would define poetry as the “commando of the language,” because poetry is the way by which the human language can enter every domain of human activity: we know poetry in action, technopoetries, biopoetry, and so on. Any production centred on problems related to language is poetic, regardless of whether the production was intended for nonpoetic ends, as in the support of a narrative or ludic framework. In other words, is poetry defined as any approach that asks questions of the text, that asks the place of natural language in the constellation of semiotic systems? But is poetry also, in a less traditional way, any approach that asks the question of the manipulation of language by writing or reading? Is poetry any approach that questions the place of the language in a globalized world? Is poetry any approach that questions the place of the language in a technical world? Such definitions do not require the explicit presence of the word or even of the letter in a poetic work. Language can even be questioned on an *illegible* level; i.e., indications of it can appear in legible material without its explicit presence. It can be present on the level of the metadata, as in Gerard Dalmon’s work “My Google Body,” where language does not appear on the screen.

Accordingly, the digital literature of fictional narrative is a particular case of digital poetry. A digital fiction is a digital poem, which, moreover, uses language as a narrative vector. One can come close to defining a digital work of fiction by focusing on its narrative dimension or its poetic dimension. One could undoubtedly define several types of digital literatures according to the custom of using nonpoetic language.

I did not want to impose such definitions to the contributors of this volume, nor, moreover, to its readers. It is only one proposal; it requests, on the contrary, to be freely discussed. But it played a part in the choice of proposals and explains both the diversity and the coherence of the contributions.

Eugenio Tisselli opens this volume with an analysis of his own works, based on the metaphor of “narrative motors,” in which the program plays the role of the engine and information the role of the fuel—in degenerative works, the logic of the program, or only its execution, burns this fuel until it becomes noise, indicating the destructive power of the look or view.

This slow destruction echoes the analysis of the digital literary work I do in my essay according to the categories of the distant and the near. Reading is seen as a perceptive failure, the program creating a work that is distant but which is seen as so close.

Camille Paloque-Berges's analysis of the practice of codework is also about noise. The focus in this case is creative textual noise in the informational system. The focus always remains noise, however organized. Shuen-shing Lee, by examining the forms of satire and simulation in the hypertextual fiction *Reagan Library* by Stuart Moulthrop, shows how the principle of "noise filtering" increases textual coherence. Janez Strehovec shows us the digital poem as a hybrid of "words-pictures-bodies-motions," that programs give life to on screen. Such objects are intended for a new public and are open to a new form of distribution.

Alckmar Luiz Dos Santos points out to us that this conception of the bodily relationship between words and pictures is related to the practice of Concretism and more still to the process-poem. These fundamentally Brazilian twentieth-century poetic movements asked the question of the function of the device in poetic works. The essay's reading takes this cultural background into consideration and leads the author to demonstrate an epigrammatic dimension in digital poetry. Finally, Alexandra Saemmer also analyzes poems as "words-pictures-bodies-motions" to discover some rhetorical figures that these objects bring to the more general corpus of literary works.

These explorations remind us that digital works of this sort, in all the diversity of their forms and objectives, remain, above all, Literature. This collection expresses different conceptions of digital literature and, notably, conceptions that are sometimes unusual for American readers. If some of them deal with "classical" aspects of digital literature such as "codework" (Camille Paloque-Berges) and "hypertext" (Shuen-shing Lee), the others break with these conceptions and remind us that the "very nature" of digital literature depends on cultural background (look especially at the essay by Alckmar Luiz dos Santos). Clearly, the "classical" aspects of digital literature are different from one country to another. This is why I prefer to use the term digital literature(s). This collection is not focused on an analysis of the diversity of the field but is

instead an academic manifestation of this diversity, one that usefully reminds us that theories, as great and popular as they can be, are always relative to an implicit cultural point of view.



NARRATIVE MOTORS

Eugenio Tisselli

1 THE METAPHOR OF NARRATIVE MOTORS

When we experience narrations created in a digital environment, we generally find a clear trend in which writers consider the computer as a mere tool and not as a medium. Thinking about the computer as little more than a rather sophisticated typewriter leads to tremendous limitations: the resulting text becomes a continuation of mechanized writing and its history instead of a reflection of the intrinsic qualities of the computer. Nevertheless, new formats (and thus, new ways of telling stories) come with new media, even if not necessarily new themes. This text explores new forms of narrative by exploiting the qualitative differences between two media: computers and paper.

The computer's keyboard as a physical interface clearly follows the model of the typewriter. In such a machine, we face a series of univocal processes: each time a key is pressed, the corresponding character is printed on paper (the only possible variation comes from the binary choice between upper and lower case). Furthermore, such processes generate accumulation through repetition: a page is formed by many letters, words and paragraphs; a piece is made up of pages.

A writer who is new to computers can become comfortable with them through the familiar presence of the keyboard. When this happens, it is only logical that the writer approaches writing in the same way it was done before: that is, accumulations of text are created from an idea as a point of departure, only this time on a screen. It is true that correcting, copying, and pasting can now be done much more easily, but the physical configuration of the keyboard as an interface between the text-idea and what is written on the screen encourages a way of working that is almost the same as working on a wooden desk. It

then becomes necessary to look beyond what the keyboard suggests and turn our gaze toward the guts of the machine.

The mainstream operating systems usually follow the desktop metaphor. We can find documents, folders, a recycle bin, etc. We can suspect that those who designed such interfaces (the keyboard as a physical interface, the “desktop” as a logical interface) couldn’t or wouldn’t leave behind the traditional ways of working and producing and thus reduced the computer’s possibilities to a rather unstable mimic of tools that already existed.

Which are the “new” capacities offered by the computer? Let’s mention only the more significant ones. On a surface level, we could say that the contemporary nature of the computer is multimedial. Audiovisual layers are added to the text, affecting it strongly. It is true that multimedia narrations were created long before computers existed, but now we have it all enclosed in the same box and always available. But let’s go deeper: the computer is an unprecedented advance over older audiovisual media (such as photography, cinema, or video) because it is capable not only of reproducing external realities but also of producing synthetic environments. The fusion of reproduction and production capabilities makes the computer an ideal medium for creating fictions.

Our old paper archives were able to store large quantities of information at a great cost. With the innovation of the computer, it is now commonplace to talk about storage devices with capacities of hundreds of gigabytes—entire libraries condensed in a small gadget.

We can also instantly view any file stored in our device: this is called “random access,” and it is one of the fundamental characteristics of any modern computer. The possibility of instant multi-linearity offered by some digital narrations is based precisely on this.

Earlier in this text, we talked about the linear process of pressing a key and obtaining the corresponding character printed on paper. Computers not only can respond to physical impulses (such as a keypress), but they can also offer emergent responses to such inputs: variable manifestations that both depend on and affect an algorithm’s execution. An algorithm is a set of rules that define a process that leads to a result, and it is precisely in these processes where we can find enormous possibilities for generating new narrative forms.

Historically, rules and writing have been very closely related. We can cite a recent nondigital example: OULIPO, a literary group whose main work consists in the creation of well-defined constraints in order to generate texts that follow them.³ These constraints can be seen as true narrative motors, which need textual fuels to produce new texts. Many digital works apply this philosophy by “manufacturing” writing machines.

In works created with computers, everything that moves or manifests is an ensemble of algorithm and data. Since both elements can be clearly differentiated, we could say that the first one acts as a motor while the second one becomes the fuel. In this way, we can think about digital narrations in relation to a machine paradigm, in which the story moves by following a precise set of rules. We can also think about the author of such narrations not only as the writer of the text-fuel, but also as the programmer-manufacturer of the algorithm that transforms it. It would be necessary to find a new name for this “augmented author.” Douglas Hofstadter proposes a very interesting one: the “meta-author,” that is, the author of the result’s author (i.e., the author of the algorithm). If the “material” author of a computer-manipulated text is the computer itself, then the meta-author is the human that wrote the program.⁴

To illustrate what we call “narrative motors” in this text, we can approach different ways of generating digital narrations through some examples, divided in the following categories:

- 1 Narrations based on the paradigm of computer languages
- 2 Narrations based on operations made on elements of language
- 3 Process-driven narrations, or narrations in motion
- 4 Databases as narrative fuel and motor

2 EXERCISES IN STYLE WITH EXECUTABLE LANGUAGES

Noam Chomsky devised a “language-generating machine”: the Generative Grammar, in which there are words (vocabulary) and rules for their combination (grammar and syntax). Languages that are modeled this way become frozen and thus remain at a great distance from any contemporary human

language. Everyday languages are mutant entities that are not limited to pre-defined structures; they are in constant transformation thanks to the influence of multiple flows (social, economical, cultural, etc.). Nevertheless, Chomsky's Generative Grammar is quite useful for the design of programming languages because they exist within an artificial environment and are not exposed to the fluctuations of soft systems. Languages created by following this generative model are expressed in terms that are very close to those of mathematics, with elements such as iterations, recursiveness, and nesting.

Programming languages are mostly expressed as text and share a basic quality: in these languages all that is written is executable. In this way, we can say that they are not expressive but rather executive. Nevertheless, many writers/programmers have explored the parallels that can exist between the human's and the computer's reading of a program by writing "literary" texts using programming languages.

Multiple examples of such exercises in style exist, such as this poem written in Perl by Angie Winterbottom, winner of the "Second Perl Poetry Contest":⁵

```
if ((light eq dark) && (dark eq light).
&& ($blaze_of_night{moon} == black_hole)
&& ($ravens_wing{bright} == $tin{bright})){
my $love = $you = $sin{darkness} + 1; };
```

In English, it translates to:

If light were dark and dark were light
The moon a black hole in the blaze of night
A raven's wing as bright as tin
Then you, my love, would be darker than sin⁶

It must be said that the Perl code is grammatically and syntactically correct, so it can be executed by a computer. It is evident, however, that only a programmer could appreciate the multiple nuances of the fragment. It is a narrative for the initiated.

Other experiments follow a similar line, yet with much more irony: they imitate the syntactic and grammatical structures of programming languages and apply them to nondigital narrations. For example, the group socialfiction.org has created a programming language executable only by humans called “.walk.” This language is oriented toward the creation of “walk-ware,” that is, “software” for walking through urban spaces. A “program” written in .walk could be:

```
repeat
{
1st street left
2nd street right
2nd street left
}
```

Here, narration becomes a programmatic dictation, and its reading implies a concrete action to be carried out by the reader—that of walking.

3 COMBINATORY LANGUAGE PRACTICES

It is possible to apply operations to a text with the aim of generating other texts. If we can fragment a text into its minimum units, their re-composition can be determined by combinatorial, probabilistic, or other types of algorithms. The roots of generative text and textual operations can be traced back to very antique origins, such as the Kabbala. In the practice of the Kabbala, the first five books of the Old Testament are interpreted in a quest for revelations. In this tradition, as in computers’ ASCII code, every letter is related to a number; this makes it possible to manipulate text on a mathematical level.

In the early stages of computer science, when one of the main preoccupations was to create models of natural systems in order to study them within an artificial environment, programs that tried to reflect social behavior by simulating human language were created. One example is the famous work “Eliza,” where a digital “psychologist” responds directly to one’s questions and

concerns when they are typed directly into a command line. Eliza's replies are apparently logical (in some cases, they could be mistaken for human replies) thanks to a combinatorial and probabilistic algorithm that is fed by the patient's input, a set of generic questions and answers, and a database of loose phrases that can be combined by using some well-defined rules.⁷ Eliza is one of the first steps in an area called Artificial Intelligence, which tries to emulate the complexity of human thought in a digital system. Nowadays, many implementations of Eliza can be found on the Internet. At <http://www.manifestation.com/neurotoys/eliza.php3> accessed on 03/30/2010, the dialogue with Eliza takes the form of a chat—an interesting and elegant update.

Another view on this topic can be found in projects such as “The Postmodernism Generator,” a random generator of essays on postmodernism that delivers truly surprising results.⁸ Each time “The Postmodernism Generator” is accessed, a random text is generated through combinatorial operations on fragments of other texts. This project shows how absurd and predictable an essay on postmodernism (or any other subject, for that matter) can be and makes evident that, in a disturbingly usual way, humans write in such a way that their writing can be reduced to a set of simple rules that can be reproduced by a computer.

In other words, many of the arduous experiments in Artificial Intelligence can be ridiculed through the generation of results that imitate almost perfectly our natural “machinality.”

These narrative experiments reveal many aspects of the process of writing—what makes it human, and how exactly can it be differentiated from automatic writing? Which algorithms do we use to combine words in our own human language engine?⁹

4 PROCESS-DRIVEN NARRATIONS

The possibility of modifying the course of a digital text through external events or inputs, possibly generated by the user, can open the way to the creation of narrations whose development through time depends on contingent events. These process-driven narrations require an “augmented reading” in

which the reader also acts and modifies. We are talking about texts that include the reader's action as a fundamental element, as a necessary complement. To illustrate such cases, I would like to comment on three of my works: The first one, "degenerative" (<http://www.motorhueso.net/degenerativa>, accessed on 03/10/2010), is a web page where each time it is visited, one character from the page is destroyed. When someone enters "degenerative," one of the characters that form the page is deleted or corrupted, leading to a gradual degeneration of both its content and structure. The original text in the web page deals with issues and poses such questions as: "the only hope for this page to survive is that nobody visits it. But then, if nobody does, it won't even exist"; "your visit will leave a permanent mark. This page will not be the same after you visit it"; and "are our eyes predators of their targets?". "Degenerative" was made public for the first time on March 11th, 2005; a few days later, the page was already illegible. Here, we play with a gradual and collective process, in which the action of visiting a web page becomes the motor of the narration. The story that is told is about a dying virtual being, but also about the deadly erosion that the (apparently innocent) act of viewing provokes.

The next project, "meaning" (<http://www.motorhueso.net/meaning>, accessed on 03/10/2010), plays with the concept of synonyms—equivalent words within a language. The dynamic of "meaning" is similar to that of "degenerative": the action of visiting the page triggers the narrative process. In this case, each time the page is visited one of the words that form its content is replaced by a synonym. If it is true that a synonym is "a word that has the same meaning as another word,"¹⁰ why does the meaning of the text get increasingly twisted until it has nothing to do with the original? Maybe we should discard the practical (but unrealistic) concept of synonymy in favor of the semantic field, in which related words grow together. This project was announced on April 9th, 2005, and now the text in the page has gone very far from its original state (the base text is about the philosophy of language, and among other things, it asks, "What is the meaning of 'meaning'?") In "meaning," collective action narrates the doubt about the validity of such a thing as a synonym.

Finally, I would like to mention "synonymovie" (<http://www.motorhueso.net/dcr/synonymovie/synonymovie.htm>, accessed on 03/10/2010.) Extending

the theme of synonyms, “synonymovie” aims to create a “movie” from a word and its successive synonyms. The basis of this project is the Internet. The user is asked to introduce an initial word or “seed.”¹¹ An image corresponding to the initial word is taken from the Net and then shown.¹² From this moment, the movie goes on through the concatenation of recursive processes: a synonym for the current word is found, and then an image for it. The movie ends when no more synonyms can be found. The movie’s development through time is relational: the current frame is semantically related to the previous one. In this way, “synonymovie” creates relational movies that are made up of fragments of the enormous, chaotic and subjective database that is the Internet. The movies generated by “synonymovie” can all be seen as movies about the Net; it only takes an initial choice from the user to define their course and duration.

As I hope to have shown, process-driven narrations, in which many ends are deliberately left loose, offer little space for the writer to develop plots or characters as in traditional stories, since they formally acquire a mobile, emergent, and multidirectional nature. Nevertheless, process-driven narrations open the possibility of actively communicating ideas through the readers’ actions.

5 METADATA IN MOTION

The Internet has grown in a more or less uncontrolled way, in spite of multiple attempts to guide, order, or limit its expansion. Nevertheless, the day has arrived in which the actors of the Internet, that is, all the publishers and consumers of Net content, feel an almost instinctive desire to sort things. This desire has nothing to do with an encyclopedic order, nor is it about rigid taxonomies—it is simply a desire for an order from which many routes, and thus narrations, can be generated.

The Internet may be the biggest and most disorganized accumulation of information ever, and this has led to the development of very specific methods of classification—enter metadata.¹³

Metadata is data about data. They are words, tags, or descriptors associated with units of information (texts, images, videos, etc.) in order to classify

them, access them through semantic filters, and relate them to other units. These organizational possibilities turn metadata into something more than a tool for ordering things: they are (at least potentially) a true narrative motor that allows us to browse information sequentially but in multiple ways according to varying criteria.

In the first paragraphs of this text, we defined “random access” as the possibility of getting immediate access to any fragment of information in a computer. It may be obvious that all these fragments must be organized in a certain way in order to “enter” them at any point. Usually, databases are the tools utilized to achieve such organization. Databases are much more than simple containers of information; they truly can be relational machines, in which rules locate each fragment of information automatically in a specific place, assigning to it a set of relations with the information existing in the database.

Databases are usually designed following a relational model, in which almost any system can be described by well-differentiated entities and specific relations between them. Thanks to this way of linking fragmented data, databases can offer different views of the information they contain: fragments can be ordered in multiple ways and relate to each other under different criteria, always in coherence with the rules defined to structure the content.

We can find many ways to create stories by taking the database model to the narrative territory. Let’s suppose we have a database with fragments of text, image, sound, and video. If we could associate metadata to each of these fragments in order to describe their content (geographical location, characters and so on) or their formal attributes (colors, movements, styles), the possibility opens up of creating algorithmic combinations: narrative sequences that are defined by filters applied to the relations between fragments. For example, we could create a sequence of images taken during nighttime, in which only the character “X” appears, or videos where light colors are predominant. Here, the traditional order followed by narratives is subverted: instead of starting with a script and creating representational elements based on it, we now start with a database of multimedia fragments and explore the different sequences that can be generated from it.

An example of this approach is “Soft Cinema,” by Lev Manovich: software

that is fed by a database with hundreds of short videos, all of them described using metadata.¹⁴ The software can be used to generate different sequences defined by the user based on initial conditions that reflect formal or content criteria.

Antoni Abad's mobile audiovisual narrative projects provide further examples of this approach.¹⁵ A system for classifying multimedia content is used in these projects, in which participants capture their urban surroundings using multimedia-capable cell phones and send the images, sounds, and videos directly to a database on the Internet. Once the content has been stored, the participants describe each of their multimedia fragments using words (descriptors) that come from a special "dictionary" specifically created within each project's context. This makes it possible to search through all the content by using keywords: images of children or videos taken during a celebration, for example, can be recalled by the users of the database. Such searches can be seen as "emergent narrative vectors" in the process of constant transformation.

Content classification is becoming an increasingly popular act of collective construction of meta-realities. We can observe this phenomenon in rapidly growing Internet sites such as *del.icio.us* (now *delicious.com*), described as "a social bookmarks manager," in which registered users can create collections of links, all of them classified using "tags" which are also metadata. Admittedly, this process of classification has enormous doses of anarchy: an order is created, but as previously stated, it is far from being encyclopedic. The definition of new tags is made by the users themselves, making the tag dictionary quite prone to incoherencies and inconsistencies. Perhaps this is a new mutating subjective encyclopedia—collective and personal at the same time. The newly invented term for describing this new process of collective description-narrative is *folksonomy*, or folk taxonomy—a real social classification game.¹⁶ We owe this new word to Thomas Vander Wal, who used it for the first time in an attempt to describe the effervescent activity in communities such as *delicious.com*.

We could say that the classification, reordering, and linking of preexistent texts under mutable criteria reflects the vertigo before immensity described in "Los demasiados libros," by Mexican writer Gabriel Zaid.¹⁷ Instead of feeding that unfathomable collection, we can find the new within the guts of the old by applying relational games with the text.

THE UNSATISFIED READING

Philippe Bootz

Laboratoire Paragraphe, Université Paris 8

1 INTRODUCTION

Any aesthetic revolves around the two poles of sensibility and reason.¹⁸ Although digital literary works seem to repress sensibility and lyricism in many cases, some of them foreground a disjunction between these two, making them complementary and necessary (Strehovec in this collection). Such a disjunction is not an isolated event in the digital medium. On the contrary, the author's multipolar dissociation has been known for a long time. In the digital medium, the function of designing a model and the function of designing the surface shape of such a model are separated between the human designer of the program (the *meta-author*) and the program itself, either called the author, or referred to only as the writer.¹⁹ The text splits into a *texte-auteur*, a *texte-à-voir*, and a *generative function*.²⁰ These disjunctions between proprieties and functionalities in various entities that were formerly united are consequences of the specific structure of the computer device which plays the role of an environment, even more so than the medium does.

The text and the author-function do not come out unharmed from this literary mutation. Unsurprisingly, this process affects reading itself. Actually, reading is divided into several modalities, e.g., *reading*, *double reading*, and *meta-reading*.²¹ This article will describe the aesthetic meaning of these divisions by putting into relation the theses of Walter Benjamin and Mario Costa.

2 THE THESES OF WALTER BENJAMIN AND MARIO COSTA

It is well known that Walter Benjamin opposes the “cult” value of works to the “exhibition” value, by reading the impact of the introduction of mechanical

reproduction techniques into art as a depreciation of the former in connection to the latter.²² It is important to remember the definition that he gives of the cult value of a work: “distant, however close it may be.” The exhibition value, on the contrary, increases with the consumption of the work, for it is connected to the habit the spectator develops by being given reproductions of that work—a habit that enables him to cast both an expert’s and a consumer’s eye upon it.

Mario Costa distinguishes four stages in the introduction of technologies of communication that radically modify the value of a work of art, leading the beautiful to cede its place to the technological sublime. The word *sublime* is to be understood here in its Kantian sense of “that which cannot be assimilated,” of “absolute greatness.” Mario Costa states that this “sublime derives from a crisis of the symbolic, induced by something which cannot be told nor shaped” and that “this condition has nothing to do with the work of art, which always identifies with an already expressed and shaped universe.”²³ He infers that, “in technological productions, art is less and less ‘representation’ and more and more ‘presentation,’ what it presents being neither the truth, nor the signified any longer, but the signifiers and their logics, either objective or technological.”²⁴

Mario Costa analyzes the reception of digital images, but in my opinion, his conclusion should be broadened. He begins by setting out the two fundamental characteristics of digital images, which are “aseity” and autonomy.²⁵ These involve the awareness, in the reception of the work of art, of its nature as an “entity in itself,” which triggers the experience of the sublime. Mario Costa takes up Kant’s description in regard to this subject. He says,

Imagination needs two operations in order to work: the apprehension of the multiple in empirical intuition and in the understanding of the unity of the multiple, i.e., the understanding of the form of the object. . . . In the sublime, the balance between apprehension and understanding is flawed: apprehension progresses towards infinity [. . .] and understanding is compelled to stop [. . .]. Imagination has to face its powerlessness, for it does not manage to reduce multiplicity to unity, in other words, it is unable to give back a form to that which, by essence, is beyond any measure.²⁶

2.1 *Shared concepts of “distant, however close it may be”*

One can easily compare the conceptions developed by Benjamin and Costa by using the dichotomy of the far and the near. Benjamin’s “cult value” is clearly asserted as the perception of the aspect of “remoteness” in the work of art. In opposition, the “exhibition value” can be understood as a perception of the “nearness” of the same work. Actually, given that for Peirce, habit is the way to understand signs, Benjamin’s “exhibition value” increases with the Peircean comprehension that one may have of a work. Thus, understanding is internalized, and this habit, in the Peircean sense of the word, is both the understanding and the destruction of the otherness of sign. Therefore, Walter Benjamin points out a shift in connection with the meaning and social use of the work by the receiver, a shift from very remoteness to very nearness.

Mario Costa’s position also resorts to the far/near pair, but does not put them in opposition. The sensation of the sublime is linked to the awareness of otherness. In this, it is opposed to exhibition value without deriving from cult value. Indeed, in the latter the sensation of the sublime is related to an ontological postponement of the work caused by “remoteness,” even when the nature of the sensation is sublime or “transcendent.” While the work may appear to be near, regarding its cult value, it remains perceived as something that can be neither assimilated nor internalized in the sensation of the sublime, and consequently, it is indefinitely remote. By replacing exhibition value with presentation value, Mario Costa does not offer the receiver of the work any means to cancel the ontological distance that separates him/her from it! The presentation does not cancel “remoteness,” and yet it really is a pragmatic “nearness”: the presentation brings near what is remote.

According to Benjamin, that bringing nearer cancels remoteness. According to Costa, it renders remoteness perceptible. Here lies the great difference. In order to compare these notions, it is important to add perceptive characteristics to the ontological ones.

We can use the near/far pair, then, to define these values in a common vocabulary:

- To speak of the cult value of a work of art is to define it as “remoteness” and to perceive it as such, as near it may be.
- To take exhibition value into account is to define the work as “nearness,” no matter how far away it may be. This “nearness” can be internalized. The phrase “however far away it may be” refers to the existence of cult value to which “nearness” is opposed.
- To give the work a presentation value sets it as “remoteness” that one cannot reach. Presentation is opposed to exhibition in that it does not shift the work on an axis of internalization or value that would pass through the addressee—it does not cancel the ontological value of the work—but rather it uses a spatio-temporal bringing nearer, in order to make that distance perceptible. The presentation value would thus come down to the use of a physical “nearness” to make an ontological distance more perceptible.

3 PRESENTATION AS A MODALITY OF REPRESENTATION

3.1 *The private-reading procedural system operates through displacement*

When we look closer, though, none of these arguments seem to really deal with the digital apparatus of private reading that is used by numerous authors and artists. Let’s remember that this technical apparatus comprises at least two computers: one on which the work is created and one on which it is read in a given reading context. This apparatus is at the same time a communication and a reproduction device. The context of the work, of the author, and of the reader has something to do with the concepts proposed by Mario Costa and Walter Benjamin.

Here, we are confronted with a truly complex paradox, in Morin’s sense of the word: is it possible that exhibition value, which tends to cancel ontological distance, and presentation value, which tends to assert it, can coexist within the same work? In the end, is the work an exhibition of the “already shaped, already said,” or the presentation of the unspeakable?

3.2 *A seismic event of magnitude 3 on Costa scale*

To answer these questions, we must try to place procedural works that use the digital apparatus on the scale of the implications of communication technologies as described by Mario Costa.²⁷

This analysis is quickly made by examining the different levels in decreasing order. On the fourth level,

it is not a matter of finding the specific aesthetic forms of communication technologies, but of thematizing the networks and channels directly, by taking them away from their expressive function, and by using them, in their essence as technological devices of remote communication, to make aesthetico-anthropological events of a new kind happen.²⁸

It just so happens that most digital poets work to find specific aesthetic forms or particular writing modes. Such enterprises cannot be taken into account in the aesthetics of communication, for they do not simply use the technical device in its specificity as remote communication. The third level, on the contrary, seems to account for these approaches. On that level,

it is a matter of creating aesthetical products that possess the same linguistic resources as the communication technologies through which they are conveyed, products which are able to use the technological specificity of the language chains as a proper expressive material. . . . During the third phase, that of the research of the aesthetic forms of technology, production has already escaped the artist's will to express; it escaped²⁹ his/her subjectivity.

On the inferior levels, the work is still achieved in a traditional way, without any telecommunication intention, which is not the case in the works that we take into account.

Mario Costa's use of the verb "to escape" to characterize the third level is important. It is a consequence of the autonomy of the work in the sense of the procedural model: whether the author wants it or not, the process that the

reader can observe more or less escapes the subjective will to express that he/she has put into his/her program. It is known that the fidelity to surface aesthetics revealed itself as incompatible with the preservation of legibility during the natural diachronic evolution of the first animated works programmed by L.A.I.R.E., so that it was necessary to reprogram them on radically different bases by accepting the need to delegate a certain expressive responsibility to the machine.³⁰ This delegation of expression to the machine is, of course, relayed in interactive works through a delegation to the reader. It is important, though, to understand that interactivity is not the cause of that delegation but one of its modalities. The deep cause of that autonomy lies in the double nature of the procedural device—both a flow-based communication system and a device to reproduce a generative process in real time. This double nature, as we are going to analyze it hereafter, constitutes a real seismic event in the beautiful linear scale described by Mario Costa.

3.3 *The procedural work: a “being in itself” deprived of aseity*

Let’s get back to this term “to escape.” To escape is not to surrender. Instead, it seems to me that it is the fundamental distinction between the aesthetics of communication and “the aesthetics of frustration,” characteristic of the approaches of the authors of *Transitoire Observable*.³¹ These authors’ approaches do not abandon representation for the benefit of a setting in motion, but they use communication as one of the modalities of representation. The reason is that there simply cannot be any programming without a representation of the expected result in the shape of a computer modelling. Thus, even if the autonomy of the work taught us that this representation by the program is truncated or at least limited, if not erroneous, it exists nevertheless and acts within the running process in a more or less conflicting way with the technical will that encompasses it and/or with the reader’s will. The procedural work thus appears to be given autonomy but no aseity. Yet, because of this autonomy, it is still *perceived as* a “being in itself” that some do not hesitate to compare to—if not to assimilate to—a living entity. Let’s say from the start that there is no need to go as far as that metaphorical interpretation in order

to identify this “being in itself.” Opacity or, to be more precise, the nature that the procedural model calls “the disjunction between the fields of the reader and of the author,” is the complementary characteristic to autonomy that, in fact, replaces aseity.³² This disjunction operates through the work as an infinite ontological distance between the reader and the author, a barrier in front of each actor’s intentionality, so that the work is perceived, though for different reasons, both by the reader and the author, as endowed with intentionality.

Thus, opacity and autonomy reproduce the conditions of the perception of aseity. But this is an important difference! Representation does not disappear, but it slips into a snare. The snare cannot be connected with any writing strategy. It is one of the textual constraints that the apparatus applies to the work. It is specific to “apparatus-based” literatures to use these contextual constraints as raw materials for writing. In this context, the running of the apparatus appears as a process of “intentional expression of the being-in-itself aimed at the other,” i.e., from the work to the reader. What is it but a sacred “presentation”? This presentation of the observable events—an artistic modality of communication—acts as a new modality of representation constrained by the snare. Indeed, it is another representation than is inscribed in the program. Actually, the program represents the generating conditions and makes that observable transitory state appear in the running process. It is linked to something “to do,” while the representation that is conveyed by the observable transitory belongs rather to something “done.” As we have already mentioned, these very conditions, internal to the program, are already a level of representation that Jean-Pierre Balpe and Douglas Hofstadter named a *meta-level*, because it is distinct from the representation level that is conveyed by the observable state—called *transitoire observable* in the procedural model—that may be a process itself, as it is the case in animated literature. The representation that is conveyed by the program differs from that which is conveyed by the product of the running process. It is the fundamental difference between a programmed writing, which is composed of two levels of representation at least (in fact, we will see that it is composed of three levels) and a writing that comprises no level of representation equivalent to that of the program.³³

In programmed literature, the existence of this double level of representation—one inscribed in the program, the other in the produced state—transforms the produced state into a snare. It is a snare because it does not cover the totality of the representation and because the opacity of this apparatus prevents the reader from attaining the unobservable part or, at least, bothers him considerably in his quest or even steers him in the wrong direction. It expresses a profound criticism of the Occidental artist's role, and as an indirect result, that criticism turns the reading away from the reader's expectations.

4 THE ARTIST'S CONDITION

4.1 "I demonstrate concepts"

The function of the Occidental contemporary artist is well formulated by Sotto when he says "I demonstrate concepts." Actually, the artist defines himself first as a producer of concepts, but these ones have to be productive, capable of generating *some consumable* works. That innovation has to find expression in an endlessly repeated production, so that art may accept both "little" concepts and "big" ones. In art, everything "bulges." Even the death of art does.

But that is not all. Not only must the concept be innovative and consumable, but *it has to express itself in a perceptible way within the work*. In particular, it has to express its innovative nature. This is even truer nowadays in our communication society: communication through the work is above all the communication of that difference which defines its innovative nature. In his relation to the work, the spectator or the reader *has to be* the receiver of that difference. Therefore, we could explain what remains implicit in Sotto's definition and define the Occidental contemporary artist as "the one who demonstrates innovative concepts in a perceptible way."

Then, we will manage to put the definition of the artist—which is deduced from Sotto's definition—into relation with the three values that we have drawn and to analyze the definition profitably, in contrast with the dichotomy of the near and the far.

4.2 *The displaced work and the ritual work*

The concept—for it to be innovative—is, of course, distant from the reader or the spectator. “To demonstrate” is the understanding through a logical process of what was in fact already known but not understood. Demonstration never creates new material, only premises can do so. Demonstration is a particular mode of understanding, i.e., of logical internalization: each stage of the process has to appear as something already known and in an already known (true) relation with all the preceding stages and with all the rest of what is already known. It is a useless knowledge with regards to the problem raised, but it is coherent with its solution. This is what we call the “coherence” of the demonstration. Thus, in our perspective, each stage of the demonstration looks like a “so near.” In other words, to demonstrate is to render near what is initially “so far” by using a series of states of nearness. It is truly an ontological movement of bringing nearer. Basically, this is why this paradoxical formulation, i.e., “to demonstrate a concept” (a concept is not demonstrable), is not at all absurd. It reveals the profound sense of contemporary artistic approaches, which consists of shifting artistic production on Benjamin’s axis in order to take it as far away as possible from its “initial” cult value (related to the innovative nature) and to bring it to a consumable exhibition value. The artist’s vocation, in this perspective, is to turn what is sacred into something consumable—which is tantamount to removing its sacred nature—and to bring it nearer to the spectator. This has to be perceptible in the work itself. A demonstration is a series of enunciations of nearness which makes this proximity perceptible through each stage.

Let’s call “displaced work” the work that is designed according to this schema. The work is “displaced” because it is carried by the artist to the reader, who remains a consumer.

As opposed to the preceding concept and according to Mario Costa, the communication aesthetics artist—even if he/she cannot escape the Occidental artist’s condition—does not bring the work nearer to the spectator. The work remains considerably distant from the spectator, hence the sensation of the sublime it arouses in him/her. That artist cannot prevent, though,

the work of art from being related to the “sacred.” Yet, such a relation modifies the position of the work through demonstration, whereas it modifies that of the spectator through presentation. Actually, Mario Costa’s categorization inverts Walter Benjamin’s. In the scriptures, “we present to God.” Hence the work’s cult value is conceived as a mediation of the sacred by Benjamin. For Mario Costa, “we present to the spectator.” The spectator is not God; the difference between them resides in the spectator’s finitude and limited understanding. Then, it is this sacred position given to the spectator which enables him/her to become aware of the finitude of his/her thought as the source of the sublime feeling. Thus, presentation is an extremely powerful modality to implement a “cognitive limit” in the reader, a limit that the reader perceives and feels. This leads to the reader’s unsatisfied reading in comparison with the way the displaced work functions. Let’s call “ritual work” the work which positions the spectator—or the reader—in front of his/her own limitation.

5 THE RECURSIVE LOOP BETWEEN PRESENTATION AND REPRESENTATION

5.1 *Presentation differs from representation*

In procedural works, presentation is operated through the running and the reading processes³⁴ together, and the cognitive limitation that derives from them is resolved in terms of representations in a certain number of ways: a spiral development of the model reader,³⁵ the aesthetics of frustration,³⁶ and the meta-reader. The procedural work uses presentation techniques to the extreme, which causes effects, pointed out by Mario Costa, while preserving and assuming modes of representation.

Thus, representation changed shape, but it has not disappeared. It works with signs; the signifiers of which are no longer objects but processes. It is not only (or no longer) the product of a process that is represented but the process itself. It is no longer an object that represents, but it is a process. The procedural work thus comprises two levels of representation, that of the product and that of the process.

5.2 *The dialectics of presentation and representation*

As a product, representation manifests itself in the observable transitory state as it would do in a classical artistic product. There is a difference though: this product is not an object, but the transitory state of a process endowed with autonomy. In this lies the snare. It is highly responsible for the unsatisfied aspect of reading in maintaining infinitely distant (and thus with a high presentation value) what should be endowed with a high exhibition value. In fact, the exhibition value of the programmed observable transitory tends toward zero because of its difficult (if not null) reproducibility.³⁷ It is important to note that this snare also plays on the consumer instinct that it criticizes, as is the case when the Balpean automatic generator asks us “do you want some more? I’ve got some; don’t you want some more? I’ve got some more.” or when the single-reading poem asks us “do you want to read once more?—impossible,” or as the adaptive generator could reply “don’t you see the difference? What a shame!”³⁸ (The perception of difference, measure of the habit, is rendered difficult in the adaptive generator, as it needs repeated expositions on several machines.)³⁹ Thus, the snare simulates the consumption of the product in the Balpean generator until one is sick or, on the contrary, fervently opposes this consumption in the adaptive generator. These two modalities produce the same effect; the artist continues to produce the consumable concept in the procedural device. But through a production that is not really one, and/or while not producing any “apparent difference,” it does not let one easily perceive the depth of the concept through the work. That second stage of the snare does not play on autonomy any longer but on opacity. It is not just *because* the Balpean “generated text” looks like a printable page from a novel that it does *not* mean it is not a page from a novel. It is not just because the *texte-à-voir* of my works looks like an animated illustrated text that does not mean it is not an animated illustrated text. As a state, the *transitoire observable* does not cover the totality of the being-in-itself of the work. That other part passes through and among other channels, programs, and processes through the reading that are considered as an internal sign of the work in certain cases.⁴⁰

Finally, the snare is a way to invert the order of things. The *transitoire ob-*

servable state gives itself to the reader as representation, while at the same time being used by the author as a modality of presentation. Then, where the reader expects a high exhibition value, he/she is confronted with a high presentation value that may make him/her feel dizzy. Or he/she may *implement his/her limits* anyway, and it is that value which may enable him/her to perceive that implementation. It is up to him/her to sort it out. Anyway, these limits are used as components of an “already said” in the author’s project, for in the end, the whole of the work is really a representation rather than a presentation. Thus, the use of presentation as a modality of representation is equivalent to having the physical limitation of the reader play the role of the semiotic function of the representation of a limit. In the work, the physical limit is used as a sign for another limit that is inherent to the author’s project. What is too distant (the work with a high cult value) is wrongly represented by a nearness (the work with a “false” high exhibition value) in order to make one feel another distance (the work with a high presentation value). Yet, that other limit, that other distance, is not perceptible in the observable transitory state, because it acts like a presentation. In this sense, the reader “is not the person the work addresses,” and the work remains nonconsumable through reading. In fact, the work addresses a human subject that must use several modalities of reception to access it. This subject cannot access all facets of the work at the same time; he cannot “take in his hand the totality of the representation.”

5.3 *The splitting of reading*

The theory of the meta-reader makes clear how the Kantian splitting (apprehension progresses toward infinity, and understanding is broken)—of which Mario Costa reminds us—works in the procedural system. Because of the modality of presentation, particular to that apparatus, the reader is the one who apprehends and the meta-reader is the one who understands. Actually, understanding—limited by the value of presentation of the observable transitory—cannot be entirely conveyed through a reading process. I already mentioned this particularity as I pointed out that the two traditional aesthetic functions of reading, i.e., reasoned analysis and affective reading, were divided

in this apparatus by the programmed work. The affective reading relies on a certain construction of meaning—more instinctive than reasoned—which is applied to the observable transitory, perceived as an artistic representation.

The analysis of the meta-reader relies on an objective observation—in a transversal observation of the work—which benefits from the observation of the reading of an “other” reader and, at the same time, from the whole discursive equipment that is built around the project or the work, and which is the topic of this essay. The meta-reader thus escapes presentation. The final understanding does not come from within the programmed work—which, on the contrary, provides an experience of limits—but from an “outside” which is based on the work. Then, the work is composed of that programmed part and that “outside.” Meta-reading is not double reading (the reader reading his/her own reading process), nor is it the counterpart of the Balpean meta-author, but the two of them constitute the real addressee of the work.

Affective reading and analytical reading also have to do with the dichotomy between far and near.

Analytical reading brings nearer what is far away in a demonstrative way. In that kind of reading, the far away identifies with the different and the near with the similar. This is a reading that brings the work nearer in order to dominate it. This is only to be done through an interpretation of the semantic level of the various signs that constitute a work. This bringing nearer is possible for the meta-reader who escapes presentation. Thus, the work presents a high exhibition value for him/her. On the contrary, the high presentation value that the reader finds in the work partly destroys his/her analytical reading.

The affective reading constructs meaning by relying on the work’s observable elements. That construction participates in the semiosis by initiating some actions from the reader, either during the reading or later. Yet, it functions in “resonance” through affect and not semiotic analysis, which is far different from the analytical reading. The analytical reading, deriving from a demonstration, assimilates the faraway to the different and the near to the similar. In the affective reading, the axes far/near and same/different split. The far away is perceived as near because of “resonance” and yet it remains different. Thus, in a certain way, it functions by shunting the reason level. The meaning thus

created needs not be expressed. It often remains no more than an impression, a “state of mind.” The work appears to the reader as a “for me” or even a “from me.” (It can *legitimately* claim the reader as a “father”!) This paradox is made possible because reading does not operate on Benjamin’s axis any longer. First of all, the reader is the receiver of the work (“the work for me”), before he/she reintegrates it in his/her own construction (“the work from me”), which will be translated, if necessary, into a kind of intertextuality or into a rewriting. Jean-Pierre Balpe, in the hypotheses about his work *contexte de l’art numérique*, explains the functioning of this appropriation/expropriation. Thus, if the context of the snare makes an analytical reading by the reader uncertain, or even impossible, it acts in no way upon an affective reading which remains entirely operational in a situation with a high presentation value. The affective reading takes the opposite view of the sublime, by acknowledging it without trying to tame it. It does not matter whether the meaning it constructs is true or false, reasonable or not.

Thus, the interpretation of the procedural work does not escape the reader, only because ever-new processes might be possible in the closed world of the work’s signs—a situation expressed in Peirce and Eco’s semiotics—but also because he/she is denied part of the world of signs that are useful to this interpretation, whereas the meta-reader is not denied any. Yet, reader and meta-reader can never merge as they do in traditional reading, because one of these signs—which escape the reading—is precisely the process of reading itself, a situation that has no equivalent for the meta-reader. Clearly, the reader can only be the reader “of his/her reading” and the meta-reader can only “read the reading of another.” Once more, the distinction between meta-reading and double reading has to be made clear.

The procedural work’s processes are really elements of representation while being elements of presentation in the aesthetics of communication. Here again there is an inversion of the present situation. This inversion helps us in keeping the reader away from the centre of the work, as distinct from what happens in the aesthetics of communication. The reader is internal to this apparatus of representation, because he/she plays a role in it. In that representation, this is what helps the reading process in becoming a sign, while it is the

modality of engagement in the presentation of the *transitoire observable*. Without this reversal, there would not be any double reading. Therefore, the double reading is part of the numerous writing strategies in electronic literature.

6 CONCLUSION: THE READER AS “EN-JEU”⁴¹

Now, we have to put together the *transitoire observable* state and the running process, particularly the reading one. The *transitoire observable* makes a presentation that operates through reading.⁴² Therefore, that reading process is also a representation. The modality of this presentation, i.e., the physical reading, is not a simple technical operation, which would be equivalent to the turning of a page. This active reading—as a modality of presentation that may generate a sublime feeling—is a physical limitation of the reader’s understanding. Besides, it is considered as a sign by the meta-reader. The limitation of understanding is then used as a sign for another limitation, which it represents and concerns the reader/individual.⁴³ The loop is looped, but not without a huge displacement of the roles: the reader is no longer the addressee of the work, by virtue of his reading; instead he/she is deprived of the role of co-author—as he is the effector of a part of the representation—as soon as the two poles of reading (affective reading/analytical reading) are dissociated. Yet, he/she remains the addressee of the *transitoire observable*. The work is not consumable any longer, even if the concept invented by the author is still by meta-reading. This work ceases to be consumable. If not, in the worst case, it openly presents its difference to the reader, and the procedural artist is to take away from the path drawn by eminent predecessors.

The procedural artist produces a “remoteness” that has to be wrongly perceived as a “nearness,” in order to represent a “too distant.” Then, the perceptive failure doubles the reading modalities on two distinct poles.

“AGENTS PROVOCATEURS”: **Codework Interventions on the Listservs**

Camille Paloque-Berges

(Translated by Justin Katko & Camille Paloque-Berges)

1 INTRODUCTION: A POETICS OF INFORMATION?

I *f the limits of digital* literatures have not yet been defined, then we know—at least since Lev Manovich articulated an “informational aesthetics”—how to approach textualities elaborated by and for the digital medium.⁴⁴ A McLuhanite criticism of media (medium equals message) is replaced by a critique based on the study of the language of digital media, where the processing of data determines cultural forms whose ideological values are flexible and ambiguous. Roman Jakobson already supplied an informational approach, resituated by Sandy Baldwin into the lineage of Claude Shannon’s statistical theory of communication.⁴⁵ Shannon undertakes to define information in a context of mediation: information moves through channels, carried by combinations of units, units that are both signals (material) and symbols (conceptual). Shannon proceeds with a quantitative and statistical analysis of symbols in order to determine how information is produced, and thus, how to define information. For a given message, if the combination of units is improbable, information is produced in high quantity; if the combination is redundant, less information is produced. Jakobson’s poetics are informed by Shannon’s system: literature, characterized by interconnected structures, is defined by a literary ratio, the index of its “defamiliarization.” This ratio is the motor of an innovation that renews informatic systems, repositioning expectations and redundancies in a structure of probabilities. Baldwin explains that

for Shannon, the more complex and difficult the encoding of a message, the more information it contained. . . . Now, the novelty of literature was Shannon’s singular example of information density. . . . Since information theory addresses

systems of coding and transmission, literature remains necessary to the definition of information while lying outside its space of application. Literature is the medium of information ‘itself’.⁴⁶

This conclusion is only possible in a context where messages are inscribed within a larger structure, an interconnection of writings defined by the structure’s inter-mediality (or medial connectivity in an exchange network). Above all, this sense of interconnection reinterprets its context as a frame in which processes (not only of communication but also of signification) are at stake: a virtual community where codes are not only functional but also semiotic. One could argue that an innovative mode of textual agency, *e.g.*, hijacking speech acts and injecting noise into informational systems, renders this superimposition of codes a dead end. This essay asks: what kind of poetics, elaborated with the help of early information theories, could emerge out of a confrontation between actors in a networked communication system?

2 AGONISTIC NOISE EXPERIMENTATION WITH LISTSERV PROTOCOLS

Virtual communities running listservs have a practical understanding of interconnection: it is a textuality contributing to the “language-plus-code” problem, as formulated by N. Katherine Hayles: digital code, as in programming languages and computer network protocols, should be taken into account for any language-oriented theories in the context of technologically developed society.⁴⁷ Going back to an early pragmatic, informational, and code-oriented theory of communication may illuminate the literary (hypertextual) and sociologic (collaborative) definitions of interconnection.⁴⁸ A semiotic approach might ask: what are the textual strategies at play in the poetic processing of information? The most obvious examples of this are the codeworkers’ interventions on listservs. Codeworks are the online texts of a group of artists and writers that emerged toward the end of the 1990s. Codeworkers work at the intersection of programming and natural languages, mostly on their own personal websites and blogs, but also on digital art-oriented mailing lists. Florian Cramer, one of the pioneer theoreticians in the “language-plus-code” field,

has joined other codeworkers in suggesting a narrower definition that suits our object of analysis: “Codeworks are technically simple e-mails whose text, however, calls to mind associations of computer crashes and interferences, viruses and spam.”⁴⁹ Can the study of a textuality that confronts protocols (in the computational sense of a rule set that determines the format—and thus the meaning—of messages exchanged between computers) limit itself to the analysis of interpretive strategies, or should it take into account the stochastic dimension of informational systems?⁵⁰

As Florian Cramer reminds us, codeworks are originally only e-mails; more particularly e-mails sent to listservs, which are channels of communication allowing a group to share information or discuss topics of common interest. Since the mid-90s, listservs have been created by art centers or other communities of theorists and practitioners in the field of new media. Codeworkers intervene regularly on these lists, and these interventions constitute their “works.” Several codeworkers, such as Alan Sondheim or mez, have created their own lists.

Theoretically, these lists welcome and even encourage codework-type e-mails.⁵¹ One of the most active mailing lists in the new media/media art community, <nettime>, has welcomed such experiments. <nettime> describes itself as “a moderated mailing list for Net criticism, collaborative text filtering and cultural politics of the nets[sic],” which echoes in part the text-processing techniques of codeworkers.⁵² But the term “filtering” is ambiguous in the sense that it refers also to strategies of listserv moderation. Generally, moderation is automated: a program controls the circulation of e-mails and filters out spam. As a matter of fact, codeworks have been compared to spam because of their illegibility and frequency. French net.artist Frédéric Madre has coined the term “Spam Art” for these interventions. mez herself, in an e-mail sent to the *Syndicate* list in June 2000 and referring to a *nettery*, describes Spam Art as

one of the early Incitation Netiterature Genres seeking to validate the use of the email network and procedural collaborative responses as an acceptable fictocritical medium. Spam Art is essentially a misnomer that has concreted itself within the netiterature . . . Influenced by the now-infamous NeoNetitures [link

to Mezangelle, NeoNetiture, RE_WORKINPR, Antiorp, Warnell, Webartery] whose stylistic rhizomatic emails also incorporated radical emotive tracts from sub-collaborative reactors.⁵³

Note that Madre and mez are both Spam Artists as well as theorists. They undertake the definition of a literature of informatic poetic speech using an oblique and negative process of identification: genre (“Incitation Netiterature”), name (“misnomer”), intertextual paternity (“the now-infamous Neo-Netitures”), form and style (“rhizomatic emails”), etc.⁵⁴ They also describe methods: a subjective approach of collective and public contexts of the network that articulates a reactive political position (“emotive tracts from sub-collaborative reactors”). Spam Art participates in the definition of an *ars poetica* of codeworks.

Syndicate, a listserv initiated by Inke Arns and Andreas Broeckmann in 1996, was a site of Spam Art’s early experiments. One of the first lists dedicated to media art, *Syndicate* was unmoderated, unfiltered, and relayed announcements of new media-related events in Europe. In 1997-98, *Syndicate* came under a Spam Art attack performed by the collective NN (a.k.a “nn,” “Netochka Nezvanova,” “integer,” or “Antiorp”). NN’s works are in the lineage of mez’s faux-code texts or Sondheim’s texts generated through subjective programming, but they seem to materialize the production of noise in a communication system in a less metaphorical way than mez or Sondheim. In 1997, one of their first actions was to unsubscribe all of the *Syndicate* participants from the listserv. This was followed by a series of blitzkriegs: e.g., from August 13th-19th 1998, “antiorp” bombed the list with messages parodying promotional speeches, calls for work, and subvention proposals (recurrent practices in artistic environments).⁵⁵ NN especially targeted conference announcements, as in their 2005 intervention where “integer” delivered ironic rants on the intellectual masturbation of theorists (“self.lubricating”), pseudo-philosophical jargon on machinic bodies and artificial intelligence (“bodiez need soulz”), and rigid reading protocols at colloquies (“i read u listen_ . . . /sch/sch [. . .] sacred synaptic landscapes [. . .] schhhhhhh. . .”).⁵⁶ NN was eventually collectively banned from *Syndicate*, then readmitted, but only until their last attack on January 4th-5th 2001, when they sent a series of viruses to the list; the viruses

were inoffensive but had spectacular effects.⁵⁷ A month later, *Syndicate* went down. In “Rise and Decline of the Syndicate,” Arns and Broeckman denounce the aggressive behavior of NN, referring to a code of ethics for network communication, a “netiquette.”⁵⁸ According to them, NN consistently breaks the rules: they promise to behave well and attack even more, and they abundantly use self-promotion through vanity links and long epideictic texts on the glory of Netochka Nezvanova’s *persona* (or better, its staged *vanitas*).⁵⁹ They over-parody manifestos in a speech that uses multiple languages, faux-code, gibberish, pseudo-anarchist propaganda, sarcasm, and grandiloquence.⁶⁰

The purpose of these interventions is to generate a noise capable of disturbing the open channels that mark a listserv as a community. Alan Sondheim, the high priest of codeworks, assigns a political mission to noise, terming it “social turbulence” in a system of communication where “address [is] coded.”⁶¹ This perspective has ties to L=A=N=G=U=A=G=E poets such as Bruce Andrews, who wrote on the political repercussions of noise:

Dissonance expands the possible range of what can bear momentum and drive it forward—to make incompletions (or frictions) that solicit a resolution in the future. Instead of information, this is deformation—a universalizing of tension, stoking chaos, by denser (and freer) articulation. . . . A free play that the equivocal, undefinitive quality of sound units in language makes possible—as long as they are not recruited as doubling echoes, indentured to stable systems of stable meaning. Noise as chaos.⁶²

Noise (poetic noise, in this case), might seem to have an entropic and counter-informational value: according to the philosopher Raymond Ruyer, “information is entropy with a negative sign.”⁶³ This entropy is accounted for by the L=A=N=G=U=A=G=E poets in terms of quality, which is an interpretive leap from entropy’s primary definition: “an average quantity of information attributable to a message constituted by a set of signals, representing the degree of uncertainty in which each signal manifests itself.”⁶⁴ It is precisely this definition, based on signal, that Andrews rejects: “The reduction of sounds to signals may help with a project of subgroup boosterism or identity politics empowerment. But it may also abandon a project of decoding a larger antagonis-

```

Ministry ov Sugg3stion. S3duktion \+\ TOTAL>RAKIKALER
| Sektia A | Quadrant 24 | Labyrinth 09 |

We destroy everything we touch!

We steal human labor and shapeshift it in2 fire _+ ic
We teleport you from rapture \2\ rupture \2\ extāsy \
We steal your nights and sell them to sleepless tortu

We fuse the retinas of unbelievers in eye|2|eye tacti
We are the black cloud. rrsolutely human. albeit calc
a hypnotic sense ov detachment.

LOVE ME NOT!!

We are Absolute Power \+\ Joy.
We are the fatal leap into Emptiness. Alpha + Omega.
We radiate at all frequenciess and seek not you but Pl

We Ex.press. your interior world. We Lift u 2 Ex.peri
We may decide to enchant you and you shall surrender!

LOVE ME NOT!!

NN

```

Figure 1: Listserv posting by Netochka Nezvanova, 2006.

tic social outside.”⁶⁵ The L=A=N=G=U=A=G=E poets’ project can be thought of as a will to substitute the Objectivist poet George Oppen’s “discrete series” for the mathematician Claude Shannon’s “discrete translators”: to disturb language automatisms, to provoke a “shock mimesis,” to replace the discrete units of linguistic rules by sound sequences and language (re)compositions. This can be meaningful in the context of a reflection on natural languages, which are referential by definition, but what happens in the context of autoreferential informatic codes? What kind of object can *mimesis* shock? The very quality that poetics “adds” to language, and which modern and post-modern literary experiments have praised, should be interrogated once again in a digital context where text generated by code (or hybridized *text-code* in codeworks interventions) suddenly engenders new questions.⁶⁶

NN’s interventions are excessive disturbances in an environment where moderation, collaboration, and cooperation are the basis of communication.⁶⁷

Noise, in computer jargon, is defined as what threatens the constitution and documentation of informational patrimony. NN performs in the field of human conflict, refusing the constructive logic that transforms a group into a community: they fight with *agon*, in the sense that they bring verbal confrontation on a performance stage, according to the meaning of the Greek work *agon*. On the website of the Pavu collective (a trio of French Net.artists close to NN), a manifesto-type axiom can be found hidden in the source code: `<meta name="description" content="pavu.com After Contemporary. Forget the avant-garde, get ReadY for the En-gArde!">`. This war cry heightens the militaristic metaphor embedded in the notion of the avant-garde by asserting the desire for direct conflict, the duel—an almost playful confrontation in a virtual community that takes political commitment seriously.⁶⁸ Geert Lovink, initiator of `<nettime>`, another victim of Spam Art, spoke up in 2004 after Alan Sondheim accused him of censoring codeworks:

Many will find a relief that such postings and related debates no longer happen, but that's perhaps a personal matter. What might be true is the shift towards political economy, away from arts and culture. The political economy (of new media) thread has been part of nettime from day one, at least in my understanding. And I am not sure that one can find these debates anywhere. . . . The question could be: what moves people these days? I think that's a more interesting—and urgent—question than the old issue of 'censoring' nn or mez.⁶⁹

In effect, it is true that codeworkers protest against censorship as soon as the nettime community voices its discontent.⁷⁰ This protest is purely formal: they provoke their own censorship in a refusal, not of the possibility, but of the positivity of discourses on “political economy.”

3 IS TEXT-CODE A CRITICAL REPRODUCTION OR A SPECULATIVE REPROGRAMMING OF DISCOURSES?

The “codes” to which semioticians (and after them, the codeworkers) refer to have to be decoded through a critical reading of intertexts and social behaviors. But social “decoding,” understood in the context of software, codes, and

“debugging”⁷¹ techniques, has the quality of an analogy whose metaphoric value should be considered with care. In cybernetic theory, noise is not an addition, but a loss of information; Norbert Wiener writes that “as efficient as communications’ mechanisms have become, they are still, as they have always been, subject to the overwhelming tendency for entropy to increase, for information to leak in transit, unless certain external agents are introduced to control it.”⁷² The value of addition assigned to the phenomenon of entropy is actually a leak of information and a dilution of the units (symbols) in noise. Thus, this essay asks if the poet-performers on listservs are “external agents” who invent new modes of control in an *ars poetica* belonging specifically to the informatic medium, or “agents provocateurs” who create artificial interference in communication by manipulating error codes and toying with disinformation.⁷³

According to Shannon, in an information system, transmission errors tend to be re-encoded. Noise is reduced to facilitate the distribution of messages: thus communication doesn’t create anything new. As the first works of the ARPANET testify, redundancy is a condition for optimizing network communication.⁷⁴ The problematic nature of codeworks does not concern the introduction of new information to be encoded but a new situation of disturbed communication (i.e., noise) to re-encode: the fight between a “free play” and “doubling echoes” (to use Bruce Andrews’ terms).⁷⁵ The only possible answer that the informational community can provide to these attacks is redundancy—re-encoding noise through filtering. It’s paradoxical in the sense that this redundancy is precisely what the codeworkers denounce: the interventions provoke these reactionary positions, or, better said, they generate them (almost programming them). The paradox is articulated in the image of parasitism used by the organizers of *Syndicate*, Arns and Broeckmann:

The irony of this process is that, like any good parasite, this artistic practice depends on the existence of lively online communities: it not only bites, but kills the hand that feeds it. These parasite nomads will find new hosts, no doubt, but they have over the past year helped to erode the social fabric of the wider net cultural population so much that communities have to protect themselves from attacks and hijacks more aggressively than before. Their adolescent carelessness is partly responsible for the withering of the romantic utopia of a completely

open, sociable online environment. However educational that may be, we despise the deliberation with which these people act.⁷⁶

The only possible co-existence between Spam Art and new media communities is of a parasitic nature.

Alan Sondheim develops a speech of resistance close to Bruce Andrews's: a network is a space of technical and ideological redundancy in communities controlled by system administrators (“*sysadmins*”) or moderators, “nodal gate-keepers at the heads or tails of flux-vectors.”⁷⁷ Against this backdrop of surveillance, Sondheim foresees the future in terms of liberatory tactics: “Look for increased hacking in the next millennium, hacking as a way of life, the hacking culture, with its emphasis on anarchic bricolage, becoming the seeds of a future renaissance.”⁷⁸ This is preparation for Mackenzie Wark's theory of vectorial economics: the vectorial class is a reinterpretation of Marx's bourgeois factory-owner within the contemporary information economy, a class that owns intellectual property over software (“intelligent machines”). Codeworkers seem eager to execute the hackers' program of resistance and play the role, within online artistic communities, that hackers play within the world of corporate high tech. The problem is that “the hacker” is a fantasy, a *wish* as Wark himself admits in *Hacker Manifesto*.⁷⁹ The codeworks' *ars poetica* formulates language hacks as a method of infiltration and a critique of networks, but this in an endless play of images that blurs any political distinction. Their works betray a hope in the quality of noise's transmutation and the fantasy of a “technological sublime” that would fight network indigestions sustained by a hyper-subject (supposedly the digital persona saturated in information redundancy, or better, drowning in an information overload)—from this perspective, text in excess (in entropy) is laxative.^{80, 81}

In a virtual community, what should be the quality of information? What should be the purpose of critique? The “new media community” has an ambiguous relationship to codeworks.⁸² In praising the quality of Software Artin 2003, Andreas Broeckmann writes: “Software Art ...can be the result of an autonomous and formal creative practice, but it can also refer to the cultural and social meaning of software, or reflect on existing software through strategies like collage or critique.”⁸³ This was two years after ranting against NN's

<nettime> disturbances. Yet NN's interventions into listserv protocols operate on principles analogous to the social and cultural meanings of Software Art; their textual strategies are a direct confrontation with the coded rules of the Internet (code as law, as formulated by Lawrence Lessig).⁸⁴ Codeworks are related to Software Art, which is considered "speculative" by Matthew Fuller, and following him, by the trio of Software Artists Geoff Cox, Alex McLean, and Adrian Ward in "Coding Praxis": "Software, part of whose work is to reflexively investigate itself as software. Software as science fiction, as mutant epistemology. Speculative software can be understood as opening up a space for the reinvention of software by its own means."⁸⁵ This mutant epistemology belongs to viruses, the first model for the art of code defined by artist-programmers, who put into play the quality of code per se: autoreproduction. Viruses are a good example of code as discourse in their ability to auto-generate themselves and contaminate rhetoric via media. In 1994-1995, the famous Good Times virus, for instance, was a hoax, merely an e-mail warning of the existence of a dangerous virus that would not only damage machines but propagate by sending itself to e-mail addresses found in the victim's computer.⁸⁶ The message's conclusion is a warning prompting the user to warn their contacts. But by 1994, the capacity for auto-reproduction had not yet been implemented in any computer virus. It was the exponential quantity of Good Times virus alerts that started bringing down users' e-mail servers: "In a sense, the warning was itself viral . . . it replicated itself by exploiting vulnerabilities in the human mind."⁸⁷

Codeworkers are circumscribed by this critique of the modes of information processing, by imagining textual metaphors for programming. Their interventions, hybridizations of informatic codes and natural languages, present themselves as performative (following the idea of speculation) and in performance. Virtual communities are their privileged space-time for action, being eminently both textual and coded. Espen J. Aarseth has described MUD (Multi-User Dungeon) societies (discursive and rhetorical by definition) as performing textualities.^{88, 89} These textualities are constituted in a software environment, through which users put into play the three positions described in Claude Shannon's communication diagram: the sender, the receiver, and the observer.

Shannon, in his *Mathematical Theory of Communication*, distinguishes between communication channels with noise and those without. For those with noise, he proposes a noise reduction model.⁹⁰ An observer must be integrated into the circuit to witness the message at its entry and exit points, taking note of the errors (noise manifestations) produced during transmission. The observer then transmits a “data correction” report to a “correction system.” Under certain conditions, these errors can be encoded into the message in order for it to be sent once again, reducing the percentage of noise. The quality of a communication’s transmission is thus indexed by “transition probabilities”: the probability of sending and receiving a signal without error. It would be interesting to consider network (and software) users not only as receivers but also as “observers,” i.e., as participating, second hand, in the production of the message—or, more precisely, in its reproduction. In effect, when you circulate through networked spaces your usage of digital tools is put to the test through observation. An application closes without warning, and an error message pops up to alert you that a report has been sent to the developer; a webpage does not show up, and an error code appears along with a text that asks you to contact the webmaster to report the problem, etc.

In ideological terms, the positions of sender and receiver have use values (good or bad) in relation to the software. The position of the observer is inflected with degrees of thoughtful participation and engagement, from which two extreme behaviors emerge: passive observation (“lurking”) and collaborative observation (in order to determine the rules that define the community, “for its own good”). This last mode is problematic: the observer in Shannon’s “correction system,” transposed to a moral level, becomes the figure of the reporter, and moreover, the tattler. The idea of community is often used to justify the act of reporting; in an online community, the stakes are more intimate (and more virulent) than an error report sent automatically to a software company to improve its product. What’s at stake in tattling involves a folding of the semantic content within the semiotic context of the report: processes of signification, not products. The intervention of codeworks can be read as noise injections intended for the observer-reporter position, aimed specifically at

its activation. Its agential action is parasitic and viral: it calls forth a general tattling, hypertrophing and hyperinterpreting the observer function in a message's transmission.

In 1998, the artist-programmer duo JODI jammed the *Eyebeam* list with a Spam Art intervention.⁹¹ In an e-mail sent Friday the 13th, they staged a hoax-performance during which some *Eyebeam* members were subscribed without their consent to a new list called *Cyberstar*.⁹² The victims responded by sending e-mails with the command status "unsubscribe," a code instruction supposed to activate an automatic unsubscription from the list. Rather than executing the unsubscribe commands, the bot-server, programmed as a hack, sent back the commands as messages to the unwilling participants. As a response, the victims reformulated their desire to unsubscribe, this time in the form of demands (or even insults), linguistic messages addressed to a hypothetical manager of the list. These messages were appeals for a human hand to remedy the server's coding "mistake," but they were processed in the same way as before, sent back out as new messages, creating a glut of reprocessed commands and demands in the victims' mailboxes. JODI's intervention effected a radical equivalence between code and data, an equivalence inefficient in terms of performativity (activating the list's commands afforded no result), yet efficient in terms of performance (the commands themselves became a metaphor for the decay of linguistic agency within the machine). Amidst the sabotage of protocols, listserv members become puppet-actors: the only discursive power they have is the power to tattle. They took on the roles of senders and receivers; their actions performed the morality leap of the hypertrophied observer. An *Eyebeam* member commented on the victim e-mailers' behavior, their becoming-aware of their status as a group forced to communicate with a broken code: "Sometimes it takes an emergency situation to see some of the issues we're discussing on embodiment and information in action. There is a situated physicality here that erupts as if at the site of an accident, when all of the protocols are flung out the window in the urgency of the moment. A scrim of social convention momentarily stripped away."⁹³ JODI's listserv interventions expose social behaviors in communication situations because they cross the wires of spoken languages with programming languages, speech acts with informatic commands.⁹⁴

Date: Mon, 27 Apr 1988 18:36:21 -0400
From: listproc@listproc.thing.net
To: 404@jodi.org
Cc: root@listproc.thing.net
Subject: Error Condition
Re: Invalid request

>Who eyebeam
Unrecognized request WHO

**Report any problems to 'root@listproc.thing.net'.
For a list of the available requests send a message to
listproc@listproc.thing.net
with a body consisting of nothing but the word HELP**

**PS: Any subsequent requests that you might have
submitted have been
ignored.1**

Figure 2 : Listserv posting by JODI, 1998.

5 PROTOCOLS OF PUBLIC COMMUNITY: INFORMATIC AND SEMIOTIC CODES

Lawrence Lessig suggests that one should question the conditions under which problems (logical or social) are solved with programming.⁹⁵ A poetics of codeworks would reformulate Lessig's suggestion in a speculative way, i.e., wagering on textual mini-bombs released into the network, the stakes being whether or not the texts will undergo a leap into executability. This wager is based on an analogy between the performativity of informatic codes and the performativity of text, the former being logical (algorithmic) and the latter semiotic (linguistic): text disturbs code and vice versa.⁹⁶ Following Lessig, Bernhard Rieder and Michaël Thévenet describe the digital public sphere as a "procedural space":

The interpretation of messages, of their importance, is an activity which is deeply subjective; however, under the pretext that information classification processes . . . are mechanical, modernity requires that it is enough to elect them as a guarantee for precision and objectivity. Here one faces the real question of

agens [agency] that one should attribute to procedural spaces: spaces that filter, classify, interpret and decide autonomously, and claim a new perspective upon the organization of the public sphere, now hybrid.⁹⁷

This *agens* is a fundamental property of coded environments such as listservs, where human question-answer situations are problematized by the command-execution system functioning both parallel to the human and saturating it completely. There are two modes in which communication shifts unexpectedly into protocol: semiotic and informatic. When these two levels of code are superimposed by a codeworks provocation, they are subject to discursive noise. This agentive quality is at work in texts that claim to belong to a “404 aesthetics” questioning the community’s discourses by manipulating the very tools that enable them.⁹⁸ What is gained is an expressive power: algorithms, commands and protocols, data processing, filtering techniques, moderation, etc. Codeworkers are the human doppelganger of the “informational agent” (defined by Rieder as “intelligent agents, . . . mediators, . . . autonomous and intelligent systems [that] settle between man and machine in order to help us live in the digital era”):⁹⁹ they are “*agents provocateurs*”.

Network artists question the notion of the “public” and the representation of their interests by art and/or politics. This problem is inherited from the Tactical Media Art movement, which interrogates the legitimacy of representation discourses and the expression of “the public good”: what is the public, and, whatever it is, does it have a common voice and common interests?¹⁰⁰ It happens that the installation of artwork in public space results in neighborhood protests. What is the corollary in virtual communities? NN and JODI consider public taste and propriety to be decoys, representations they seek to disturb. They follow a program of critical deconstruction and reject distributive and collaborative ideals considered as “good intentions” of the new media community. They take a position on the unstable border of political activism: by intruding on groups, invalidating discourses of action, replacing them with reactionary texts, and manipulating opinions. The political effect is null, in the sense that either noise is re-encoded by the community via redundancy, or noise destroys the community (as with *Syndicate*). The poetic effect seems an echo of Jakobson’s reinterpretation of early communication theories: literature

becomes an informational medium. The *new* doesn't come through informational content, but through its remediation, in spite of the social protocols of the community (according to the notion of "defamiliarization"). Textual provocation is only efficient to the extent that the text is performed, in motion and in action, on the social arena, but it accomplishes this by confronting the conditions of its own production (in this case, informatic codes and commands). To use mez's terms, *netiteratur*¹⁰¹ wants to analyze its *nettery*. Thus, the letter of the text is bound only to the support of that upon which it is parasitic: text in itself has no reality but is an idea processed by and between several media (in the logic of intermedia). It is not material but always literal (by adopting the form of its support). It is a simulation of programming, a circumstantial supplement assigned to a task: something that happens on site, at one specific moment. It would be hard to imagine an anthology of codeworks appreciable outside of the network context. Network text, as a "bruitist" (noise) intervention, happens where it should happen, mimicking principles of programming and speculating on the effects it can have on behaviors. In that sense, it participates in the renewal of writing via programmatics.

SPEAK, “MEMORY”: **Simulation and Satire in Reagan Library** ¹⁰²

Shuen-shing Lee

National Chung Hsing University, Taiwan

1 INTRODUCTION

This paper presents a close reading of Stuart Moulthrop’s *Reagan Library* (<http://iat.ubalt.edu/moulthrop/hypertexts/rl/>, accessed on 03/30/2010), focusing on two topics: mnemonic simulation and surrealist satirization. These are closely related, in that the revelation of *Library*’s mnemonic simulation lays down insightful perspectives for the ensuing survey of the work as a surrealist satire. *Library*’s mnemonic simulation is mainly concerned with the irregular memory of three central characters. The three characters’ mnemonic activities unfold through an interaction design called sifting, or in Moulthrop’s terms, “noise filtering.” The investigation culminates with the interpretation that *Library* is a satire on Ronald Reagan and his “Star Wars” project, which in the 1980s escalated nuclear tensions between the two existing superpowers and consequently increased the probability of the end of the world.

2 SPEAK, “MEMORY”

The final version of Vladimir Nabokov’s autobiography *Speak, Memory* underwent a series of revisions. In the foreword, he describes how he penetrated foggy recesses of memory to reclaim the clear image of a certain person or object:

I revised many passages and tried to do something about the amnesic defects of the original—blank spots, blurry areas, domains of dimness. I discovered that sometimes, by means of intense concentration, the neutral smudge might be

forced to come into beautiful focus so that the sudden view could be identified, and the anonymous servant named.¹⁰³

In the same foreword, Nabokov also admits to a broad array of blunders due to “the anomalies of a memory” in the previous versions of his autobiography. The relentless revision of his memory betrays a yearning for refined factuality. More significantly, his confession implies that he is aware of the unreliability of memory. Such admission of unreliability is usually not volunteered in recollection-based memoirs. Most writers apparently disregard the possible gap between what they remember and what actually happened. This discrepancy gives rise to intriguing questions of authenticity, which many fiction writers have fueled with imagination. In Nabokov’s *Pale Fire*, this discrepancy is embodied by Kinbote’s paranoid voice in the interpretation of John Shade’s poem. Aside from the inconsistency of memory, clinically diagnosed mnemonic diseases such as amnesia are also often dealt with in fiction. Symptoms of such conditions include one losing his grip on reality and thereby being unable to coherently express perceptions or experiences compatible with reality. Nabokov’s revision of his life story strives for greater precision, but past events may also be intentionally distorted to serve the specific purpose or need of an individual. In contrast to those who are able to consciously manipulate their memories, some people who suffer from mnemonic disorders may be mentally incapable of expressing themselves accurately or coherently. This whole spectrum of mnemonic-narrative dynamics is embodied through simulation in *Library*.

Library is of the tradition of fiction that confronts issues of memory and expands the tradition by including forms of memory created by artificial intelligence technologies. *Library* approaches memory in a way that can be formally termed digital “stream of consciousness” on the diegetic level. As text unfolds, passages of metatext intertwine with this “stream” of memory. The flow of memory is unraveled partly through simulation rather than completely by representation. Therefore, *Library* is an environment that requires the user’s hypertextual interaction to divulge its characters’ modes of memory processing. The processing comprises such distinct modes as random selection of me-

morial objects, associative connection of past events, modification of previous memory lanes, and focusing on one specific point in memory while downplaying another.

3 NOTES ON THE FINAL CONSTRUCT

Library's four “world-states” or spaces, though intermingled within the interactive environment, are easily differentiated by the color and font used in the verbal area of each node. The 3D panorama of each node is another cue to help the reader distinguish the four different spaces. The red space, particularly its “NOTES” section, is fully devoted to a collection of hints on *Library's* content, form, and navigation design. This space, an independent unit in *Library* in terms of content, is a metadiegetic construct equivalent to that normally seen in conventional print metafiction. In contrast, the other three spaces are primarily occupied by mnemonic narratives, the structural similarity of which encourages investigation.

At first glimpse, *Library* is a random text generator: the verbal content of a node in a given reading, after being revisited, will change slightly or greatly. This textual mutability does not last throughout a sufficiently long engagement. As the work's “Introduction” reminds the reader, *Library* has “a final form” and “an end to it” after all the nodes have been traversed “a sufficient number of times,” though this final form or the final state of verbal texts does not exist in the red space. The “NOTES” section in each node of the red space does not succumb to stabilization at all. Consider, for example, Figures 3 and 4, two screen shots of the “Floaters” node in the red space. The content of the “NOTES” section in these two figures differs, which signifies that the “Floater” node's content keeps modifying itself, even though the node has been accessed at least four times.

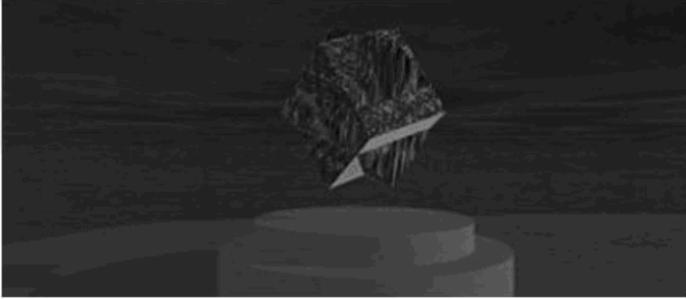
Figures 3 and 4 are two screen shots of the “Floater” node taken during one reading of mine. The four square dots at the right-hand lower corner indicate that the node has been visited at least four times. “THE PHYSICS EXPERIMENT,” i.e., the verbal text zone wedged between the 3D panorama and

the “NOTES” section has attained its final state, while the “NOTES” section stays mutable.

Endlessly changing, the “NOTES” sections are not based on a large database. Actually, the total number of NOTES that might appear is very limited and can be easily catalogued by compiling a list of them, as one NOTE implicitly urges the reader to do: “Do we have to make you a list?” Unless otherwise specified, “the final form of *Library*” in the coming discussion only refers to that in the deep blue, black (dark gray), and dark green spaces.¹⁰⁴

To reach the finalized text, the reader must traverse each node at least four times. The attainment of this number terminates the running of the random scripts underlying *Library* and stops the verbal text of a node from changing in response to any page loading. When the final version comes into being, *Library* becomes much like a regular hypertext, only slightly different than the first-generation hypertexts composed of nodes and links.¹⁰⁵

The three 3D panoramas installed in the three spaces constitute a visual narrative that very often weaves its way into its verbal counterparts. The peculiar similarity between the 3D worlds gives the reader the impression that they are clues in a mystery threaded throughout the verbal narratives, challenging the reader to decipher them. The three conical objects in the three panoramas, associatively connected, seem to promise a key to the resolution of the mystery, as hinted in a NOTE: “Solve the mystery, save the princess.” A few narrative fragments dispersed throughout the three spaces provide the same inducement. For example, Emily’s fascination with fire, the prisoner’s fire purge, and the comedian’s fire burn, all arouse curiosity as to their possible connection. The comedian’s mention of the missing eight-and-a-half-minute part of the film *Waste Land* suggests involvement in the movie Emily directed. The prisoner has no fear of staying in the flames because he has “no body to hurt.” This provokes one to speculate that he is a “memory” like Emily, or a soul suffering in a surrealistic hell or “Waste Land.” The prisoner considers his cell to be the location of the end of the world, a thought relevant to that expressed in Emily’s film based partially on her childhood vision, i.e., “the kingdom of death” in relation to Edward Teller, “the father of the American H Bomb.”



THE PHYSICS EXPERIMENT

*Opposites attract, alternates
compel, geometry spins and dances.*

See what you see as you're seeing.

The way between flying and falling
is precious.

You may rise yet not depart.

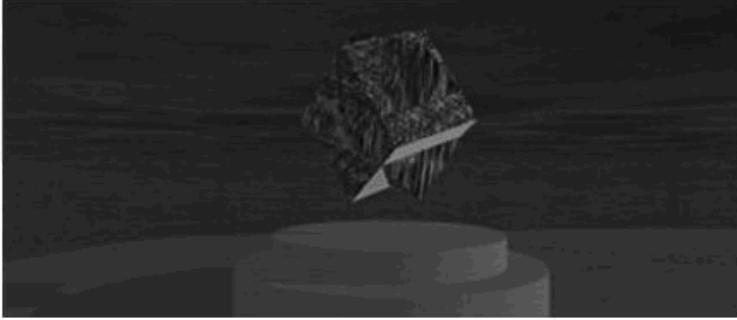
True balance draws the light.

NOTES :

- i. There are four states of this world.
- ii. Not that any of this makes sense.

■ ■ ■ ■

Figure 3: Screen shot from Stuart Moulthrop's *Reagan Library*, 1999.



THE PHYSICS EXPERIMENT

*Opposites attract, alternates
compel, geometry spins and dances.*

See what you see as you're seeing.

The way between flying and falling
is precious.

You may rise yet not depart.

True balance draws the light.

NOTES :

- i. Let's move the camera.
- ii. Do you have a problem with
noise?

■ ■ ■ ■

Figure 4: Screen shot from Stuart Moulthrop's *Reagan Library*, 1999.

More clues are required to solve the mystery. Unfortunately, there are not enough materials available for the reader to work toward a constructive understanding of the conundrum. The above synopsis, based on the finalized text of *Library*, is just one possible reading of the stable text, which in its own right contains a variety of link-node trajectories for other interpretations. To complicate the matter, the so-called final form looks very problematic itself. There seem to be residues of “noise” (i.e., authorial intrusions and chunks of text that bob up across any of the three spaces) in the final form, which cast doubt on its finality. The insufficiency of clues in the finalized text for the resolution of a mystery suggests that the final form mentioned in the work’s “Introduction” is metaphorical, a temporary stop, a rest area in chaos rather than a static end, the terminus of a journey. To tackle these questions of the final form, along with the mystery issue, we may look back to the prefinal form of *Library* to see if it can supply any suggestions. In the pre-final states, seeing word-noises popping up, one cannot help but ask, “Do those texts bobbing in and out on the way to the final form count toward anything?” And, “toward what do they count or not count?”

4 THE MNEMONIC SIMULATION

The significance of the ambulatory texts and that toward which they may be significant are questions that require an understanding of the mechanism that drives *Library* to mutate, to evolve from a state of verbal chaos toward stability in the literal sense. There appear to be seven nodes in the four spaces. In the deep blue, black, and dark green spaces, each node presents four versions of verbal text in a complete reading of *Library*. In these three spaces, before a node has attained its final stage of evolution, its text space consists of two types of verbal zones: one filled with permanent text and the other with transient text generated by random scripts which are therefore subject to change in a different retrieval. The zone of fluidity through which transient text must pass makes each node, and by extension, *Library*, amoebic. Each node in the three specific spaces obeys three operational principles:

- 1 The first three traversals of a node in a complete reading produce three versions of verbal texts, different from each other to an indefinite extent.
- 2 The three verbal versions of a node produced in one given reading will not be likely to repeat themselves in another reading independent from the previous one.
- 3 The fluid text zones of all the nodes in the deep blue, black, and dark green spaces share one database (or to be exact, the same text sources), from which the random scripts affiliated with the fluid zones retrieve their words for random processing.

These operational principles give *Library* the look of a digital cutup machine, which likewise runs random scripts in processing textual input from the user or other sources. This impression particularly holds true for readers who are unaware of the progression toward a final form or who abandon the text before arriving at the stabilized version of *Library*. A randomly assembled text might be meaningful in accordance with William Burroughs's cutup theory. This, however, is not the case for *Library*. With a final form in view, the verbal reshuffling in a node goes beyond mechanical action and acquires a metaphorical identity, which Moulthrop terms "noise filtering."¹⁰⁶ Each visit to a node initiates a "sifting" of text, adding or deleting certain elements in the evolution toward the final state. According to *Library*'s "Introduction," "the text should become more coherent (if not more sensible) on repeated visits," as a result of this sifting.

Below are the first passages from four versions of "Furnace," one of the nodes in the prisoner's (black) space, garnered by my own reading. The second half of the first two passages (in my italics) signifies the location of a permeable zone through which random text cycles.

- [V1] Standing in the fire is good for you, or so the folks here tell me. Everyone needs to purge, and some more than most. *Did you actually read this? Don't touch that dial. Did I say that? This is the real text. Buy more memory. Was it a good dream? Excuse me, but have you considered the angle of your repose?* [The first passage of Black Space/Furnace 1]

- [V2] Standing in the fire is good for you, or so the folks here tell me. Everyone needs to purge, and some more than most. *We didn't think you did. Consider the non sequences. Boot me up and call me rider. I will say that again in Australian. No, this is just the technology. Did you ever wonder about the shape of things?* [The first passage of Black Space/Furnace 2]
- [V3] Standing in the fire is good for you, or so the folks here tell me. Everyone needs to purge, and some more than most. **Therapy by bonfire. The humane torch. Flash away the husk, incinerate the casings, let the heart shine through and the truth shall make you free.** [The first passage of Black Space/Furnace 3; bold type mine]
- [V4] Standing in the fire is good for you, or so the folks here tell me. Everyone needs to purge, and some more than most. **Therapy by bonfire. The humane torch. Flash away the husk, incinerate the casings, let the heart shine through and the truth shall make you free. *Slow fire, holy fire, holocaust, pentecost. Let the devil call the roll: George Burns, Helen Burns, Monty Burns, Bobbie Burns, Moneta Burns, Atlanta Burns, General Burnside's whiskers.*** (The first passage of Black Space/Furnace 4; italics and bold type mine)

The first passage (V1) consists of permanent text (plain text) and noise (italics). The second visit (V2) consists of the same permanent text and newly generated noise. The third visit (V3) contains new permanent text (in bold type). The fourth visit (V4) reveals the final version of the passage, comprised of the accumulated permanent text and new permanent text unique to the final version, with no noise. This is one mode of textual evolution used in some passages of nodes in the deep blue, black, and dark green spaces.

The finalized texts in these three spaces are mostly concerned with personal memory. Seen in this light, the sifting or noise filtering simulates the selection, combination, and revision of human memory. In their respective simulated environments, the prisoner's memory sputters randomly, Emily's drifts in a comparatively organized style, while the burn patient's strays in an associative mode. The evolution of randomness toward a static form parallels

the processing of sensations and events in human memory. This metaphorical connection answers the questions concerning the significance of the mutable text in the interactive environment. It also sheds light on the questions concerning the final form. The performance of the mutable text, examined in conjunction with the three central characters' peculiar mentalities, calls into question the stability of the final form. This is most obvious in the case of the prisoner. Given that he suffers from amnesia, it is difficult to ascribe finality or validity to anything he says. The text of the final state of black space, with aimless, flashing thoughts and reminiscences, lacks a center that would organize them into reliable discourses. Hayles shares this perception, commenting, "the only true stories are those he can not remember."¹⁰⁷ Reliability may not be the primary issue in the burn patient's space, but neither is it irrelevant. The dark green space is fraught with disruptive memories invoked by a virtual reality. The brokenness of memorial narration implies a mind critically impaired by a severe burn. The unreliability of the prisoner's memory and the brokenness of the patient's memory entice one to infer that once the sifting process of the *Library* reaches a halt, it ends their mnemonic activities, which otherwise tend to sprawl endlessly in their narrative landscapes. Emily's world is much more coherent, but it should be noted that her "garden of remembering" is made possible by a "memory" running in a computer. This "memory" perpetually revises itself in the name of striving for certitude, according to the command of the embedded assembly script.

Thus, to consider the final form diegetically absolute may be misleading. For one thing, such interpretation leaves out possible messages conveyed through "noise" not present in the final form. Apart from being an essential element in the simulation of human memory, *Library's* noise is a message in its own right. This concept is well illustrated in Hayles' reading of Talan Memmott's "Lexia to Perplexia": "The electronic medium is here used to create 'noisy' messages, making noise itself a message about the distributed cognitive environment in which reading takes place. The nervous screen constantly challenges the user by reacting to her movements in ways she did not anticipate or intend."¹⁰⁸ The noise created by the electronic medium as a message is



Figure 5 : Screen shot (*Blue Space/Furnace 1*) from Stuart Moulthrop's *Reagan Library*, 1999. The rectangle in Figures 5 that encloses the phrase including "Remembering the biological father of our country" is superimposed by me.

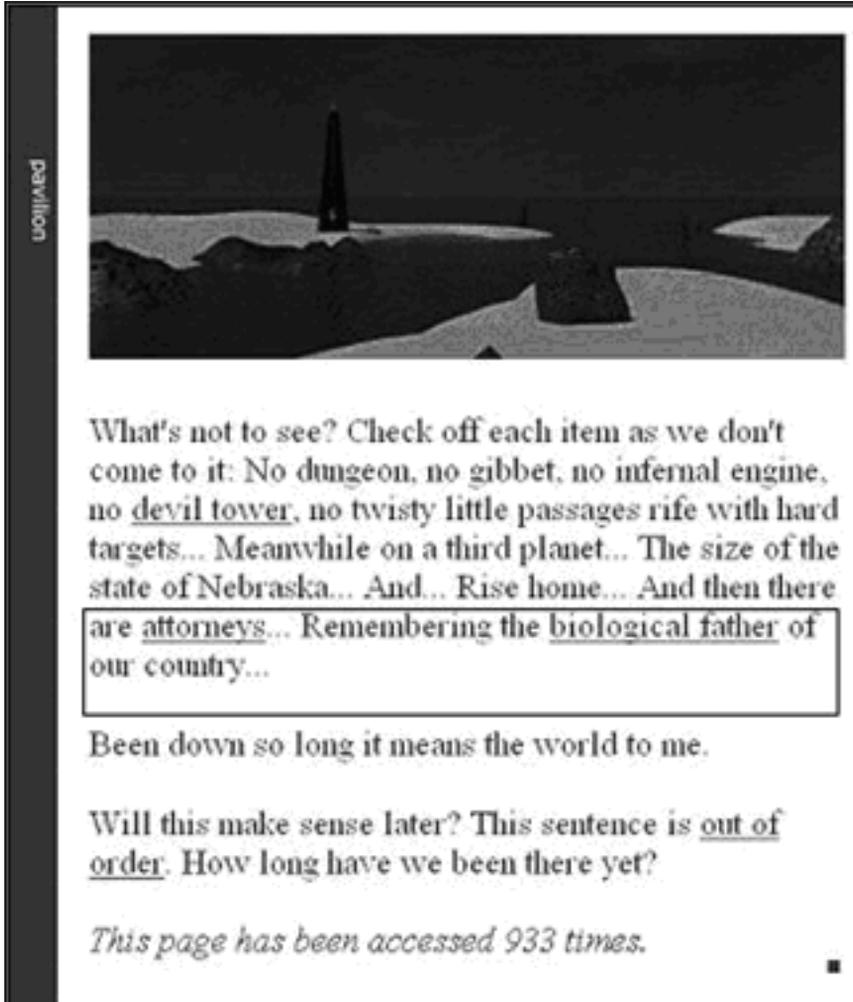


Figure 6: Screen shot (*Black Space/Pavillon 1*) **from Stuart Moulthrop's Reagan Library, 1999. The rectangle in Figure 6 that encloses the phrase including "Remembering the biological father of our country" is super-imposed by me.**

redolent of Marshall McLuhan's dictum, "the medium is the message." Hayles considers "Perplexia" a second-generation hypertext work, and interprets the noise of layer shift as a new mode of communication between nodes, distinct from linking modes implemented in earlier hypertexts.¹⁰⁹ *Library's* "nervous screen" disorients and disturbs the reader in a similar fashion, but *Library* employs a different coding approach. Both works look to be cutup machines. "Perplexia" implements layer shifting (activated by mousingover) while *Library* runs random scripts (initiated by clicking). *Library's* production of noise operates on a much more complex mechanism than that of "Perplexia." Layers of text stacked on top of each other in a node-screen are stable in content and position in "Perplexia." Shifting layers create changes in content. But since the number of embedded layers is very limited, the change in content carries little complexity. By contrast, the destinations of links in *Library's* prefinalized verbal text are determined randomly. To complicate the matter, the verbal content of a chosen destination is in part randomly selected from a database. This double randomness, or double "noise," created by the digital medium constitutes a more powerful manifestation of digital materiality, and thereby a more transparent message, than the mousingover-effectuated randomness of "Perplexia."

A single reading of *Library* is unlikely to exhaust the reservoir of noise or induce it to betray its scope. A new reading generates its own version of noise. To exhaust all the text/data is not necessary to an understanding of the work because a fair number of readings will make manifest the structure of *Library* and help to apprehend the noise design, and recognize its simulation of human memory processing. As pointed out earlier, all the fluid text zones share the same database. This can be verified from the phenomenon that an identical set of words or phrases may appear across any of the three distinct narrative spaces. For example, the phrase, "Remembering the biological father of our country" is found shot through the deep blue, black, and dark green spaces, as shown in Figures 3, 4, and 5. The phrase, and by extension, the database (artificial memory) shared by the three spaces, in a figurative turn, becomes organic memory co-accessed by the three central characters. Arranged in this manner, their memories partially overlap, and are interchangeable to a certain

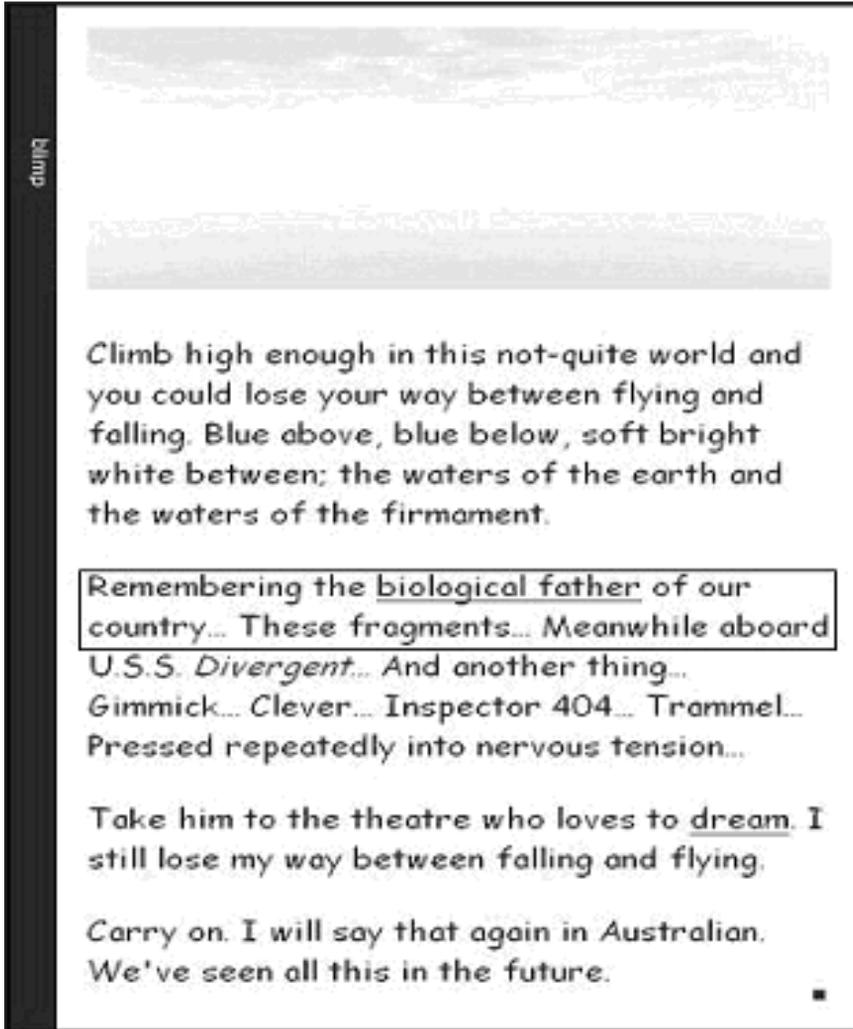


Figure 7 : Screen shot (*Dark Green Space/Blimp 1*) from Stuart Moulthrop's *Reagan Library*, 1999. The rectangle in Figure 7 that encloses the phrase including "Remembering the biological father of our country" is superimposed by me.

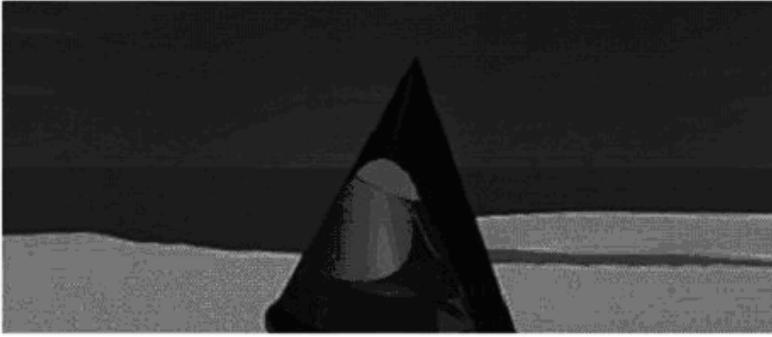
degree. On the macrodiegetic level, each memory fragment is not purely individual but is a slice of a collective hybrid memory. The three characters are permuted copies of a collective consciousness, three virtual embodiments of a common memory/database. These permutations correspond to the three visual worlds, which are three possible variations of a common origin.

5 A SURREALISTIC SATIRE

At the very beginning of her unpublished essay on *Library*, Hayles writes: “The dark irony of *Reagan Library*’s title, naming a memorial for an Alzheimer’s victim who cannot remember, invites meditation on the library’s function in the late age of print.”¹¹⁰ The allusion to Ronald Reagan and the amnesic disease he suffers from is unquestionable. But to build a metaphorical relation between *Library* and “the late age of print,” or to read it “as an assault on the body of print,” is just one interpretation among many, given that *Library* is a changeable hypertext and that its networked components provide no overarching narrative. At the end of the essay, Hayles confesses that she is not confident that this “print-to-be-dead” issue is what Moulthrop intends to present. She cautions: “If we do read the text this way, it becomes as dark a work as its ironic title hints it will be. Read as an assault on the body of print, it takes no prisoners—or rather it takes one but punishes him by robbing him of memory.”¹¹¹

My reading experience is that *Library* at least partially comprises a futuristic and surrealistic satire alluding to Reagan and the American hegemony solidly founded upon the possession of weapons of mass destruction, which cast a shadow of annihilation over humanity and the humanities.

In 1983, amid the ongoing Cold War, Reagan proposed a space project, nicknamed “Star Wars,” to Congress and the American people. It was “a new system to reduce the threat of nuclear attack and end the strategy of mutual deterrence.”¹¹² This defense strategy involved capacities to intercept missiles targeting the American territories from space. But to the Soviet Union, the Star Wars project signaled escalation through the development of greater first-



This is the seat where the archon sits... a jet black cone
 signifying the focus of terrible energies... Unless...
 Remembering the biological father of our country... Magenta...
Potlatch... For crimes against the humanities... falling for days
from a great height... burning... death from above... Rise home...
Mutal assumed deconstruction... Meanwhile aboard U.S.S.
Divergent... Hypertext, more or less... More than ever... don't
 go out tonight.

No one can take that seat and live, and yet sometimes I sleep
 here on the gently glowing sands. There is a certainty, a clarity
 about it, and those qualities are scarce in this place.

When I lay me down to sleep, I invariably choose the backside,
 verso, roundabout from the awful maw. I glance at the thing
 before I shut my eyes, see the glossy contour unbroken, out of
 sight and out of my mind.

Figure 8 : Screen shot (*Black Space/Black Cone*) from Stuart Moulthrop's *Reagan Library*, 1999. The two rectangles are superimposed by me.

strike capabilities and increased nuclear tensions between the two superpow-
 ers. The project never came to fruition, but its proposal heightened “the end of
 the world” fears in the humanities.

Transpositioned in surrealistic play, the *Library's* Reagan is a character condemned and jailed in an outlandish environment for reasons unknown to him. The black cone in the prisoner's world as a surrealistic representation of a nuclear warhead suggests to readers the reason for the prisoner's condemnation. The cone is visually and verbally portrayed as an inauspicious object, from the prisoner's point of view:

This is the seat where the archon sits. You will know the archon by his symbol, a jet black cone signifying the focus of terrible energies . . . falling for days from a great height . . . burning . . . death from above . . . don't go out tonight.

(Black Space/Black Cone 4)

In the red space, the black cone object is defined as:

LAVA LAMP OF THE APOCALYPSE

Viscous flows deep within the mantle number all our days.

(Red Space/Black Cone 1-4)

These descriptions all evoke nuclear Armageddon, concentrated into a surrealistic object, presided over by the archon (the ruler) or perhaps the Reagan-character before his memory is emptied: he who had the power to wield death at will.

Misbehaviors attributed to the prisoner in the narrative include "oral infractions," "whistling out of tune," or "vagary" (Black Space/Ruins 4), but these cannot account for the severe punishment imposed upon him. On the other hand, these charges could be "memories" made up by him, a man deprived of a past, to justify his current situation. These light infractions are no more valid in explaining his imprisonment than his story that he was abducted by aliens. The true reasons for his predicament lie beyond his temporal-spatial reach, forever absent. This absence is a blank space, which, in a playful turn, allows him to fill in whatever he wants. Many gestures and objects in the prisoner's world, once their surrealistic veneer is removed, suggest that amnesia is a punishment leveled on him by an unknown arbiter for what a certain node terms "crimes against the humanities" (Figure 8; "Black Space/Black Cone 2").

In the same node, another phrase also intimates mass death: “Mutal [sic] assumed deconstruction... Meanwhile aboard U.S.S. Divergent...”(Figure 6). Stripped of its word play, mutual destruction is exactly the fate that nuclear weapons could reward their proponents and inventors, and by extension, with a twist of black irony, the humanities. Like Reagan, the Reagan-character is a politician who embraced the escalation-as-deterrent policy. This endorsement is symbolized in the prisoner’s contradictory feelings of veneration and apprehension toward the black cone, by the side of which he sleeps and from which, ironically, he receives consolation:

This is the place to be for the end of the world show. No one can take that seat and live. It is not a happy site, and yet sometimes I sleep here on the gently glowing sands. Call that strange, but it comforts me to have the thing nearby. There is a certainty, a *clarity* about it, and those qualities are scarce in this place. (Black Space/Black Cone 4)

Though he has forgotten the past, he intuits the cone as doom. Even so, he finds comfort in a diabolical object, which alludes to a collective consciousness constantly oscillating between fear of nuclear warheads and obsession with them. This collective paranoia mostly stems from a survival mentality and a deeply rooted binary presumption: good vs. evil. Together they form an ideology that has contributed nothing to the world other than intensifying the nuclear race and making mass death more imminent.

Denied access to the past, all the prisoner can do is to drift along the flow of his consciousness and relate to the cone with intuition. The cone moves in his sleep. The “front” side of the cone, with its “awful maw,” always faces him the moment he wakes. The prisoner states, “as if it wants me to look inside. So I do. There’s no one home” (Black Space/Black Cone 4). This response corresponds with his earlier narration that the cone is an unhappy site, the explosion site of nuclear bombs, wherein no one can survive.

In Moulthrop’s work *Hegirascope*, the epicenter of the issue of Armageddon resides in a conversation between a father and his son, which starts with

expressions of their fear of hydrogen bombs and continues to the father's theory that the Internet and its numerous virtual worlds are "designed to survive a thermonuclear attack."¹¹³ Not coincidentally, Edward Teller, "the father of the American H bombs," is the central inspiration for a short film that Emily intends to make or has made. The film is concerned with "the kingdom of death," apparently based on Teller's "travelogue." Emily confesses that she encounters difficulties in finding the kind of light suitable to express the proper mood for the film (Deep Blue Space/Marble House 4). Another node recounts her experiment with a special visual effect in her film, *Waste Land*, possibly the short film on the kingdom of death: "When you look at the world through a lens of fire it doesn't look real but neither does it look like the movies" (Deep Blue Space/Furnace 4). She plans to burn her cameras to achieve lighting that conveys the mood of mass hydrogen death but was forced to abort the lens burning before starting: "On the final take of *Waste Land* I planned to burn the cameras but the union called the fire marshal and the fire marshal called the cops, who said they'd bust me for arson if I really lit the match. By the time I got my lawyers on the phone the fucking weasels had already struck the set, and anyway the light was gone" (Deep Blue Space/Furnace 4). To please her, a postproduction team created a flame effect for her movie, but she "threw up on . . . their suits" because "It looked exactly like the movies" (Deep Blue Space/Furnace 4). Her obnoxious physical reaction testifies to the intensity of her yearning for a surreality rather than a virtuality fashioned by imitation. Though she knows that the death is inarticulable and its surreal light doesn't exist in reality, she refuses to accept any alternatives.

One day at the age of 11, Emily enters a vision, which is later engraved on her mind and lasts throughout her life. The vision revolves around a white cone, awash in mysterious blackness.

I saw a white cone, hollowed out and filled with stars. Somehow to see this was also to know what it meant, or rather to know that I had always possessed the understanding. The cone was the form of light streaming out into spacetime. Part of this form was taken away to show the interior, which was the world as we

know it and see it, the world of light. But the vision included ground as well as figure—not just the cone, inside and out, but also the blackness all around, the space outside of space, the time that carries time. (Blue Space/White Cone 4)

The vision injects her with an aspiration to become a film director. Her vision of the cone and the blackness, Teller's influence on her work, and her desire to see "the world through fire" suggest that mass death is the theme of her film. This theme corresponds with the issue of the end of the world dealt in the prisoner's space. Beyond the similarity of the primary themes of their lives, the coincidence of certain words and phrases in their respective narratives moves one to speculate that the prisoner was the actual subject of Emily's film.

Locked up in an inferno that condemns souls with mnemonic dysfunction, the prisoner has no chance to be saved even by fire-purging, not because he is bodiless but because the fire is hellfire, carrying no holiness, as the first passage of the final "Furnace" node in the black space implies (quoted in Section 3). In this passage, his narration of the holiness and evilness of fire resembles an Imagist juxtaposition. This is particularly the case for the second half of the node, starting with "Slow fire, holy fire, holocaust, pentecost." The ensuing phrase, "Let the devil call the roll," accompanied by a long list of human names with the last name "Burns," creates an image of hell, or the kingdom of death, crowded with people dying from BURNing. A nuclear "holocaust" is the event of such BURNing.

The Reagan era is over, the Cold War era is over, and the nuclear confrontation has subsided greatly, though the threat of mass destruction still hovers over humanity. Nuclear powers have agreed to cease nuclear testing and dismantle a portion of their nuclear warheads. These historical events are seized and transfigured in *Library*. In Moulthrop's imagination, a defused nuclear warhead is degraded into a prop for a film, as narrated in the comedian's space:

The Czechs [who were remaking the old "Prisoner" series for South African TV] had this prop, a white metallic witch hat with a light show in the belly, big enough to sit in, not that you ever would. No one was sure what it was supposed

to be, not even the art director, or what scenes it went with or even where it came from. One of the more bizarre stories said there was a tag on the back that read PROPERTY OF RONALD REAGAN LIBRARY. I never looked. (Dark Green Space/White Cone 4)

The tag that reads “Property of Ronald Reagan Library” on the one hand invokes Reagan’s nuclear defense strategy and the new terror it provoked. That is, the tag lends itself to the manifestation of the cone as a deadly weapon in relation to Reagan. On the other hand, the tag insinuates that the defused bomb has become a historical object, collected in the library (memory database) of the humanities, subject to later generations’ interpretation. Both associations, in reference to the Czechs’ recycling the nuclear head or a historical item collected in the Reagan Library, are encouraged by the comedian’s comments at the end of the white cone node: “I am not surprised to find it here. Are you?” Though no longer fatal, the warhead still radiates an unnerving aura around it: “In fact nobody in cast or crew would come within arm’s length of it. The bloody thing glowed in the dark, and worse than that, it hummed, giving off this constant NNNNNNN on some frequency too low to hear, a buzzing you felt in your breastbone” (Dark Green Space/White Cone 4).

My reading seems incompatible with Hayles’s, if not contradictory. These divergent readings may reflect two facets of Moulthrop: his world view as an American intellectual and his observation of the late age of print as a hypertext writer, both of which have been elaborately dealt with in *Hegirascope*.¹¹⁴

6 “THERE IS NO FLOW CHART”

Library empowers randomness in two metaphorical ways: associating randomness with a form (1) that mirrors the structure of memory, and (2) that mimics the process of evolution. *Library* joins Judy Malloy’s *Its Name Was Penelope* and Robert Kendall’s *A Life Set for Two* in using randomness to represent a form of memory. Simon Biggs’s “Book of Books” uses a form of randomness to represent an imaginary evolutionary process of languages, but

the mode of evolution differs slightly from that of *Library*. The final “universal language” in “Books” does not emerge till it has gone through a complete evolution. *Library*’s evolution does not achieve an end, but only suggests an impromptu and temporary “stasis.” *Library*’s final stasis curbs the text from becoming a total chaos, an endless loop of reshuffle and modification.

Library begins and ends *in medias res*. This middleliness signifies an unbounded world. To the burn patient, this world is a virtual reality his doctor uses to stimulate his damaged sensorium. The whole landscape can be repeatedly broadcast and started at a random point. In Emily’s case, *Library* is an alternative world, in which one may break away from the “bodyspace.” For the prisoner, the world morphs into a hell, offering no exit, no escape from the amnesia inflicted upon him, no possibility of recovering his identity or his past. Through abductive association one may construct a coherent story, as Licia Calvi urges the reader to do, going beyond a merely mechanical understanding of the hypertext. Calvi writes: “In order for her to ‘escape from the labyrinth,’ the reader . . . must not simply understand the labyrinthine, combinatorial construction chosen by the author by experiencing it directly, . . . but also build one herself abductively on the basis of the clues she can discover in it . . .”¹¹⁵ It should be noted that there are many ways for a reader to actualize a text. One NOTE reminds us: “You can’t flow this thing; there’s no flow chart.” But hypertext invites associative reading, i.e., it encourages the reader to create his own “flow chart.” The ambiguous but unmistakable interrelation among the three characters and their respective worlds projects a diaphanous beauty like a net of stars, apprehensible but always distant, beyond certainty. The aesthetic subtlety and complexity of *Library* is inexhaustible in a single reading such as the one exhibited and examined here. Diverse interpretations of *Library* that will divulge more facets of what Hayles calls this “conceptually fascinating” work have yet to arise.

DIGITAL POETRY BEYOND THE METAPHYSICS OF “PROJECTIVE SAYING”

Janez Strehovec

University of Ljubljana

1 INTRODUCTION

In postmodern culture, the visual was privileged both as the key paradigm of the contemporary perceptual field and as a crucial criterion for producing the mainstream cultural contents. By privileging the visual, this culture pushed aside the verbal and the tactual as second-rate criteria features. Today’s new-media culture is also bound mostly to hybrid and remixed digital images; however, the verbal features have not turned out to be as old-fashioned or useless in the age of new-media online communication as in postmodern culture. New media might be described as multimedia culture content, which deploys challenging and daring interactions between the senses, fields, and tools. Whereas the earlier transformations involved the movement from printed words to pure images, new media involves a transformation from printed words to screened words, organized with respect to spatial and temporal syntax.

In terms of the vocabulary included in today’s technoculture, we can see that the term “new media” itself has been adjusted to the demands of speed of light, digital morph, and virtual reality, as well to the Web 2.0-shaped practice of cut-and-paste culture. “New Media” has been transformed into a digital word-image-movement and brought to life on computer screens and mobile screen devices (e.g., cellular phones, PDAs, iPad, e-book readers, consoles, players).¹¹⁶ We bear witness to the birth of a highly visualized, malleable, and flexible word, incorporated into the film of verbal messages. In comparison with artists in the field of visual and performing arts, artists and writers find it more difficult to adapt their activities to the trends of new-media technol-

ogy, we have been witnessing the rise of a number of digital literatures and mixed means digital-textuality-based projects that intersect different fields of new media arts. This does not only concern hypertext fiction, digital literary projects on CD-ROMs, web text-based installations, Web 2.0 textuality (e. g., blogs), and web novels with collaborative authorship, but also new media-based literary projects that use the specificity of the digital medium in a creative manner. Digital poetry also falls in this category.

2 MUTATIONS IN POETRY

In approaching the present condition of digital poetry, enabled by software as a cultural tool, it makes sense to begin by describing the very core of modern, printed text-based poetry. In the essay *The Future and the Question of Art*, French literary critic Maurice Blanchot wrote, “It seems that art was once the language of the gods; it seems, the gods having disappeared, that art remains the language in which their absence speaks—their lack, the hesitancy which has not yet decided their fate.”¹¹⁷ The notion of art as the language in which the absence of the gods speaks directs us symptomatically to the insecure position of the art today, defined by the absence of that great metaphysical stories that used to define art. Art was thus an area in which essential things were decided, as Martin Heidegger claimed in his essay *The Origin of the Work of Art*: “In the tragedy [as an example of linguistic work] nothing is staged or displayed theatrically, but the battle of the new gods against the old is being fought.”¹¹⁸ The emphasis is placed on the phrase “is being fought,” which means the work of art does not imitate the event (mimesis), but establishes it (poiesis); in the work of art nothing is shown—it is both happening (in this case the battle between the old and new gods) and establishing itself. In Blanchot’s thought, the stress on art as the language of gods certainly has importance as well. Showing the linguistic nature of the art in particular directs us to those artists who deal with the language—and those are mostly poets. We may say it is above all the language of absent gods and a lack of great narratives that are intended for them; however, the language of contemporary artists, from

which such an absence speaks, is not some unimportant, marginal language. On the contrary, it can be central and essential, for it is placed in the point of divine absence, i.e., in a point by no means marginal and unimportant. It seems the poets of modern, postmodern, and contemporary poetry became aware of this, and took upon themselves the role of making poetry from within the point of absence of gods, in a language expressing this absence. Therefore, it is no coincidence that the print-based modern poetry of the twentieth century has for a long time been an excellent inspiration for the theoretical, and especially for the philosophical.

Modern poetry did not encourage only literary theory, criticism, and poetics, it also had a profound influence on modern philosophy (especially within the poetic tradition of Baudelaire, Mallarmé, Hölderlin, Rilke, Pound, Celan, and Eliot). A number of Heidegger's notions in his crucial texts are influenced by Hölderlin's and Rilke's lyrics; Mallarmé's opus, on the other hand, was a source for bold considerations about the book and the absence of the book in Maurice Blanchot's essays. German philosopher Hans-Georg Gadamer has also written many essays about contemporary poetry and its fate. Poetry represented—for both Blanchot and Heidegger—a source and a challenge for an unbiased and radical approach to the crucial condition of modern subjectivity. They also reflected upon and wrote about poetry in terms of the question of gods, especially the absent or fugitive gods: “To be a poet in a destitute time means: to attend, singing, to the trace of the fugitive gods.”¹¹⁹ It is also hard to imagine Walter Benjamin's *Arcades Project* referring to Paris as the capital of the nineteenth century, and his account about the novel modes of individuals' perception shaped by both the traffic and the organization of architectural space of a big city, without his thoroughly formed thinking on Charles Baudelaire's poetry in his famous *Les fleurs du mal*.

Poetry that follows the gods (Heidegger's notion) or that speaks the language of the gods that have fled (Blanchot's claim) is the lyric poetry of the lyric subject, directed toward naming and saying as an excellent activity that brings the unsayable, as such, into the world. Heidegger, describing this feature, wrote: “Projective saying [das entwerfende Sagen] is poetry: the say-

ing of world and earth, the saying of the arena of their conflict and thus of the place and all nearness and remoteness of the gods. . . . Projective saying is saying which, in preparing the sayable, simultaneously brings the unsayable as such into a world.”¹²⁰ We are again faced with something great as the reference of poetry (the earth and world, the scene of their conflicts, the proximity and absence of gods). This projective saying was expressed in a language which not only followed the fugitive gods but also created a special lyrical atmosphere for the extraordinary, the tragic, the elegiac, the vulnerable, the anxious, and the transitory. But today, in the age of the new media, Web 2.0 culture, globalization and netspeak, readers are more and more frequently facing digitally coded poetical texts, as well as digital poetry as a form of software language art, which are oriented toward (minimalistic, conceptual, etc.) linguistic works that abandon the big issues the modern print-based poetry used to deal with.

Digital poetry is a practice of new media-based digital textuality with “poetry scripts” written by authors like John Cayley, Loss Pequeño Glazier, Claire Dinsmore, Deena Larsen, Aya Karpinska, Komninos Zervos, Philippe Bootz, Jim Rosenberg, Miekal And, Wilton Azevedo, Alan Sondheim, Reiner Strasser, Patrick Henri Burgaud, mez, Jörg Piringer, Jaka Železnikar, etc. (these authors are listed here just in terms of variety of their approaches and not with regard to aesthetic criteria), and institutionalized e.g., in collections of animated poetry *alire*, in the events like E-Poetry festival, international conferences like *Digital arts and culture*, books and collections of essays, e.g., Eduardo Kac’s *Media Poetry, New Media Poetry* (edited by A. Morris and T. Swiss), *Cybertext Yearbook*, various on-line journals (e.g., *Dichtung Digital*). Along with literary hypertext (in the genre of hyperfiction and hyperpoetry) we also nowadays come across digital texts that are no longer (explicitly) based on a link (like the case of the hyperfiction and hyperpoetry), but on the words-images-bodies in motion, formed by programming and scripting languages. This turn from hypertext to software-based language art and new media poetry run parallel to the change of paradigm within Internet art at the end of the millennium: “Early Internet art—from the highly conceptual phase known as ‘Net.art’—is concerned primarily with the network, while later Internet art—from what

can be called the corporate or commercial phase—has been concerned primarily with software.”¹²¹ It is self-evident that, in terms of digital poetry, such a phase should not be called a commercial phase because there is no common denominator between the (digital) poetry and the commercial.

Digital poetry as a software-based language art has an essential relationship with the processes of making new meanings and word plays. It is no longer “the language of the gods,” nor is it the language in which the absence of the gods speaks—which initiated and even defined the modern and contemporary print-based poetry of the 20th century—however, it is still making something essential within which a gathering takes place. How do we imagine this feature of digital poetry; how do we approach its poetic nature? Let us say first that digital poetry belongs to digital literatures, new media art, Net art, and new media textuality—meaning it is characterized by new media features such as digitality, database, software, interactivity, immersion, hypertextuality, dispersal, customization, remixing, repurposing, and virtuality. Besides those features, there are a number of others connected to textual particularities in the new medium, but—and this is crucial—digital poetry generated by programming and scripting languages and made possible by a very special interface (computer screen and navigation devices, such as the mouse and scrollbar) is by no means merely about technical innovations. It enables us to face textual practices happening inside the text and in the context of the present artistic production, as defined by: globalization, multiculturalism, the Internet economy, September 11th, Web 2.0, new forms of experiencing identity, the issues of gender, community, and embodiment. It allows for new forms and new modes of representing the world and its objects, by accessing new audiences that are closer to the club (DJ and VJ) culture than to the elite culture, by using the Internet, aesthetics of special effects and of mosaic, and—this is of crucial importance—by using present linguistic practices (including the cyberlanguage as a language of online communication).

We have mentioned the new audience, which is an essential factor here. Just as we can find—among those interested in the contemporary performance art and net art—individuals who, as a rule, do not go to theaters, philhar-

monics, or museums (i.e., the venues and sanctuaries of the elite culture), it is also possible to find among readers/users of digital poetry individuals who rarely read books, but are more familiar with personal computers, palm pilots, and mobiles and who participate in the events of club culture. We may also say, while mentioning club culture, that digital poetry can be, in an absolutely adequate manner, represented in clubs and not necessarily inside rooms assigned to the elite culture (libraries, university classrooms, cultural centers, etc.). Blurring the difference between the high elite and popular art also impacts the writers of this poetry, among which we often encounter Net artists and programmers who were not traditionally educated in the humanities.

On the basis of the development so far attained in digital poetry, it seems to belong more to the world of new media and new media-based art (especially software art), as well as to the clubbing connected with this world (e.g., *bOtimatiOn*, VJ textual performance by Amy Alexander) than to the world of the high literary, printed book-based culture and the literacy shaped with such a culture. Due to its new media art features, this practice is also placed beyond the traditional boundaries between two cultures, as they are discussed in Charles Percy Snow's book on the divide between scientific and literary intellectuals.¹²² It seems that Lev Manovich in his *Language of the New Media* does not pay enough attention to digital textuality and Web-based literary projects—for the medium of “linguistic works,” and its arrangement in virtual environments, may also demonstrate the significant features of the new media. Essential to digital poetry is also its fundamental connection to contemporary art, which in the present time, in the era of the Internet, has passed from a stable work of art [*Kunstwerk*] to the performance and service of art (in terms of task-solving, often as algorithmic procedure-performed activity), as well as to art worlds and art experience.¹²³ In any case, we can see that the link between this poetry and Net art, software art, browser art, and text-based electronic installations is closer than to the connection to poetry focused on the printed book and on traditional literary culture. Interestingly, the authors of this kind of creativity do not foreground the question of genre; some of them declare themselves to be poets of e-poetry, others do not. Some projects (e.g.,

e-poetry pieces of Giselle Beiguelman) function also in the context of Net art, others (e.g., projects of Simon Biggs) in the medium of (text-based) electronic installations or as a practice of VJ-ing (e. g., Amy Alexander's performances).

3 CYBERTEXTUALITY ATTITUDE

To enter the world of digital poetry, one needs a special approach, let us call it a cybertextuality attitude, which requires abandoning the traditional reading styles and therefore also logic, developed by Roman Ingarden in his phenomenological aesthetics of a literary work of art.¹²⁴ When mentioning such an attitude, one touches at least fleetingly upon phenomenological aesthetics, which describe the transition to the aesthetic experience level as a far-reaching and radical turning point with a practical and natural attitude. The cybertextuality attitude also requires a certain “cyber-reduction” in the sense of the reader's/user's shift from the usual practice of textscape decoding. A digital textuality user needs to dwell on the visual aspect of the text, on the digital word-image itself, and not use it as a vehicle to something entirely different, like a literary world. Ingarden states that

there is the question of the degree to which we really sensibly perceive and must perceive the individual paper and the individual flecks of ink themselves in the concrete reading of a printed book. Are we not rather immediately disposed to apprehend the typical forms of the printed “words” or the typical verbal sounds, without bringing to consciousness what the individual written signs look like?¹²⁵

In digital poetry the emphasis is not only on the decoding of a meaning or on the (libidinal) identification with the imagined poetry worlds. A hybrid reader-viewer-listener is also interested in what the individual written signs look like. Therefore, the visual features of a signifier and the space syntax organization of the text units come to the fore.

Digital poetry is based on text. Text, however, can be—in the frame of the new media paradigm—understood as an experimental artistic environment

for establishing new (spatial and temporal) relations between text components, as well as for a bold experience of unusual meanings. What do we mean by that? Let us say, first, that digital poetry is not a continuation of poetry-as-we-know-it by other means. It is a new medium with its own specificity, borrowing only some basic characteristics of the print-based poetry. Some that should be stressed in particular are:

- 1 the creative work that makes language behave in a different way from language applied in ordinary and practically shaped communication and which textually enables the reader/user to encounter artificially staged linguistic events that are different from the user's everyday experience with language;
- 2 the economical use of linguistic expression; authors of digital poetry strive to express as much as possible by using as few words as possible, which demonstrates a tendency toward "verbal concentration" and not to prose;
- 3 the strong emphasis on the author's very intimate attitude to the application of language; in digital poetry the author tries to establish a relation with the word material as individualized; we even find cases of creating a new language (for example in the pieces of the Australian author mez);
- 4 the antimimetic character of poetry work; as a sophisticated structure and process (re)presents or imitates nothing and talks about nothing, digital poetry creates a linguistic event in the "artificial life of the language," meaning it is rich also in terms of performance;
- 5 the significance of points of indeterminacy, blanks, absences, the unsaid and hidden; however, in digital poetry the points of indeterminacy (as they are defined in Roman Ingarden's work on the phenomenology of the literary work), the whiteness, and the not-written (the blank in Wolfgang Iser's theory of reading) are replaced at temporal intervals between displayed and not (yet) displayed text (for example in kinetic, animated poetry).

In digital poetry the text is on the computer screen, and the demand of linear textual order is often abandoned, as well as the attempt to strive for rhymes, assonance, and other demands of formal regularity. Lyrics, in terms of

a very particular atmosphere of pure emotions, are also rarely used in this type of poetry (digital poetry is mostly postlyrical). The lyrical subject, characteristic of modern poetry, is about to disappear (as it is also destabilized within the present cut-and-paste culture); demands of conceptuality and pure linguistic experimentation and play of verbal and nonverbal signifiers are gaining importance. Rather than being considered as lyrical atmospheres enhancer, the digital poetry shaped with state-of-the-art software often addresses pure rational task-solving activity, which demands even the user's readiness for risky account with the text organized as an enigma to be solved.

In this context, let us point to digital poetry text as a field based on digital words as "malleable signifiers" (a term from Glazier's *Digital Poetics*), into which we can intervene in different manners. Inside the digital medium, the word loses its authority and solidity—which characterized its role in printed texts—and it appears as the raw material for numerous transformations and interventions (made and controlled by software). Text is a textual "moving reserve," a new media shaped textscape, which challenges both the author and the reader in terms of navigation, orientation, and non-trivial decision-making. Noah Wardrip-Fruin described these features by referring to *Screen*, the *CaveVR*-platform based textual installation:

The experience of *Screen*, we hope, is one of oscillation. The words are at times objects, and act like graphical objects, and we concentrate on playing them that way. But sometimes the words are words, and we read them as clusters of text—seeing them overlap, hearing them spoken. And sometimes the words are part of a memory, a fiction, and we remember the context in which we heard a word before, we see how the texts are deforming through the play process, deforming more the better we are as players.¹²⁶

Referring to such an experience, we can also mention the digital poem *Beer*, by Komninos Zervos, based on the animation of nouns (beer, beef, heel, hell, etc.) by means of digital morphing, which allows a change of letters within words over time, making an instant word that is constantly changing

into another “word-compound.” We can also take into account the (software) intervention with the digital morph (which often replaces the metaphor in the print-based modern poetry) and the use of devices such as parataxis, which establish within a single word an actual “theatre of tensions” among new meanings, issued from units made of the primary word, now cut to pieces. The poet of the digital medium actually makes the word behave or function in a way radically different from its everyday role, i.e., in a way it has never been spoken, written, or designed. The meaning is extended and augmented beyond the predicted or the expected. For this poet, text is a network of relations. What is important is the very nature of these relations and not the quantity of words and the meaning that emerges in these relations. The “richness” of digital poetry is based on the quality of relations/interactions between elements of poetry, which are, in the case of animated poetry, arranged as an (temporal) event.

Digital poetry also enables the reader, in the role of the user, to have a very creative, intensive, even an intimate contact with the text. In her digital text *Carving in Possibilities*, Deena Larsen expressed this characteristic with the demand to “sculpt again” and not “read again.” In the already mentioned *Screen*, the VR-based installation of the text is related to the reader’s body, and demands bodily interaction with the data-words-bodies. “The computer gives the reader the opportunity to touch the text itself, an opportunity never available in print, where the text lies on a plane inaccessible to the reader.”¹²⁷ Even devices such as the scroll-bar, mouse and stylus (when using a PDA) enable the reader to handle the written piece in a very specific, intimate way, and to interfere with the text through an interface, such as a screen covering the text like a curtain, which responds to the click of the mouse (within a mouseover event). In Larsen’s *Carving in Possibilities*, words are hidden behind the surface—like the objects conditionally wrapped by the artist Christo in his land art projects. The reader is asked to find—by the means of “mouse event” procedure—the covered/“wrapped” words and make them appear on the screen. By touching various points on the screen an image of shapeless stone is being transformed into Michelangelo’s *David*. The user’s action is in-

dividualized, the sequence of textual components is adapted to her interventions (this is “customization” as a procedure well-known in the new economy) and is always producing or sculpting a different succession of the written. That is to say, it accomplishes a different textual event. Larsen’s opening line, “I saw precisely what the stone was meant to be,” is a starting point for various textual continuations/derivatives caused by random repositioning of the mouse-touch on the screen.

We use the term “event” (also, in Flash vector-based art, we talk about “mouse events”), and digital poetry really is about the event. It is about creating a text that stresses temporal features, based on two levels: on the internal “unwrapping” of the textual hidden layers, and on the reader’s/user’s reading in the form of interactive intervention into the texts (which is often the case). Text, as an event, implicates a textual life, which is a form of an artificial life (also in terms of replicating certain textual components in the textual postproduction, reproduction, and interactive reading). It is essential that the components of a text are not based solely on words, but above all, on relations among words and on special connotations connected with these relations. Such an “in-between” is becoming more and more crucial for the digital poem as a striking temporal structure. The poet of digital poetry is therefore the one who is able to insert textual materials into very special relations that are highly shifted from the known relations (from the everyday language or the profane marketing and advertising based verbal communication). Her role is not merely the saying of poetic words; it is above all arranging the stage of relations among words and even within one single word. Therefore the digital poetry text (designed as an object, service, performance, browser, textual ambient, project, piece of software, etc.) appears to be an eminent linguistic “work of art” (a term taken from Heidegger’s essay “The Origin of the Work of Art”), to which the demands of new media aesthetics and poetics—such as digitality, software, logic of database, mixed reality, mosaic arrangement of cultural contents (e.g., on the Web portals), networking, customization, aesthetics of flatness and nearness, sense of the game mode, kinetics, and multimedia—are crucial.

In his book *The Language of New Media*, Lev Manovich claimed that “the printed word tradition that initially dominated the language of cultural interfaces is becoming less important, while the part played by cinematic elements is becoming progressively stronger. This is consistent with a general trend in modern society toward presenting more and more information in the form of time-based audiovisual moving image sequences, rather than as text.”¹²⁸ However, he overlooked the fact that an important part of current textual production is organized in the form of time-based audiovisual moving image sequences. In other words, it is based on words in motion and functions as a film of words. The texts themselves have passed into mainstream film’s (and new media hybrid) way of organizing its components, and have been transformed into kinetic textscapes with an emphasis on visuality (and tactility), for which the main purpose is to attract a hybrid reader-listener-viewer as a voyeur, i.e., the staring one. Mobile textscapes are, metaphorically speaking, mobile seductive bodies. In order to fulfill the demands of such attractive representations, the textscapes must be organized and arranged in as sophisticated a manner as possible (the *Screen on Cave* platform-based project works here as a paradigmatic example), and must be satisfactorily performed exclusively through computer tools. This means, that in the present time, the textscape as a seductive body becomes a digital text generated by means of different sorts of software.

The idea of text-film is not coined exclusively by digital culture; it is found already in the historical avant-garde, especially in Marinetti’s futurism which was based, as far as poetical practice is concerned, on free, nomadic words, i.e., on the “words-in-freedom” [*parole-in-libertà*].¹²⁹ In the manifesto *The Futurist Cinema*, we come upon the idea that “the most varied elements will enter into the Futurist film as expressive means: from the slice of life to the streak of color, from the conventional line to words-in-freedom, from chromatic and plastic music to the music of objects.”¹³⁰ We can see the actual realization of this idea in certain films, for example *A Clockwork Orange* (1971) by Stanley Kubrick, where textual components made of different symbols and formulae move over the screen. In *2001: A Space Odyssey*, textual design insertions also

represent an important component. Mobile text is also an essential component of installation art, especially electronic artworks. For example, the textbar flowing vertically over light emitting diodes (LED) are the trademark of Jenny Holzer's visual art projects. Mobile text, based on words-objects designed by computer graphics, is also characteristic of Jeffrey Shaw's electronic installations (e.g., *The Legible City* and *The Virtual Museum*), as well as of the already mentioned VR installation *Screen* (by Andrew McClain et al.).

The noticeable swing of text in motion (which, as a rule, emphasizes visibility because it has to fulfill the imperative of being organized and arranged as a seductive body) can be encountered particularly within the digital (visual) culture and within the culture of informing and communicating in the society of information, software, spectacle, breaking news, and new media. This is also tied to the demands of new-media aesthetics, as well as to current individuals' needs to receive information in a form arranged as multimedia and therefore as mosaic—a form based on the coexistence of verbal, sound, visual, kinetic and haptic features. The individuals of today seem practically incapable of decoding features of pure genre (just the verbal, the visual, etc.). Instead, they always need such features to be arranged into a mosaic and hybrid format based on the coexistence of different forms, meaning that “the logic of replacement, characteristic of cinema, gives way to the logic of addition and coexistence.”¹³¹ The text by no means disappears, but rather adapts itself to the new media aesthetics and has an important place in their midst. We come across it in the speech bubbles of comics and in the short pieces of information provided about the pop stars of some music videos, and it also appears in the design of television news based on a mosaic format. “What is evident in current television is that the screen is no longer a ‘sacred space’ dedicated to a single image. Television has diverged from film in this way—its screen is divided in its presentation of information.”¹³² On CNN, we thus encounter mobile text flowing underneath visual content (the so-called “bizbar,” “newsbar,” “sportbar”), which means it is not enough to merely watch and/or to listen. Instead, the user must constantly receive a package of information organized in a mosaic way, represented in verbal (e. g. web site bullets), auditory, and visual forms.

The mosaic design is also the constant companion of web sites, which still contain a lot of entirely verbal features. Those features are arranged in a language characteristic of web media (so-called “netspeak”), based on abbreviations, acronyms, accumulation of nouns, mobile text, insertion of signs from the expanded ASCII language, icons of emotions, etc.¹³³

The language in textscape is not based solely on kinetic text—knowing temporal syntax as well as the syntax of film language is essential to its understanding. It is based also on highlighted visual features, which imply a consideration for spatial syntax, for within a digital textuality the spatialization of textual components comes to the fore. In fact, before digital media, the endeavors of Visual and of Concrete Poetry for “total textwork” had not been completely fulfilled. In many ways, these aspirations have been surpassed and complemented by new elements deriving from the aesthetics of the digital. In any case, it is important that words inside textscapes are “words-images-virtual bodies.” They are self-contained signifiers which must be perceived not only considering their semantic (and symbolic) function, but also their visual appearance, as well as their position and their motion in space. Analyzing the textual elements in science fiction (SF) films, in the case of a scene from *2001: A Space Odyssey*, Vivian Sobchack claimed in 1987 that the viewers “simultaneously read the content and see the content. The words and print themselves convey meaning, but so do their kinetic movements, mechanically calm yet flashing urgency, graphic configurations, colors, and the associations we have with them.”¹³⁴ In such SF films, an integration of reading and seeing takes place, and therefore fuses into one process. Today, such a convergence of reading and viewing can be named as “veading”, and the most advanced object of veading is the vook (video book), which integrates book-as-we-know it with the video and the Internet.

5 THANKS FOR WATCHING (A POEM)

Today animated digital poetry—as a new medium with its own specificity—provides us with new, provocative, and challenging forms of experi-

ence that disrupt our normal modes of perception. It is a medium that cannot be perceived as a mere continuation of Visual and Concrete poetry by other means, but can only be understood on the basis of analysis of the present world of new media and new perception forms, which originate in interface culture. The problem arising here is in the poetic nature of digital poetry pieces. Traditional devices of literary theory, poetics, and literary criticism, developed in terms of the literary avant-garde and neo-avant-garde of the twentieth century, are often less successful in describing and explaining digital poetry phenomena than they are in describing theoretical devices of new-media aesthetics and theory (e.g., *suspense* and *stain*, taken from contemporary cinema theory). The key to creating digital textuality is, namely, machine-generated code, and that is why authors of digital poetry often stress its “machine” nature in the titles of their works (e.g., poetry generators, poetry engines). The terms cyborg-author and cyborg-reader (coined by Mark Amerika) are used, especially when one discusses the possibility of machine-generated poetry devoted just to reading as a way of machine-decoding.

When we are interrogating the poetic nature of digital poetry that presupposes the destabilization of verse by applications of nonlinearly distributed verbal and nonverbal components, and frequent reduction of poetic language just to nouns, one needs again to emphasize that the “poetic” is now beyond the lyrical as it is understood by the movements of modern and contemporary poetry. In digital poetry, we can also sometimes discover the making of pure “poetic atmospheres” (for example in Miekal And’s poem “Seedsign”), where the tension between the said and the unsaid, the written and the white space of the page (in kinetic and animated poetry, for example), is now revealed through the loops between the text that is displayed in our field of vision and the text that has yet to appear. One of the striking features of this poetry is namely its inventive work in the field of broadening the concept of poetic language (and even the concept of language as such).

With the latter, we refer to a language suited to postlyrical sensations and attitudes of the post-lyrical subject and the subjectivity of the most recent “mix, cuts & scratches mindset.” What kind of language are we talking

about? Is it the language created by the merging of programming languages and natural language? It is a language expressed by means of expanded textuality based upon the combining and upgrading of natural languages, netspeak, and scripting and programming languages, resulting in the usage of symbols, word conglomerates, and textual devices, such as mez uses in her mezangelle language, or which some projects by Alan Sondheim approach. Code poetry is, in fact, merely a technical term for some of the projects in this genre that foreground the code functions first and foremost in terms of its execution. Yet in some texts, based upon expanded textuality, we nevertheless encounter the coexistence of signs pertaining to natural and programming languages, and netspeak's emoticons and acronyms, (angle and square) brackets and other inserted symbols, which lead to the play of meanings and thus more to play *within* the signifiers (parataxis) than with them.

When considering postlyrical digital poetry, we may certainly mention texts by Mary Ann Breeze (mez), who invented her mezangelle language in which the English letters (English being the natural language) combine with the symbols taken from programming languages and with ASCII symbols and punctuation marks, which makes the traditional, linear reading procedure rather impossible. Mez uses various procedures and textual devices, based on research about meaning under the condition of artificial juxtapositions, syllable and letter parataxis, and interjections of the words. By using interjected words set off in square brackets [she] also tries to demonstrate lots of new and daring associations. By parenthetical splitting of words, mez changes the way of reading and creates new polysemantic structures within a single word, as demonstrated in this part of her *T.ex][e][ts*:

>T.[s]he a.ddress[inge inna rosebuddish-pink 1, or raveing-red, circuz
 colourz refr.act-ted N the flowe[ur[[]]] be.low[the gender linez n
 communication blurbz] could not be.[hivez N wartz N all]long to an.y[-talk N
 IRC] ac[k!].counts on this machine, so[-so, this drink, this cravin, this
 D-sire & [dental]damnation]] an at.tempt[inge izzn't it? we all live here,
 B-neath N on[line-a]top ov] w.as[izz] mad.[with luzt and truzt N nuthin ov

the sort]e to for.ward[ing ovv the Devil, spirits re.spl[e]en.dent[ata]]
the mess[N dirt, crave again that simpelle x-istence, failin]age to the
des[ertin, breakage, splinter]ti.nation[of webbishwhorez] h.[L]ost.
How.ever[n eva ah[wo]men, again], the destin[ee ahweightz, is clogginge
mixturez of texttinct and tractz].ation ho.st[op! 2 much!] is
T.HIS[z.....hizzzz] ma[mez]chine, but under

A different name.

By considering mez's pieces, we actually come across certain textualities that stimulate feelings of the uncanny as discussed in Freudian theory (in terms of something familiar, yet strange), and that can be located near that part of Net art that is more involved in the aesthetics of the uncanny of modern technology than in the aesthetics of the beautiful and the sublime. mez's "netwurker's texts" can be considered as a daring and challenging practice of expanding the concept of textuality using netspeak and web visual culture devices, in order to produce a seductive text as if it were displayed as, let us say a naked body. The demand of the text as a naked body, meant to be stared at as if it were the very object of voyeurism, is by no means unknown to digital poetry as a linguistic digital art that attracts both the process of reading as well as a process of seeing, as demonstrated by Kim Stefans's "Thanks for watching" at the end of his "The Dreamlife of Letters."

Another interesting piece created in this manner is Claire Dinsmore's *The Dazzle as Question*, based both on the author's very intimate, poetic account of issues in interpersonal communication on one side, and on technical solutions which disrupt our expectations about how the poetic text behaves on the other. *The Dazzle* is a lyrical piece, one which heeds the romance and history echoing throughout poetic creation, yet plumbing this new media for the singular sonority that the encounter affords. Its locutional marks and varied rhythmic emphases are indicative of the particular tones and dialectical nature of the question and confusion underlying this untoward relationship. The tendencies of the digital noted here, of both pleasure and menace,

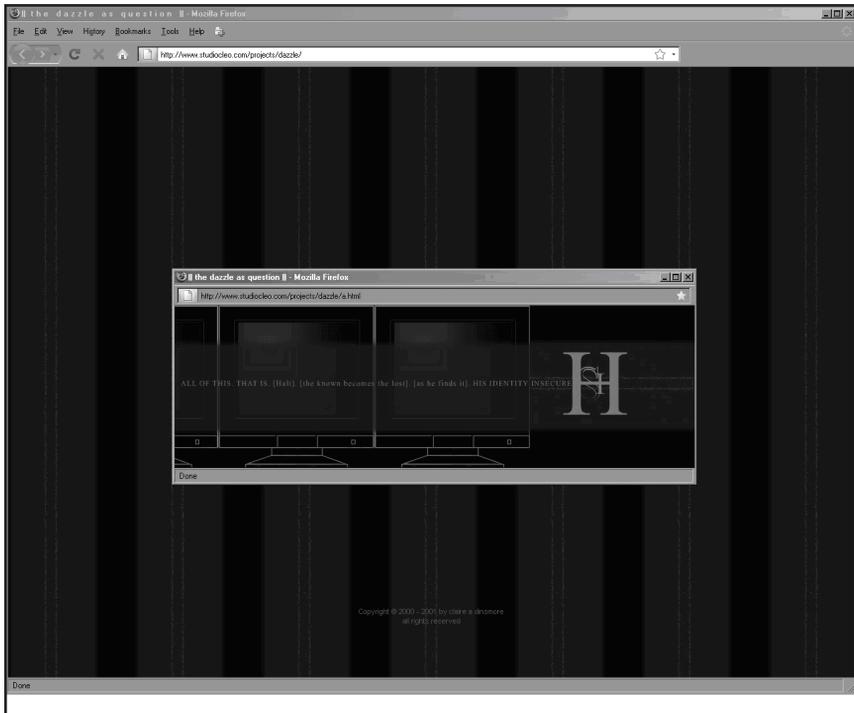


Figure 9: Screenshot from Claire Dinsmore’s *The Dazzle as Question*, 2000

are then marked by the distinct use of text within the piece—it is not easily read, but is instead rather ghostlike and obscured—thereby signifying the effect of the media in erasing/displacing the narrator’s words/identity, undermining his/her marks, his/her history—the history of poetic form itself with obliquity. The effect is thus abstracted, culminating in an aura, shall we say, which is more “impressionistic/textural than textual.” The digital media seeks to inscribe within and around the text layers of sub- and supertext that work upon myriad unexpected levels beyond the page, hence underscoring the (desired!) incision implied by the surface meaning of “mere words.” Here, semantics battle within fertile, yet deliciously foreign, terrain—and are tantalizing as a result. Such a rich play of unstable meanings and their controversy are accompanied with the dynamic unmappability of textual articula-

tion, which places the reader in a very unsafe position. She is faced with the dynamic textbar, which disrupts the normal way of reading and perceiving the textual units.

Instead of searching only for the expressions derived from the literary theory the scholars in digital poetry can draw more profusely also from a broader field of media and even the cinema studies in order to find new terms for describing and understanding the digital poetry characteristics. In approaching the Dinzmöre's piece, based on words-images-movement, we can find out that the cinema theory concepts fit better to the very nature of moving words than to those taken from traditional literary theory. One among the film theory concepts that seems to fit well to issues posed with Dinzmöre's piece is the *stain*, as it is defined in Pascal Bonitzer's film theory. Referring to Hitchcockian suspense and Bonitzer's account on it Andrew Murphie argues that "in cinematic crime in particular, it is the gaze which potentially transforms any image into an image of death. More than this, the evil which the gaze recognizes is a stain which calls forth the gaze, and the excitation in this calling forth is what gives rise to suspense. This stain disrupts the 'natural' order which seemed to be bubbling along so nicely. It eroticizes the image—makes it fascinating."¹³⁵ What is crucial here is the notion on stain as a device, which disrupts the natural order, makes such an order strange. Such a procedure places this concept very close to the concept of defamiliarization, which has been introduced and discussed within the Russian Formalism. In terms of digital poetry it means that the stain disrupts the ordinary way the digital word (and the *cyberlanguage*) behaves by placing it within an artificial and risky condition.

The concept of stain is described in Pascal Bonitzer's essay "Hitchcockian Suspense," which refers to Hitchcock's movie *Foreign Correspondent* (1940), in which the highlights include an assassination on a rainy day with the killer escaping into a sea of umbrellas and a group of spies who signal their Dutch contacts by turning windmill against the wind. The stain is found in such a visual effect as a field of windmills in which the sails of one windmill are mysteriously turning the wrong way; that is, in the opposite direction from

the others. Such a very special effect strikes the gaze and the viewer's expectations about the ordinary way the things behave, she is getting more and more curious about that extraordinary condition. Can we also find let us say the windmill turning against the wind in Claire Dinsmore's piece *The Dazzle as Question* (2000). Similarly, as sails of one windmill turn in the opposite direction from the others, we are facing the Dazzle's moving textbar, which in a certain moment begins to enter the readable field from the right. The ordinary stream of textbar running from left to right is broken, the language becomes increasingly hard readable at times, and the reader is questioned what means such a disruption of a way the text ordinary run. Her stable reading point has been made strange, she finds herself as unsafe, her normal way of perception is changed in a kind of high-adrenaline adventure.

In this essay, we discuss digital poetry by placing it within the broader field of today's new media art and interface culture. The interface as a basic cultural tool in the present time presupposes a very particular mode of having and perceiving a world.¹³⁶ The tool is not neutral, but in fact is very intimate. It demonstrates the ordinary use of a computer mouse, which enables a jumpy and nervous reading, and a "mouse-shaped" viewing in terms of steady feedback loops shaped by the user-viewer's tactile interaction with the textual components. New mobile technologies profoundly shape the way in which people communicate and perceive reality. Our basic condition is, let us say, the *nomadic cockpit* (expression coined by the author of this essay), in terms of being armed with many navigational and controlling mobile devices. When we move around in our surroundings, armed with mobile screenic devices, we also perceive the data shown on the screen of such a device, meaning that both the visual and aural interfaces are integrated in our experience of a walking or riding environment. Being-on-the-move is nomadic being, and this particular condition is addressed with Beiguelman's nomadic poems, devoted to PDAs (the case of *Poetrica*, 2002) and mobile phone (her "Code-Up" project, 2004) presentations.¹³⁷ Her "Code movies" (2004) open up the possibilities of let us say non-verbal contemporary poetry, which is made with hexa, ASCII and binary codes extracted from selected

scenes of Antonioni's film *Blowup*. Rather than facing the author's innovative approach simply in terms of the interfaces, her nomadic poems may also be considered a provoking attempt at making digital poetry "beyond the verbal." Such a practice is found in her *Poetrica* series, based on the patterns of non-alphabetic fonts. "These works undo verbal and visual ties through the combination of fonts and numbers, languages and codes. They investigate and explore the interconnection of networks and media, resulting in visual meanings independent of textuality."¹³⁸ By facing such pieces, the reader-user may enter the world of posttextual poetry, which is in search of novel bearers of its articulations, and which was thoroughly argued for in the international anthology *Media Poetry* (2007), which refers to various possibilities opening up with off-the-printed-page poetry (e. g. Kac's holopoetry and biopoetry).

Rather than arranging and establishing very particular lyrical atmospheres the lyrical subject is immersed in, the pieces of media poetry are about the research in the language shaped within nontrivial environments as articulated by various media.¹³⁹ To a certain extent, this is demonstrated in Kac's very own account of this field (tied to the project of holopoetry), which has represented a significant move toward posttextual, nonverbal poetry: "A holographic poem, or holopoem, is a poem conceived, made and displayed holographically. This means, first of all, that such a poem is organized non-linearly in an immaterial three-dimensional space and that even as the reader or viewer observes it, it changes and gives rise to new meanings."¹⁴⁰ The syntax of such a poem is organized in discontinuous space, and its structure demands novel ways of a reader's approach in terms of dynamic reading. The reader must move around the holopoem as a kind of posttextual installation and catch the meanings and the relation that the words establish with each other in empty space. She is challenged with discontinuous and jumpy reading as a procedure, which demands readers' nontrivial efforts in approaching such a sophisticated structure.

HOW TO READ WORDS IN DIGITAL LITERATURE

Alckmar Luiz dos Santos

Federal University of Santa Catarina—Brazil

Group of Research in Computer Science, Literature, and Linguistics

Researcher in CNPq

INTRODUCTION

In Brazil, as is certainly the case in other countries, one cannot speak about digital literary creation without speaking of concrete poetry or Concretism. Nevertheless, let us not forget the process-poem, one of the Brazilian experimental poetry currents of the sixties, which was on close but also competitive terms with Concretism. In fact, in its lucky discoveries and its obvious limitations, it seems that the process-poem exploited the fundamental consequences of the *crisis of the verse* that the European poetic tradition has undergone. Process-poems did it in a more striking way than the European poetic tradition itself and certainly more than concrete poetry. The least we can say is that the process-poem movement brought more convincing solutions to the difficulties that one usually has in associating words with pictures. However, the history of Brazilian experimental poetry is hardly told from that point of view, even though it is precisely from that view that digital poetry can be derived. It is even possible to advance that some critical problems in comprehending mechanisms of digital poetry in Brazil, concerning the relationships between words and pictures, precisely result from this omission of the process-poem in literary history.

In the wake of the twentieth-century avant-gardes, the Concretists and their followers have pointed out the contributions of this movement to the renewal of poetic language. However, it is important to shed light on simplifications that they made, already perceptible in the pioneers' works of the fifties as well as in the following generations. Puerile puns that were presented as high

poetry can account for these simplifications and retrocessions (an operation that already drew attention to the superficiality of a baroque-like—and not baroque—literature in the seventeenth century).¹⁴¹ However, in Concretism, these puns do not only represent the simplified heritage of the literature of Oswald de Andrade, or of the 1922 modernistic generation in which he took part; they especially indicate a convenient, fast, and easy mechanical literary conception. In other words, they find expression in a conception of poetic writing that is obsessed with productivity and destined to be produced and consumed at once. Just like the “Parnassian machine” that was designed to produce sonnets—which the twentieth-century modernists made fun of—the poet who produces these funny puns takes a mechanical and naïve stance on poetic creation (even if the Parnassian poet happens to master the techniques of versification; even if the experimental poet is willing to stay close to mass-media communication and to these eager readers, deprived of any literary sensitivity).

In fact, the question is: how can one leave the mechanical level to reach the machine-designed one (or digital one)? To put it differently, the main concern of the creative poetic work within the digital medium is—and always was for poets throughout the history of poetry—to create a machine capable of generating emotions (according to Valéry). However, one must take into account the machine-designed properties, as well as the emotion it gives rise to. The only way to do so is to place the question of poetic language in the core of machine-designed properties and to become aware of the fact that our own humanity cannot escape the machine-designed properties once language constitutes its core. Our human experience, which is basically a linguistic construct, has to permeate each and every stage of the machine-designed properties.

Dealing with machine-designed properties and poetic creation presupposes that one looks back on a certain kind of poetic writing that has outlived many centuries, as shown by the baroque tradition of visual poems. Evidence is available here that, while being sometimes mechanical, poetic conception is also—and especially—machine-designed. That is precisely what is notice-

able in the visual and combinative anagrams of the seventeenth and eighteenth centuries, for example. Nevertheless, it is interesting to consider how the various experimental poetry currents (including Concretism) have been inspired by this baroque tradition throughout the twentieth century, to finally supplant it and almost forget it in a short period of time, due to the emergence of new digital methods of printing and publishing. Once again, techno-machinic logics have simplified and reduced the range of the machine-designed dimension of poetics, leading its technical reproducibility to overlap poetic creation.

As an example, let us examine some works by E. M. de Melo e Castro. We can analyze the differences between one of his first poems like “Tudo pode ser dito num poema” and the later creations he calls infopoems. If one looks at Melo e Castro’s poetic evolution, one can conclude that the poet passes (or moves back) from the machine-designed level to the mechanical one. Starting with a combinative manipulation of words and syntagms, he finally manipulates the computing commands and routines that are designed for the image-processing software. Melo e Castro certainly passes from words to images, but he does so as if they were two incompatible elements. It is interesting to read the remarks that Melo e Castro made on this subject in the interview he granted to Maria Virgilia Frota Guariglia and Jorge Luiz Antonio:

Well, word processing versus image processing. . . . I think that image processing, from a conceptual point of view, is similar to word processing (they both have identical functions, they are the same thing, they are based on the same principles), but, as regards the results, image processing has produced much more complex results, much more advanced than word processing has.¹⁴²

In a sense, the point at which Melo e Castro has arrived is the direct use of image-processing tools, and this is only the starting point for the most interesting numerical creations.

As a matter of fact, most of the early digital poetic creations that readers have been presented with were purely visual creations or creations in which the verbal matter, if any, was poor in every respect. It is still quite the case

nowadays: a Google search on “digital poetry” is sufficient to make one aware of the verbal poverty of these creations. As far as Brazilian literature is concerned, one should make out whether this is due to the unavoidable heritage of Concretism and the fact that it has neither been fully assimilated, nor seriously studied, or if Concretism itself is willing to announce an art form which would not rely on words any longer, without being so bold as to go further in that matter. Undoubtedly, it would be more consistent with the postulates and theories of Concretism if its heirs regarded the crisis of verse as a crisis of the word; by accepting the idea that, when following this path, the only option one is left with is the radical one of picture gesturality, the very same idea that constitutes the core of the process-poem.

Thus, if we are to follow the path opened by the process-poem, we may notice from the start that the verbal matter tends to vanish. However, it may also re-appear now and then, and even in a disguised way, in the way one adapts to a new gestural production, in the way one enters the visible dimension of words. In other words, a visual signifier cannot be reduced to the sole visual field, for it is also concerned with the usual syntax of visuality via processes and situations (or settings) that, born with and for the gestures, still aim at the verbal level. In this respect, the myth of Philomela stands as a perfect example: prevented from telling that she was raped by her brother-in-law, Philomela weaves the pictures that tells her story, later told in her sister’s words.¹⁴³ Thus, banned from the place where artistic expression is set, words might finally enter it when mixed with the gestures that partake in the scene itself. As well, but in a more obvious way, one might perceive the clues suggesting a return to/of the words in some digital poetic creations, yet it is modified and influenced by the already traditional exercise of visual poetic creation.

AN EXAMPLE

The Book of The Dead [*Le Livre des Morts*; <http://www.livresdesmorts.com/> accessed on 03/10/2010], by Xavier Malbreil and Gerard Dalmon, opens

on a page containing the links leading to three different spaces: the Reading path, the Writing path, and the Reading room.¹⁴⁴ These multiple spaces are meant to be gathered into a single unit. Here lies the obvious metaphor that constitutes this *Book of The Dead*. However, this exercise of (de)limitations is not bound to that first observation, because, as reading interactions occur on the screen we are facing, we are asked to bring back these different spaces into a certain “processing” unit—i.e., the unity of our intervention. This operation is already stated by the difference existing between the URL—in the plural, *livresdesmorts* (*booksofthedead*)—and the name of the website—in the singular, the *Book of the Dead*.

All in all, as we enter this *Book*, we are asked to bring a plurality back to a certain unity. In this *Book*, there is an almost immediate agreement between the space of creation, the space of mediation (i.e., the data-processing device of navigation and interactivity), and our space of insertion (I almost said interpretation): all these three spaces contribute to this ceaseless, irrevocable, pressing, and, in fact, never-to-be-completed search for the unity that is concealed within every multiplicity.

It is precisely the tuning of these three spaces that establishes the privileged way in which one can go through (metaphorically) and live (paradoxically) Xavier Malbreil and Gerard Dalmon’s creation: taking a plurality back to an unspecified unity. On various levels and according to different manners, one has to carry out this exercise: I read the many writings left by other contributors on the site before I leave my own text (readings that I perform by looking at others’ writings, and also I write my own answers to the questions that are raised by the site); I try to understand and discover several writings in order to perceive the scheme that leads me through the whole *Book of The Dead* site. In this way I can juxtapose my specific time of immersion in the *Book* to the transient multiplicity of my external life, which exists outside the *Book* and yet is involved in the questions that it asks me, with the way in which words, pictures, and interactivity multiply, without our forgetting that we are in the unique and closed situation of being-in-front-of-the-screen, which is not without pointing out the problematic unity of being-in-the-world. In fact,

it is possible to overcome that convenient opinion according to which images would only illustrate words and words would only comment on pictures.

Now to come back to what we mentioned above, taking an unspecified plurality back to the unity of our intervention is what was always called reading, either in the printed tradition, or in the oral tradition (that has reading and listening merge into one another), or else through digital interactivity and data-processing. Then, what can be read in creations like *Book of The Dead*? As regards the verbal expression (apparently put aside), we do not only have the questions asked by the creators and programmers and the answers given by the readers, but also a series of poems—and very good ones, I might add.

Nevertheless, when one tries to sort out levels other than the verbal one, one is confronted with such heterogeneous elements as photography, cinema, video-art, sound creation, music, dance, theater, etc. On one hand, none of these elements can be reduced to another (i.e., they cannot be mistaken for one another), but what is more, they intermingle in such a convincing and harmonious way that omitting one of them would amount to losing all of the others. Still images (such as photographs) become animated and able to constitute series of displacements and changes, as is the case with cinema or dance; the interactions operated with the cursor and the displacements of objects are carried out in harmony with the background sounds. To tell the truth, this background comes to the surface of the screen to highlight a precise element and then another one, and so on, so that sounds and images produce a movement.

In fact, this mixture of significant elements is so complex that the best way to seize their more general meaning is to regard the *Book of The Dead* as a big stage, made up of characters (the most obvious objects), sets (places of interaction, such as the spaces that one fills in with the “pilgrims” answers, the icons that one clicks on, etc.), places and choreographic reference marks for the characters (transitions from a screen to another), actions (the effects of digital handling which emerge progressively; writing and interactivity gestures that we are invited to perform), dialogs (the interactions we can establish with and inside the pages and PHP fields), etc.

As a whole, the *Book of The Dead* offers a constant articulation between the multispatialization of the work and the ceaseless movements of the reader's perceptive-interactive field. It is precisely as one realizes that one is confronted with a multiple-spaces setting that one can go all over the allegedly isolated space of verbal expression again while seeking more in this *Book of The Dead* than the simple reading of poems as if they were the mere product of the poetic printing tradition. Even more important is the fact that each expressive gesture that one derives from or associates with the reading concerns the whole act of reading, with its dynamic objects, its digital interactions, its logics of graphic interface, etc. All these different elements are implied in every single isolated word. Besides, they are also implied in our most essential and human nature: our fearful hesitation regarding life and our fear of death. The *Book of The Dead* certainly makes us think about these questions, like any true artistic work; however, by inserting our words into a digital space, it also enables us to widen our verbal gestures while subjecting them to the same spacialization—the same interactivity that at the same time generates and erases the other elements.

TOWARD A RHETORIC OF BREVITY

In *Book of The Dead*, some verbal concision is added to the aforementioned settings; the questions raised by the system are short, direct, and brief. The answers are also limited by the speed of the interactions set, even if they are to be written in not-too-narrow PHP fields. One can distinguish these same concisions composing the frame of Xavier Malbreil and Gerard Dalmón's creation in other levels and elements, which gives it a minimalist aspect or one of complex simplicity. Let me explain my statement before you blame me for misusing paradoxes. One can speak of simplicity, because the sound motifs are only short musical phrases; some pictures change slowly and are in fact, indistinguishable from one another; there are very few chapters and possible connections between the various reading spaces. All these elements move away from the complex structures (and unnecessarily so, to speak the

truth) that one could see in the hyperfictions of the nineties. Everywhere in the *Book*, the elements that ceaselessly emerge and compose this frame of language, images, movements, and interactions let themselves be unified by this inaugural exiguity. Thus, there is a certain complexity in the way in which a given element is linked to or announced by another: a certain sound pattern can be found later in a sequence of images; one can reproduce that pattern while striking the keys of the keyboard or while typing one's answers in the appropriate fields; and the visual distribution of the elements on a given page can be found in another scene or in the way the verses of one of the poems, which the system sometimes shows, are organized.

Thus, in this *Book of The Dead*, the reader (or *pilgrim*) is confronted with an obvious limitation of means, strategies, and processes, which sheds light quite directly on the multiplicity of possibilities discussed earlier. However, it does not mean that it is a simplistic work—far from it! Altogether, more than in the majority of digital creations, the *Book* makes us see and try a “minimalism” made of expressive gestures: displacements and interactions using the cursor; synthetic writing of the answers, in which one can use the already usual abbreviations of “blog” language; the possibility of reproducing the rhythm of the verses, in the way one writes one's answers, etc. As a matter of fact, this expresses the reduction of potential infinitudes (caused by the ever-increasing speed of processors) and especially the reduction of material infinitudes (the processing of a huge amount of information in a very short lapse of time) in the digital medium, from the modest amplitude of our gestures in front of the computer, to the limitations of the screens and menus. In other words, we are facing here what could be described as an epigrammatic point of view on digital creation based on the way in which a few elements trigger a multiplicity of code lines and signifiers in the background, i.e., immaterialities that are hidden in the tiniest expressive gestures and that make them possible.

To some extent, this digital epigrammatic property is comparable to the singular relationship between an actor and the stage on which he performs to the multitude of people who constitute the audience: the audience becomes plural thanks to the actor, and the actor becomes singular thanks to the audi-

ence. Then, is it possible to consider that it is in a renewal of the epigrammatic writing that the digital medium could find its way out of the deadlocked relationship between words and images? The setting of this epigrammatic writing gives us access to the space of speech and pictures without forcing one to radically distinguish or definitely separate the former from the latter. There is no need to use images to illustrate words or words to comment on images any longer. As a matter of fact, it is a question of reversibility between pictures and words returning, inaugurating, and giving access to one another. Then, this *mise en scène* of words and pictures—through an epigrammatic rhetoric (which is also a *mise en scène* of the epigrammatic writing)—uses original expressive movements. Actually, these expressive gestures exceed many limits and limit some infinitudes. Let us make it clear: there is no little pun disguised as a paradox in this statement. Yes, it is about a play, not only of words, but of the play of artistic creation which, in fact, enables us to interact with and inside some digital works while updating the way in which they dialog with a certain literary tradition of the past: that of the epigrams. That ancient tradition no longer comes to haunt our reading, because, if I may say, it is renewed by the ways and possibilities opened by the digital medium. It is precisely through that “epigrammatizing” of digital creation that one can catch sight of the strategies that allow one to gather words and images, formerly confined and limited to this epigrammatic narrowness, in the same expressive fields. It may not seem much, but it is undoubtedly an achievement.

TEXTUAL MATERIAL IN THE DIGITAL MEDIUM

Alexandra Saemmer

Université Paris 8

1 INTRODUCTION

Text is a “*pleasure object*.” Denys d’Halicarnasse, the first person to theorize about sentences, postulated a diffuse value that is spread on the accumulation of words and their articulation (i.e., rhythmic value, respiratory value). The “content” of a text is actually indissociable from an irreducible “uncanniness,” from that energy which discourse has turned into writing. The poetic image does not define anything: the metaphor “sheds light on the meaning (monological function), but paradoxically, it does so ad infinitum (poetic function).”¹⁴⁵ The meaning of alliteration is partly conveyed by the sound *material* of text. A neologism constitutes an “erotic act,” as expressed by Roland Barthes.¹⁴⁶ That eroticism, that sensuality of the textual material, is reinforced in the digital medium, in which writing discovers new graphical, plastic, and tactile dimensions. The printing of the animated or hypertextualized material of a text would suffice to measure the influence of these new dimensions on the semantic field of the hyphen: what was said in *writing* would then be *spoken*; part of the message would be lost. An animated or hypertextualized text, provided that it is not based on a purely decorative union of its “substance” and “form,” gets a new meaning that we will explore in this article.

2 REFLEXIVE, IMMERSIVE, CONTEMPLATIVE READINGS

A great number of readers are now aware of the new graphical and plastic dimensions of the text in the digital medium. A survey made in 2006 with 596 students from the University Lyon 2 revealed two major sorts of “digital read-

ing.”¹⁴⁷ In the first case, the text is skimmed through. That kind of reading is based on a quick glance at the information, on a “frantic” navigation practice and on very fast eye-activity. Because it belongs to a process of collection and classification rather than to a reflexive practice, most subjects perceive that reading as superficial and it sometimes arouses great reluctance. The other type of reading belongs to an immersive, intuitive, and playful practice that is fervently supported by certain subjects. These subjects show a feeling for the graphic and plastic dimensions of a text that might result from their playing of video games. He/She *reads* and *watches*, he/she is enthralled by the energy inherent in animation and hypertextuality, by new forms of typography and spatial organization, which have the textual material included in the field of the visual arts, while giving the process of reading a whole new contemplative dimension. One student who participated in the survey, and who was resistant to the on-screen reading practice, stated that “text in the digital medium lacks a soul, because this latter lies in the paper,” while another one insisted on the palpable and easy to handle aspect of the digital text. He wrote, “The relation to the book-material disappears for the benefit of contact with a plastic dimension” with reference to the animation-related widening of the semantic field of the text. Actually, a text in the digital medium often includes a high percentage of nonverbal information, such as the cursor that indicates the presence of the reader in the text, or the description of the links, arrows, buttons, images, and animated movies. It is revelatory though, that a certain number of the subjects seem to respond positively to the graphic and plastic aspects of the *textual material* as displayed in the digital medium. For one of the students, the reading of the digital medium corresponded to the “interpretation of images.” “A web text is said to be watched,” emphasized another subject: “what is read is something else than pure text.”

3 A NEW SEMANTIC PROXIMITY BETWEEN WORDS AND IMAGES

Along with the spreading, the hypertextualization, and the animation of words and images in the digital medium, some readers and designers have

perceived the beginning of a new semantic proximity, maybe even a faithful translation, between words and images. In the notes on his creation *La Révolution à New York a eu lieu*, Gregory Chatonsky evokes his fascination for the common technical origin of text and image in the digital medium.¹⁴⁸ On the visible surface of the screen, the text and image also seem to share the same plastic qualities. Thus, in Reiner Strasser and M.D. Coverley's *ii—In the white darkness*, words come in between photographs and disappear in a jumble, symbolizing the fragmented memory of patients suffering from Alzheimer's disease.¹⁴⁹ Here, words and images do not only belong to the same graphical space, but they also melt into one another until they become indistinct. The summoning-up of images is regarded as one of the fundamental functions of our consciousness. In Reiner Strasser and M.D. Coverley's creation, words are perceived, handled, and "remembered" as images would be. The textual material appears and disappears on the interactive white page—it behaves both as "container" and "content."

Paul Valéry states that the painter brings his body into a painting. Usually, the sphere of materiality seems confined to images. The substance of color shines through them: "There is something deeply rooted in the world that survives in [the image], the source of which is the light coming from the outside."¹⁵⁰ The image thus benefits from its more immediate and intimate relation to things (for Cézanne, color is "the place where our brain and mind meet"). Unfortunately, it strives for "likeness by an unlikely covering up, strives in a vain act to resemble as much as possible something like the Thing: a process of recognition happens in the image, without ever being achieved."¹⁵¹ Most often there is but a single step from the process of recognition, which happens in the image, to the affirmation of a representative link ("Drawing is the thing"). In *Petits traités I*, Pascal Quignard asserts that "the characteristic of written signs is to avoid showing what they stand for. They signify, they rule over the unshowable."¹⁵² Theoretically, the word is not quite related to that futile will to look like "the thing."

When animated in a digital creation, the word acquires graphical qualities that did not belong to it before. Transported into "another stage," it rediscovers its "organic" nature and acquires a new "aura." Therefore, the temptation is

great to charge it with a new power of “likeness” of the designated thing. Thus, thanks to the analysis of some animated calligrammes, we will demonstrate that the influence of the textual material in the digital medium involves the risk of engendering the same process of recognition, forever unfinished, that is provoked by certain images.

4 ANIMATED CALLIGRAMMES

The calligramme forces the text to say what the drawing represents, explains Michel Foucault: on the one hand, letters are linear elements that we can arrange in space; the drawing that they form accounts for the lack of things that words cannot overcome. On the other hand, letters succeed one another in the logicotemporal reading order. Showing and naming, imitating and signifying, the calligramme pretends that it can clear the traditional opposition between word and drawing: signs are always outside of the thing that they name. A visible form is carved by writing, ploughed by words that work on it from the inside.¹⁵³ When one reads a traditional calligramme, that synchrony of showing and of naming reveals itself to be illusory: “the calligramme[s] never say and represent at the same time.”¹⁵⁴ The animation of the calligramme in the digital medium seems to enable the reader to push these limits: the movement described by words can be translated into a material movement without reducing the legibility of the text. The movement gives rhythm to the reading. It is an internal and synchronic process. As writing is freely disposed on the screen surface, it imitates the simultaneity of painting, which can express several things at the same time. As it is animated, it does not only strive to render mobile things sensitive on the level of their content, as is the case with writing, but it also inscribes that movement in the “container” level, i.e., the written material. Thus, written signs do not only signify, but they also show what they indicate. They function in the unshowable *and* in the showable. Sharing the same technical origin and the same qualities, texts and animated images enter new relationships. The traditional distinctions between two modes of “representation” seem to have become obsolete.

Xavier Malbreil suggests in his introduction to *10 poèmes en quatre dimensions* that “in a general way, that ensemble is meant to be discovered with the eyes, as well as with the hands.”¹⁵⁵ Click and double-click on every link that appears on the page: each page contains several surprises, “to read is to explore.” The reader goes through the textual blocks at the top of each page. In its center, he/she discovers sketches and animated words, and he/she observes their movement. As he/she clicks on the textual block to pass on to the following poem, the text becomes a graphical element: the reader does not act on the text by reading it, but by inflicting an action upon it—no matter the “content” of the textual block. What is provoked by clicking remains the same: the reader exits the original page to go to a new page on the website. As the reader clicks on the drawings and textual elements at the center of the page, he/she runs them in the same way as the textual blocks. His/her clicking does not provoke the same reactions on the visible surface of the work, though. The drawings and words are animated without making the reader go to a new page of the *10 poèmes en 4 dimensions* website. The function of the link on the textual blocks promises the discovery of the other nine animated poems. The activation of the drawings-related and texts-related links that are at the center of the page transforms the text into an animated calligramme. The text in motion is to be read *and* watched, it signifies and draws. Inversely, as they get animated, the drawings are not unveiled simultaneously any longer, but progressively; they are read as a text, i.e., in time.

5 LIMITS OF THE CALLIGRAMME

Is it because of these intersemiotic “contaminations” between texts and images that Xavier Malbreil named his creation *10 poèmes en quatre dimensions*? In his introduction to *10 poèmes*, the author indicates one of his inspirations for that work: Plato’s *Cratylus*. In the passage cited by Xavier Malbreil, Socrates is discussing the origin of words with Cratylus and Hermogen: are they formed by the essence of things as Cratylus advances, or are they pure invention, as Hermogen believes them to be? “Quand les mots ne faisaient

qu'un avec les choses" is the textual block that is displayed on the first page of *10 poèmes en quatre dimensions*.¹⁵⁶ The dream of a mythical era is outlined, a time when a stable and *essential* contract, a magical correspondence between words and things, was supposed to exist. The childhood of humanity is a reassuring belief that Michel Foucault describes in his book *Les Mots et les choses*: "The world was winding on itself: the earth repeating the sky, faces reflected in the stars, and grass wrapping in its stems the secrets that were useful to mankind. Painting mimicked space. And the representation—either a celebration or sheer knowledge—was giving itself as repetition: theatre of life or mirror of the world, that was the title of every language."¹⁵⁷ Both words and images were useful in any representation, they both constituted mirrors to the world in the sense of a doubling of their presence: they were drawing a reality already existing. If words and things were one and if language was the mirror of the world, the visibility of the world was considered obvious.

In the texts from *10 poèmes en quatre dimensions*, Xavier Malbreil evokes that myth nostalgically: he puts it to the test by means of drawings and animated texts. While the text introducing *10 poèmes* yearns for a *stable* link between words, images, and things, the center of the page sets words and images into motion, and then stages the flaws of that myth. The word "*nuage*,"¹⁵⁸ written in the shape of a cloud, goes through the mist in which lies the triangular schema of human communication. Next to that word, one can notice the word that describes the activity of the "*nuage*" icon: "*nage*."¹⁵⁹ "*Nage nuage*" sounds like a child's rhyme. It is likely to reassure us of the coherence between the driving activity of the cloud, its "cloudy" aspect, and the cloud "thing." The magic of a new correspondence—between the word and the thing, between the image and the thing, between three elements which, throughout centuries, were "running after one another" without ever meeting—that magic thus seems to be operable in the animated space of the web page. The word "*nuage*" has taken the shape of a cloud. The word "*nage*" has started to swim. The cloud image has taken the shape of the word. The animated word has embodied the driving activity. Each mode of representation rubs off another one, giving up some of its qualities to the next. What Walter Benjamin calls a "cloudy spot" [*wolkige*

Stelle] is that point in a text when the incomprehensible springs up, at least in the sudden suspension of the statement and the disorientation produced by the apparent noninsertion of a fragment in the whole. Do we get access to a reality other than that of the text through that “cloudy spot?” Is it through the contamination between the word, the image, and the movement drawn and triggered by the interaction that “cloudy” spots form in the digital creation between the different systems of signs—*wolkige Stellen* that would give us access to a new “dimension?” “Nage nuage,” sweet rhyme, sung in a childhood dream. Actually, the drawing proves to be one made by an adult. The unity between the word and the “cloud” thing is not as fixed as the introductory text suggests it is. The “cloud” word, while imitating its color and texture, does not melt into the shape of the indicated object—the word that points out the activity of the object is separated from its “container.” The ensemble is in perpetual motion: “container” and “content” follow each other closely, and yet they never meet. The cloud “thing” never takes the shape of the “cloud” word, even if that latter imitates the color of a cloud, thus suggesting an immersion in the material world. A word never draws cloudy letters in the sky; neither does it water the earth with a rain of words. The animation of the page only stops as the word “nuage” is clicked upon: the mist disperses, the stage freezes. A communicational triangle seems to spread, in which a perfectly transparent language flows, eventually naming things without any interference. In the corners of the screen gather the following words: “Quand il n’y avait”—“Ni contenu”—“Ni contenant.”¹⁶⁰ The dream of a new world (i.e., before the division between the “form” of a word and the “meaning” that it conveys) is outlined. The price to pay to make this dream come true, a perfect match between content and container, the meaning of a word and its envelope, seems to be the freezing of any motion. If the reader updates the page, the “cloud” container starts to go through space again, integrating content without exhausting its meaning. In the animated part of this poem, it is thanks to the separation of “content” from “container” that the cloud icon is able to contain the word that it indicates, that “cloud” is able to swim at its side, and the entire scene gets animated. On the contrary, the interaction between the drawer, the author of the text, and the

reader impedes communication. As soon as the reader has clicked, the mist disperses on the communicational triangle. The flow of the meaning, which was the source of all communication, stops.

Calligrammes and onomatopoeias are usually used to give “substance” to words. Onomatopoeias strive to imitate the “things” they point out with sound effects. The hissing of the snake that is coiled around the tree of knowledge in poem 7 is translated by Malbreil with the following letters: “b-z-z-z-z.” As we pronounce them, we only *imitate* the sounds given by a snake. Even as we read them, that hissing remains imaginary. Let’s click on the textual block on page 2 in *10 poèmes en quatre dimensions*: while a written cloud had gone through the communicational mist on the previous page, it is now a wind made out of letters, a “w-i-n-d,” that sweeps the textual zones in the middle of the screen away. “Quand les mots contenaient l’action” comments on the text that accompanies the animation.¹⁶¹ Again, the animation shows only part of this intention: although the words “*choux*”—“*choux*,” going through the page in the same way as the coming and going of the “w-i-n-d,” actually imitate the whistling of the wind, they also get a double meaning when they are displayed.¹⁶² The reader cannot help associate the onomatopoeia “*choux*” to the vegetable that bears the same name (*cabbage*).¹⁶³ The onomatopoeia reveals itself to be polysemous and to have “improper” relations to the thing it tries to imitate.

In the same way, the picture of a cloud seems to have a more direct link to its meteorological referent than the word *cloud* itself. When the word *cloud* puts on “cloudy” shapes and colors, and when the drawing of a cloud takes the shape of a word, they form calligrammes. Usually, the calligramme has the text say what the drawing represents. With Xavier Malbreil, the calligramme discovers that it has a new quality—animation. Malbreil’s “animated” calligrammes remedy the fixity and the “simultaneity” of drawings and inscribe them into the logicotemporal process of reading. The word *cloud* that goes through the screen in the same way as a “real” cloud, or the “w-i-n-d” that messes up the organization of the page, have but to be *read* to be understood: at this precise moment, the two systems of signs jostle together. Despite its cloudy contours and colors, *cloud* remains a simple word. The word that describes the move-

ment of the cloud is floating behind the animated calligramme without ever melting into that latter. The word and the image are in permanent tension with the “thing” they describe without ever meeting it. In the digital medium, the process of recognition provoked by the animated calligramme is not brought to a successful conclusion.

6 TOWARD THE OPENING OF THE SEMANTIC AND GRAPHIC POTENTIAL OF THE TEXT

Although the hypertextual animated work of the digital medium attempts to create “surface” effects, it does not always fall into the mimetic trap that characterizes *10 poèmes en 4 dimensions*. Some designers try to widen the semiotic fields of language without hunting down a mythical common origin of the word, image, and thing. They let the animated calligramme lie behind them, exploring the semantic and graphic potential of text in wider and more open semantic fields.

Vingt ans après, a hypertextual and kinetic narrative inspired by some of Sophie Calle’s texts, was published on the website of the collective *Panoplie.org*.¹⁶⁴ The main stake of that creation is representative of Sophie Calle’s approach: the artist has hired a private detective to have herself followed for a whole day. Three forms of “narrative” of that shadowing are juxtaposed online. After the last page, which bears an ensemble of fragments signed “I,” the author gives us access to the detective’s report and to some of his photographs, in the shape of an appendix. Whereas the detective’s photos and report only take into account S. Calle’s character’s “external” world, the animated textual pages seem to fill these contours with a real “intimate” life. The reader of *Vingt ans après* is perhaps seduced by the effect produced by the announcement of time schedules in a browser bar, which enables the activation of textual fragments in a chronological order and from left to right, from 10.38 a.m. to 21.10 p.m. He/she may also consult the fragments in whatever order pleases him/her. Finally, he/she may leave the browser bar aside and activate “sensitive” areas embedded in each textual fragment.

Hypertextuality-based and animation-based “mimetic” processes are not totally absent from *Vingt ans après*. In fragment “11,” sentences that deal with S. Calle’s visit to the Cimetière Montparnasse are displayed without being troubled by any movement. Shaped as a stable and regular square, the text has acquired the fixity of a tombstone. One clicks on the text and slips to a new sub-fragment: the square of the preceding text quickly grows smaller, apart from three lines that are always late in following the general movement. Divided into enormous letters, at first illegible because of their size, a new text superimposes faster and faster on the preceding one, which never ceases to grow smaller. S. Calle’s walk to the Cimetière Montparnasse, which is recounted in the text, has a precise aim: the “I” visits the future family tomb. The father, divorced from his first wife, will be buried in this tomb with his “new” wife. S. Calle’s mother, less fortunate, will not rest here. S. Calle finally decides to “say her farewells” to the family tombstone: considering the place too narrow for two, “Madame Calle,” the “I” in *Vingt ans après*, renounces its place. Three hypothetical dead bodies are juxtaposed within a single tomb, three lines detaching from their environment. A lack of space is created in the grave: the textual square grows smaller. The decision is made, the farewells are bid: the textual square disappears. Like the classical calligramme, certain animations in *Vingt ans après* thus seem to trap the text in a double written form.

7 THE METONYMIC ACTION OF HYPERLINKS

Other processes remind us of mimetic rhetorical figures of a classical style. Sometimes, a word is put forward in the middle of an animated textual block. Alternatively, loosening from or coming close to the environing textual surface in a regular movement, such a hypertextualized element, underlined or given another color, creates a surprise effect: it announces the slip to other texts. In the middle of the fragment assigned to “11 o’clock” (“I” walk to the Cimetière Montparnasse), for example, the textual element “73 boulevard du Nord” detaches itself from the textual environment with a regular pulsing movement. “73 boulevard du Nord” announces a textual fragment which is displayed as

soon as the reader has clicked on it—it will be “equal to” the expected passage to the “boulevard du Nord,” and will partly represent a new fragment of *Vingt ans après* available by clicking. This assimilation of the wholeness to a part reminds us of the action of *metonymy*. Whereas in classical rhetoric the reader has to content him/herself with the *suggestion* of a whole (for example in the expression “yellow jersey,” “France has decided”), in the digital medium the reader has access to the “whole” by activating a hypertext link.

8 METALEPTIC EFFECTS

The passage to the “boulevard du Nord” is taken by “I.” S. Calle passes from one path to the Cimetière Montparnasse to another one; as he/she clicks, the reader passes from one textual fragment to another. For a short moment, the driving activities of the walker and of the reader meet. We may call that “intrusion of the narrator or of the extradiegetical narratee in the diegetic universe” an *interactive metalepsis*.¹⁶⁵ This mimetic process is not only characteristic of the digital medium. Lawrence Sterne already solicited the reader’s intervention by asking him to close a door, or to help Ms. Shandy to go to bed. On paper, the reader’s activity has to remain imaginary. In the digital medium, the reader “materially” pushes doors open by activating a part of his body: he clicks. Even more than on paper, these interactive effects point out the “importance of the limit they strive to transgress in defiance of verisimilitude, which is narration (or representation) itself; a shifting borderline, though sacred, between two worlds: that in which we tell, that which is told.”¹⁶⁶

9 ANIMATED HYPOTYPOSES

In the fragment “11 heures,” the textual element “73 avenue du Nord” slowly detaches itself from the textual surface in regular movements. It is also emphasized by what I propose to call an *animated hypotyposis*. A hypotyposis is a “description or narrative that does not only strive to signify an object by means of the language, but it also strives to touch the imagination by means

of imitative or associative stratagems.”¹⁶⁷ The movement of the text seems to suck up the reader’s hand; it imitates the driving activity that it suggests on a diegetic level. It opens a way—less fixed than the rest of the text, thus the element gives way to desire. The hypotyposis belongs to that kind of processes that “circumventing Saussure’s dogma in various ways, stimulate the plastic and mimetic resources of language.”¹⁶⁸ On paper, the author is thus able to describe battles by using battalions of words, cavalcades by means of galloping syllables and onomatopoeia. On screen, as we have already noticed in Xavier Malbreil’s *10 poèmes en 4 dimensions*, the animated words can materially gallop in every direction.

10 METAPHORICAL ANIMATIONS

Vingt ans après by Sophie Calle demonstrates that the animated hypotyposis is not always synonymous with redundancy. In fragment “12.43,” we notice that interactive metonymies, animated hypotypeses and narrative metalepses unite in more complex semantic systems. Semi-transparent, suggestive and reactive, the text appeals to transgression—suggesting the Intimate, it gives itself, but painfully—it is a kind of *mise-en-abyme* of the reader’s curiosity, both welcoming him/her and deceiving him/her. The fleetingness of the text makes it resistant to decoding, and once it is decoded, the secret that is revealed is not proportional to the effort required. Some textual animations in *Vingt ans après* thus seem to defy any reduction to a purely mimetic study. The opening of the semantic field that is provoked by these animations should rather be called “metaphorical.” It announces extremely fruitful fields of study for the years to come.

One should wonder whether the term “metaphor” is really appropriate to qualify what is happening on the semantic level as a hypertext link is activated. The successful metaphor provokes “a merging as well as a transport,” as formulated by Paul Ricoeur.¹⁷¹ Thus, the hypertext link, making texts and contexts merge in multiple configurations, seems to carry the meaning of the hyperlinked word to new semantic fields. Nevertheless, the main char-

acteristic of the metaphor remains its “being like,” abandoning the *merging* and the transport on to a purely “imaginary” level. The power of a traditional metaphor such as: “sleep is a petrifying fountain,” thus lies in the merging of the nouns “sleep” and “fountain” with the adjective “petrifying” in a single syntactic context. A hypertext link between “sleep” and “fountain” would have the reader discover the first half of the sentence, and then the second one—it would thus belong to the category of *metonymy*. For that matter, in a more up-to-date publication, Jean Clément points out that the hyperlinked word is instead given a metonymic value: “it looks like the representative of the text to come.”¹⁷² Whereas metonymy characterizes the transposition of meaning that is effectuated when a hypertext link connects a word to the textual fragment it is supposed to “represent,” in the digital medium, metaphor finds a new area of application in the field of *animation*.

In *Vingt ans après*, textual animation enters more complex synaesthesia in the narration of the story: appearing and disappearing according to repetitive rhythms, drawing monotonous movements, certain textual strata establish themselves as “idées fixes”; others, more flexible, pass by and fade away, increase and decrease in time; detach themselves, attach themselves again; others get pierced and eaten away by time; sink into oblivion; change directions; resurface; lighten and fly. The animation, acting upon the text as only metaphor is able to do, transforms the meaning of the words; intensifies it, highlights it, contradicts it or nuances it indefinitely, on the visible surface of the screen.

The distinction has to be made between animated metaphor and “syntactic animation,” used for example in Philippe Bootz’s digital creations, where “the permanent movement of letters and words constantly modifies the syntactic structure and creates new words by addition or distortions in the groups of letters.”¹⁷³ While the representative powers of language are radically put into question by the syntactic animation, a belief in its *evocative* powers endures in animated metaphors. Through the switching on of the semantic and graphical dimensions, an unspeakable “essence” of the Real suddenly appears. That quest for “another stage” is nevertheless very different from that which is set

out in the animated calligramme. The animated metaphor does not hunt down the thing it deals with twice. For example, let's look at the animated "rain of words" in fragment "14.45" in *Vingt ans après*: admittedly, the text does inform us of a coming rain. But the falling of the words also anticipates the tears of an artist, a friend of Sophie Calle's. Besides, the rain/falling of the words pierces, with every click, the moving reliefs of a text, symbolizing an ever-changing memory. The sense of that animation will not be reduced to an imitation of a meteorological phenomenon. The flow of meaning is neither closed nor fixed as in a classical calligramme.

By comparing Sophie Calle's *20 ans après* with Xavier Malbreil's *10 poèmes en quatre dimensions*, we note then that the nature of the difference between metaphors and animated calligrammes is mainly "ideological." Stimulating the plastic resources of language, *Vingt ans après* never falls within a mimetic approach, or within the utopia of a new common ground for words and things in the digital medium. Far from putting into question Saussure's dogma of the arbitrariness of the (linguistic) sign, digital creation stages the possibilities—and the deep impossibility—of transcribing memory and the presence of the Intimate. Taking advantage of computer memory to inscribe its work in time, past time is never caught up with the moving letters. The metaphorical relationships between animation and text only *suggest* these encounters, although they never set them. While they shed light on the meaning of words, they do it endlessly. Among numbers, words, and movements, the artist's Intimate remains elusive. *Vingt ans après* thus constitutes a digital Text in the true sense of the word, a semantic and graphic tissue where the intimate merging of form and meaning is brought to its limit.

WORKS CITED

- Aarseth, Aspen. *Cybertext: Perspectives on Ergodic Literature*. Baltimore: John Hopkins University Press, 1997.
- Andrews, Bruce. "Praxis: A Political Economy of Noise and Informalism." In *Close Listening: Poetry and the Performative Word*, edited by Charles Bernstein, 75-77. Oxford: Oxford University Press, 1998.
- Bailey, Stacey et al. "Review of *Reagan Library*." Accessed on January 31, 2006.
- Baldwin, Sandy. "A Poem Is a Machine to Think With: Digital Poetry and the Paradox of Innovation." *Post-Modern Culture* 13 (2003). <http://www3.iath.virginia.edu/pmc/text-only/issue.103/13.2baldwin.txt>. Accessed on March 30, 2010.
- Balpe, Jean-Pierre. "Méta-auteur." *alire10/DOC(K)S 3.13/14/15/16* : 95-99. Print. 1997. _____. *Contextes de l'art numérique*. Paris: Hermès, 2000.
- Barthes, Roland. *Sade, Fourier, Loyola*. Paris: Seuil, 1971.
- Beiguelman, Giselle. *Poetrica*. 2003-2004. Accessed on March 11, 2009.
- _____. "Nomadic Poems." In *Media Poetry: An International Anthology*, edited by Eduardo Kac. Bristol, UK and Chicago: Intellect, 2007.
- Benjamin, Walter. *L'œuvre d'Art à L'époque de Sa Reproductibilité Technique*. Translated by Maurice de Gandillac. Paris: Allia, 2003.
- Biggs, Simon. "Book of Books I." *Littlepig.org.uk*. Accessed on December 1, 2003.
- _____. "Information." *Littlepig.org.uk*. Accessed on December 1, 2003.
- Blanchot, Maurice. *The Space of Literature*. Lincoln, London: The University of Nebraska Press, 1982.
- Bolter, Jay. D. *Writing Space: The Computer, Hypertext, and the History of Writing*. New Jersey: Lawrence Erlbaum, 1991.
- Bootz, Philippe. "l'Œuvre Signe." *Texte Digital* no. 5. Web. December 2007. <http://www.textodigital.ufsc.br/num05/bootz.htm>. Accessed on November 20, 2010.
- _____. "Der/Die Leser; Reader/Readers." In *p0es1s. Ästhetik digitaler Poesie/ Poetics in the Digital World*, edited by F. Block, C. Heibach, and K. Wenz, 93-121. Ostfildern: Hatje Cantz Verlag, 2004.

- _____. "Un Modèle Fonctionnel des Textes Procéduraux." *Les cahiers du CIRCAV* no. 8 (1996): 191-216.
- _____. "Le Modèle du 'Texte Lié.'" *ALW-CAHIER: Literatuur en nieuwe media* no.23 (2002): 12-69.
- _____. "The Problematic Of Form. Transitoire Observable, A Laboratory For Emergent Programmed Art." *Dichtung-Digital*. Translation assistance by Loss Pequeno Glazier. Accessed on July 20, 2009.
- _____. "Profondeur de Dispositif et Interface Visuelle." *Les Cahiers du Circav* no 12 (2001): 81-101.
- _____. "Trois Rapports Entre Œuvre et Interface." @archivesic. Accessed in June, 2006.
- _____. "Formalisation d'un modèle fonctionnel de communication à l'aide des technologies numériques appliqué à la création poétique." PhD diss., Université Paris 8, 2001.
- Burnett Robert, and Marshall, P. David. *Web Theory: An Introduction*. London and New York: Routledge, 2003.
- Calvi, Licia. "'Lector in rebus': The Role of the Reader and the Characteristics of Hyperreading." In *Hypertext '99: Proceedings of the Tenth ACM Conference on Hypertext and Hypermedia*, edited by Klaus Tochtermann et al., 101-9. New York: ACM Press, 1999.
- Cayley, John. "The Code is Not the Text." In *p0es1s. Ästhetik digitaler Poesie/Poetics in the Digital World*, edited by F.W. Bloch et al. Vienna: Triton, 2004.
- Clement, Jean. "Du texte à l'hypertexte: vers une épistémologie de la discursivité hypertextuelle." In *Hypertextes et hypermédias: Réalisations, Outils, Méthodes*, edited by Jean-Pierre Balpe, Alain Lelu, and Imad Saleh. Paris: Hermès, 1995.
- _____. "Fiction interactive et modernité." *Littérature* no. 96 (December 1994).
- Costa, Mario. *Le Sublime Technologique*. Translated by Vera Müri-Andina. Lausanne: IDERIVE, 1994.
- _____. *Internet et globalisation esthétique: l'avenir de l'art et de la philosophie à l'époque des réseaux*. Translated by Giordano Di Nicola. Paris: L'Harmattan, 2003.
- Crystal, David. *Language and the Internet*. Cambridge: Cambridge University Press, 2001.

- Damon, Maria. "Alan Sondheim's Internet Diaspora." In *Diasporic Avant-Gardes: Experimental Poetics and Cultural Displacement*, edited by Carrie Noland and Barrett Watten. New York: Palgrave Macmillan, 2009.
- Dinsmore, Claire. *The Dazzle as Question*. Accessed on March 20, 2009.
- Eco, Umberto. *The Role of the Reader: Exploration in the Semiotics of Texts*. Bloomington: Indiana University Press, 1979.
- Foucault, Michel. *Ceci n'est pas une Pipe*. Paris: Fata Morgana, 1973.
- _____. *Les Mots et les Choses*. Paris: Gallimard, 1966.
- Funkhouser, Christopher T. *Prehistoric Digital Poetry: An Archeology of Forms, 1959-1995*. Tuscaloosa: The University of Alabama Press, 2007.
- Galloway, Alexander. *Protocol*. Cambridge, MA: The MIT Press, 2004.
- Genette, Gérard. *Figures III*. Paris: Seuil, 1972.
- Glazier, Loss.P. *Digital Poetics. The Making of E-Poetries*. Tuscaloosa: The University of Alabama Press, 2002.
- Hafner, Katie, and Matthew Lyon. *Where Wizards Stay Up Late: The Origins Of The Internet*. New York: Simon & Schuster, 1996.
- Hayles, Katherine N. *Electronic Literature: New Horizons for the Literary*. Notre Dame, IN: Notre Dame University Press, 2008.
- _____. "Mapping and Navigation in Reagan Library." Unpublished paper.
- _____. *Writing Machines*. Cambridge, MA: MIT Press, 2002.
- _____. *My Mother Was A Computer: Digital Subjects and Literary Texts*. Chicago: The University of Chicago Press, 2003.
- Heidegger, Martin. *Poetry, Language, Thought*. New York: Harper & Row, Publishers, 1975.
- _____. *Off the Beaten Track*. Translated by Julian Young and Kenneth Haynes. Cambridge: Cambridge University Press, 2002. Originally published as *Holzwege* (Frankfurt: Vittorio Klostermann, 1950).
- Hofstadter, Douglas R. *Gödel, Escher, Bach: An Eternal Golden Braid*. New York: Basic Books Inc., 1979.
- _____. *Gödel, Escher, Bach: les Brins d'une Guirlande Eternelle*. Translated by Jacqueline Henry and Robert French. Paris: InterEditions, 1985.

- Ingarden, Roman. *The Literary Work of Art*. Translated by George G. Grabowicz. Evanston, Illinois: Northwestern University Press, 1973.
- Johnson, Steven. *Interface Culture*. San Francisco: HarperEdge, 1997.
- Jimenez, Marc. *Qu'est-ce Que L'esthétique?* Paris: Gallimard, 1997.
- Kac, Eduardo. "Holopoetry." In *Media Poetry*, edited by Eduardo Kac. Bristol, UK and Chicago: Intellect, 2007. Print.
- Karpinska, A. "Shadows Never Sleep." *Shadows Never Sleep*. 2008. Accessed on April 30, 2009.
- Kendall, Robert. *A Life Set for Two*. Watertown, MA: Eastgate Systems, 1996.
- Landow, George. *Hypertext: The Convergence of Contemporary Critical Theory and Technology*. Baltimore: The Johns Hopkins University Press, 1991.
- Larsen, Deena. "Carving in Possibilities." *Frame 6: Net: Spirit*. 2001. Accessed on December 14, 2003.
- Lee, Shuen-shing. "How Do I Cool Down the Overheated Medium?: Reading Stuart Moulthrop's *Hegirascope 2*, 'the most typical hypernovel.'" *Dichtung-digital* 2005. Accessed on May 1, 2006.
- Lessig, Lawrence. *Code and Other Laws of Cyberspace*. New York: Basic Books, 1999.
- Malloy, Judy. *Its Name Was Penelope*. Watertown, MA: Eastgate Systems, 1993.
- Marinetti, Filippo Tommaso. *Marinetti: Selected Writings*. Edited by R.W. Flint. Translated by R.W. Flint and A.A. Coppotelli. New York: Farrar, Straus, and Giroux, 1971.
- Manovich, Lev. *The Language of New Media*. Cambridge, MA: The MIT Press, 2001.
- _____. "New Media from Borges to HTML." In *The New Media Reader*, edited by Noah Wardrip-Fruin and Nick Montfort, 13-25. Cambridge, MA & London: The MIT Press, 2003.
- Memmott, Talan. "Lexia to Perplexia." *Iowa Review Web*. 2000. http://collection.eliterature.org/1/works/memmott_lexia_to_perplexia/index.html. Accessed on November 20, 2010.

- Merleau-Ponty, Maurice. *Phenomenology of Perception*. London and New York: Routledge, 1994.
- mez. *Datableading*. 2001. Accessed on May 13, 2007.
- Micolet, Hervé. "Peinture et littérature chez Yves Bonnefoy." In *Littérature et peinture*, compiled by Serge Gaubert et Radu Toma, 15-58. Bukarest: Presses Universitaires de Bukarest, 2003.
- Morris, Adalaide, and Swiss, Thom. *New Media Poetics: Contexts, Technotexts, and Theories*. Cambridge, MA: The MIT Press, 2006.
- Mottram, Eric. *The Triumph of the Mobile: The Structure of Information, the Language of Computers and Contemporary Poetry*. London: Writers Forum, 2000.
- Moulthrop, Stuart. *Hegirascope 2*. 1997. Accessed on March 1, 2006.
- _____. *Reagan Library*. Jan. 1999. Accessed on March 1, 2006.
- Murphie, Andrew. "I'm Not Joking—Lacanian Nostalgia Ain't What It Used To Be," *Film-Philosophy* 2, no. 37 (November 1998). <http://www.film-philosophy.com/vol2-1998/n37murphie>. Accessed on March 30, 2010.
- Nabokov, Vladimir. *Speak, Memory: An Autobiography Revisited*. New York: Vintage Books, 1989.
- Nelson, Theodor Holm. "A File Structure for the Complex, the Changing, and the Indeterminate." In *The New Media Reader*, edited by Noah Wardrip-Fruin and Nick Montfort, 133-146. Cambridge, MA & London: The MIT Press, 2003.
- _____. "Proposal for a Universal Electronic Publishing System and Archive (from *Literary Machines*)." In *The New Media Reader*, edited by Noah Wardrip-Fruin and Nick Montfort, 441-462. Cambridge, MA: The MIT Press, 2003.
- Paloque-Berges, Camille. *Poétique des codes sur le réseau informatique: une investigation critique*. Lyon, France: Editions 21, 2006.
- Poster, Mark. *The Mode of Information, Poststructuralism and Social Context*. Cambridge: Polity Press, 1990.
- Quignard, Pascal. *Petits Traités I*. Paris: Maeght Editeur, 1990.

- Reagan, Ronald. "Address to the Nation on Defense and National Security." *Historical Documents*. CNN. 1983. Accessed on January 31, 2006.
- _____. "Reagan's 'Star Wars' Speech." (Introduction to Reagan's Speech). *Historical Documents*. CNN. Accessed on January 31, 2006.
- Ricoeur, Paul. *La Métaphore vive*. Paris: Seuil, 1976.
- Rieder, Bernhard. Introduction to "Traitement du savoir par les Agents Informationnels." Masters thesis, Université Paris-8, 2003.
- Ruyer, Raymond. *La Cybernétique et l'origine de l'information*. Paris: Flammarion, 1954.
- Simanowski, Roberto. "Digital Literature." *Dichtung-digital* 2004, no. 2. Accessed on January 3, 2006.
- Sondheim, Alan. "Knowledge-Flux." *Perforations* 3. Accessed in 1992.
- _____. "Future-Culture." *Art Papers*. Accessed in April and May, 1995.
- Smith, Gene. "Folksonomy: Social Classification." *Atomiq*. 3 Aug 2004. http://atomiq.org/archives/2004/08/folksonomy_social_classification.html. Accessed on March 30, 2010.
- Snow, C.P. *The Two Cultures*. New York: Cambridge University Press, 1993.
- Sobchack, Viviane C. *Screening Space: The American Science Fiction Film*. New York: Ungar, 1987.
- Shannon, Claude, and Weaver, Warren. *A Mathematical Theory of Communication*. Champaign: University of Illinois Press, 1963.
- Stefans, Brian K. "The Dreamlife of Letters." *Ubu.com*. Accessed on March 27, 2003.
- Strehovec, Janez. "The Moving Word." In *Cybertext Yearbook 2000*, edited by Markku Eskelinen and Raine Koskimaa, 100-116. Saarijärvi, Finland: The Research Centre for Contemporary Culture, 2001.
- _____. "Attitudes on the Move: On the Perception of Digital Poetry Objects." In *CyberText Yearbook 2002-2003*, edited by M. Eskelinen and R. Koskimaa, 39-55. Saarijärvi, Finland: The Research Centre for Contemporary Culture, 2003.
- _____. "New Media Art as Research: Art-making Beyond the Autonomy of Art and Aesthetics." *Technoetic Arts* 6, no. 3 (2008): 233-250.
- Suhamy, Henri. *Les Figures de style*. Paris: Puf, 1981.

Waldrip, Fruin et al. "Screen Profile." *Cave*. Accessed on February 3, 2009.

Wark, Mckenzie. *A Hacker Manifesto*. Cambridge, MA: Harvard University Press, 2004.

Wiener, Norbert. *The Human Use of Human Beings: Cybernetics and Society*. New York: Avon Books, 1967.

Zervos, Komninos. "Beer." *Cyberpoetry Underground*. Accessed on October 18, 2007.

CONTRIBUTORS

Philippe Bootz is an Assistant Professor of Hypermedia and Multimedia at the University of Paris 8. He holds PhDs in Physics and Sciences of Information and Communication and is the cofounder of L.A.I.R.E, a French collective in digital literature and Transitoire Observable, an international collective in programmed poetry.

Sandy Baldwin is an Associate Professor of English and Director of the Center for Literary Computing at West Virginia University. He received his PhD from New York University and is a Fulbright Scholar. As Director of the Center for Literary Computing, he facilitates interdisciplinary research projects in the poetics of new media and the media ecology of literary institutions, using web-technologies, multimedia, hypertext, audio/video, and virtual environments.

Eugenio Tisselli is a programmer and digital artist. He is Professor and Co-director of the Master in Digital Arts at the Pompeu Fabra University, Barcelona. His fields of research include digital narratives, interface design, and digital ethnography.

Camille Paloque-Bergès, after studies in Comparative Literature during which she researched French and North American experimental poetry, now investigates vernacular creativity on the Internet for a PhD at Université de Paris VIII (Laboratoire Paragraphe), France.

Shuen-Shing Lee teaches in the Department of Foreign Languages and Literatures at the National Chung Hsing University, Taiwan. His research interests include digital literature and game studies. Lee has published two novels.

Janez Strehovec received his PhD in Aesthetics from the University of Ljubljana, Slovenia in 1988. Since 1993, he has been working as the principal researcher at research projects on cyberarts, digital literature, and the Internet culture. As an Associate Professor for New Media, he is affiliated with the University of Ljubljana and the University of Primorska. Koper is the author of seven books in the field of cultural studies and aesthetics published in Slovenia.

Alckmar Luiz dos Santos has a PhD in History and Semiology of Texts and Images from Université de Paris VII (1993). Currently he is a literature professor at the Federal University of Santa Catarina, and his research subjects are literary theory, literature and computing, literature and philosophy, and text theory. He is also a poet, novelist, and essayist.

Alexandra Saemmer is Associate Professor of Information and Communication Sciences at the University Paris 8. She is author and editor of several books and articles on electronic literature and arts, digital semiotics, and the relationship between contemporary literatures and arts. Her books include *Matières textuelles sur support numérique* (2007), *E-Formes 2: Les arts et littératures numériques au risque du jeu* (2010, co-éditeur), *E-Formes 1: Ecritures visuelles sur supports numériques* (2008, co-editor), *Les lectures de Marguerite Duras* (2005, co-editor), and *Duras et Musil* (2002). She is also author of e-poetic creations: <http://www.mandelbrot.fr>.

NOTES

- 1 Nelson, “A File Structure for the Complex, the Changing, and the Indeterminate,” 144.
- 2 Nelson, *Literary Machines*, 445.
- 3 According to the www.thefreedictionary.com, “constraint” means “the act of constraining; the threat or use of force to control the thoughts or behavior of others.” In spite of such an oppressive definition, the members of OULIPO found that precise constraints gave them great freedom—the freedom of moving within a territory where the rules and limitations are perfectly clear.
- 4 Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid*, 673.
- 5 http://www.foo.be/docs/tpj/issues/vol5_1/tpj0501-0012.html, accessed on 03/30/2010.
- 6 Derived from the song “The Invocation,” by Jim Steinman.
- 7 Regarding the cases where they are mistaken for human replies, we can mention Turing’s test, which basically consists of trying to distinguish if a speaker in a conversation is a person or a machine. Turing’s test provides an indicator, among other things, of the level of sophistication of a computer system.
- 8 A well-known example of which can be found at <http://www.elsewhere.org/cgi-bin/postmodern>, accessed on 03/30/2010.
- 9 Editor’s note: The author is referring to the tradition of Chomsky’s linguistic theories, in which he argues that humans are born with some sort of “language engine,” which permits us to acquire and develop the capacity for language.
- 10 Definition taken from <http://www.macmillandictionary.com/>, accessed on 03/30/2010.
- 11 The concept of “seed” is linked to the generation of random numbers in a computer. The seed is an initial number from which the computer obtains a series of (apparently random) numbers, based on different mathematical algorithms.
- 12 The Altavista (<http://www.altavista.com>, accessed on 03/30/2010) search engine is used in this case. Anyone familiar with Altavista or similar search engines will know about the enormously diverse and disparate results.

- 13 One of the bigger projects currently being developed to create taxonomies and classifications on the Internet is the “semantic web,” which can be seen as an attempt to create a dictionary of metadata that can be associated to any web page in order to describe its content. More about this subject at <http://www.w3.org/RDF/>, accessed on 03/30/2010.
- 14 <http://www.softcinema.net>, accessed on 03/30/2010.
- 15 For example, “sitio*TAXI, canal*GITANO, canal*INVISIBLE, canal*ACCESSIBLE” by Antoni Abad.
- 16 The first time the word “folksonomy” was used publicly is documented in Smith, Gene. “Folksonomy: Social Classification.”
- 17 In English, this title translates to “The too-many-books.”
- 18 Jimenez, *Qu'est-ce Que L'esthétique?*, 25.
- 19 Hofstadter, *Gödel, Escher, Bach: les Brins d'une Guirlande Eternelle*, 1985; Balpe, “Méta-auteur,” 1997.
- 20 Bootz, “Un Modèle Fonctionnel des Textes Procéduraux”; Bootz, “Profondeur de Dispositif et Interface Visuelle.”
- 21 Bootz, “Der/Die Leser; Reader/Readers”; Bootz, “Trois Rapports Entre Œuvre et Interface.”
- 22 Benjamin, *L'œuvre D'art à L'époque de Sa Reproductibilité Technique*.
- 23 Costa, *Le Sublime Technologique*, 4.
- 24 Costa, *Le Sublime Technologique*, 24-25.
- 25 “Aseity” here means a quality of a living entity that possesses, within itself, the reason and the principle of its own existence.
- 26 Costa, *Le Sublime Technologique*, 27-28.
- 27 A procedural work is a programmed digital work that is meant to be executed on a computer in real time during the reception. Thus, it brings together computer procedures and observable physical processes.
- 28 Costa, *Le Sublime Technologique*, 13.
- 29 Mario Costa uses the preterite here, because in his opinion, that stage is already over. In fact, it is nothing of the sort, for the reason that the involved technological systems are not limited to a problem of communication, which is not expected by Mario Costa. Programming plays a part in many other aspects, and

the autonomy that results from the use of a computer device is richer than Mario Costa says it is. Besides, Mario Costa himself acknowledges that, with this preterite, he sweeps over the real analysis without lingering over it, as he says one page 13 (my italics): “Admittedly, with new technologies, it is possible . . . to achieve a formal aesthetic expression *which essence remains approximately unexplored and misunderstood*. These technologies enable us to do much more, though, and that is what is important.” This material comes from pages 12-14 of Costa’s work.

- 30 Collective created in 1998, which developed animated poetry in France and which founded the review *alire*.
- 31 International collective created in 2003. See <http://transitoireobs.free.fr/to/>, accessed on 03/30/2010.
- 32 Bootz, “Der/Die Leser; Reader/Readers,” 199.
- 33 Writing modes that use the computer only as a medium are equivalent to other mechanical devices: books, videos, etc. Then, they belong in level 2 on the Costa scale.
- 34 That ensemble constitutes a “lacture” [a pun on “lecture” (the French word for “reading”) and “action”].
- 35 Bootz, “Le Modèle du ‘Texte Lié.’”
- 36 Bootz, “Der/Die Leser; Reader/Readers.”
- 37 While the value of exposition of the program is infinite, its medium is also its reproduction device.
- 38 To watch again is a prerequisite for exposition: exposition is a permanent feature of habit.
- 39 The statement that asserts that the perception of difference is a measure of the habit is easy to accept when we take the example of music. When we are used to interpreting a work, we easily detect the differences brought by another interpretation. In the case of a procedural work, the technical difference may be measured by its synchronic lifetime.
- 40 As it is the case in the aesthetics of frustration.
- 41 A pun on “enjeu” (the French word for “stake”) and “jeu” (the French word for “game” or “play”).

- 42 And through the running of the program on the side of the work, or more exactly
through the more complex function that the procedural model calls “generating.”
- 43 This limitation varies from a work to another.
- 44 Lev Manovich, “New Media from Borges to HTML.”
- 45 Sandy Baldwin, “A Poem Is a Machine to Think With: Digital Poetry and the
Paradox of Innovation” ; see also “De Crypticis Methodi,” text online without
reference of publication at http://alansondheim.org/bk/de_crypticis_methodi.txt,
accessed on 03/30/2010.
- 46 *Ibid.*, no pagination.
- 47 N. Katherine Hayles, *My Mother Was A Computer: Digital Subjects and Literary
Texts*, 16.
- 48 According to Umberto Eco and Michael Riffaterre, following Barthes, text in its
process of authority and intentionality is defined by a set of textual strategies: “a
textual strategy establishing semantic correlations and activating the Model Reader.”
(Umberto Eco, *The Role of the Reader: Exploration in the Semiotics of Texts*, 11).
- 49 Introduction to .ran [real audio netliterature], in the radio show KUNSTRA-
DIO, February 12th, 2005: http://www.kunstradio.at/2005A/20_02_05en.html
accessed on 03/30/2010.
- 50 Stochastic refers to random phenomena appearing within a system according to
statistical probability.
- 51 Sondheim: *Fiction-of-Philosophy (now Wryting-L)* and *Cybermind*, <http://alansondheim.org/CYBINFO.TXT>, accessed on 03/30/2010; mez: *arc.hive*, <http://sympa.anart.no/sympa/arc/arc.hive>, accessed on 03/30/2010.
- 52 <http://www.nettime.org> accessed on 03/30/2010.
- 53 mez, “Spam Art Reference: _Monitoring Absorber: A Nettery_,” sent June
11th 2000 on *Syndicate*: <http://mail.v2.nl/v2east/2000/Jun/0040.html>. Link no
longer available as of March 25, 2010.
- 54 In *Poétique des codes*, I use the term “speech” (in French, *parole*) while observing
the linguistic and semiotic basis underlying the formation of network languages
as different from (but inspired by) programming languages; cf. Camille Paloque-
Bergès, *Poétique des codes sur le réseau informatique: une investigation critique*
(Lyon, France: Editions 21, 2006), chapter 4.1.

- 55 The message “=cw4t7abs” (from antiorp@tezcat.com), sent on August 17th 1998: <http://mail.v2.nl/v2east/1998/second/0103.html>. Link no longer available as of March 25, 2010.
- 56 On <nettime>, December 9th, 2005: <http://www.nettime.org/Lists-Archives/nettime-ro-0512/msg00026.html>, accessed on 03/30/2010.
- 57 Andreas Broeckmann alerts (<http://mail.v2.nl/v2east/2001/Jan/0021.html>, link no longer available as of March 25, 2010) and Inke Arns confirms the presence and effects of a virus that shuts down the computer screen, without further damage (<http://mail.v2.nl/v2east/2001/Jan/0019.html>, accessed in 2008 and now broken).
- 58 “The Rise and Decline of the Syndicate: the End of an Imagined Community,” e-mail from Inke Arns and Andreas Broeckmann on <nettime>, November 13th 2001: <http://amsterdam.nettime.org/Lists-Archives/nettime-l-0111/msg00077.html>, accessed on 03/30/2010.
- 59 *E.g.*, in the fictitious ceremony of awards in honor of Netochka Nezvanova, staged in the e-mail “nn.buletin - eksam!n !f komplet!”, sent December 17th 2000: (<http://mail.v2.nl/v2east/2000/Dec/0089.html>, link no longer available as of March 25, 2010).
- 60 Mainly Romanian, French, Italian, and French.
- 61 Alan Sondhein, “Noise,” no further reference: <http://www.alansondheim.org/NOISE.TXT>.
- 62 Bruce Andrews, “Praxis: A Political Economy of Noise and Informalism,” pp.75-77.
- 63 Raymond Ruyer, *La Cybernétique et l'origine de l'information* (Paris: Flammarion, 1954), 46.
- 64 Definition following Piéron (1963) in the entry under “entropy,” in *Trésor de la langue française*; my translation.
- 65 Bruce Andrews, “Praxis: A Political Economy of Noise and Informalism,” p.81.
- 66 For a discussion of this subject, see Paloque-Bergès, *op.cit.*, Chapter 3.1.
- 67 See NN’s pseudo-manifesto (illustrated above) inserted in Netochka Nezvanova’s biography, sent by “n2o” in an e-mail on February 10th, 2006: <http://www.nettime.org/Lists-Archives/nettime-ro-0602/msg00040.html>, accessed on 03/30/2010.

- 68 The page generated by the source code is titled “Warshout”: <http://www.pavu.com/indexWarshout2003.html>, accessed on 03/30/2010.
- 69 E-mail by Geert Lovink on <nettime>, August 17th 2003: <http://www.nettime.org/Lists-Archives/nettime-l-0408/msg00055.html>.
- 70 See Frédéric Madre’s ironic call for participation to a “lovely list – ultra uncensored [...] *palais-tokyo-list@pleine-peau.com*”: <http://mail.v2.nl/v2east/2000/Feb/0166.html>. Link no longer available as of March 25, 2010.
- 71 If decoding is a translation (from one language to another, in hermeneutics or in a cryptographic exercise), debugging is a correction (code and software testing); they both have the critical value of an interpretation, which could lead one to consider them analogous.
- 72 Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society*, 125.
- 73 Critic and poet Eric Mottram was already, in 1972, pointing to parallels between poetic writing and cybernetic innovation: “Computer theory can help us to understand the nature of information chosen for an environment—with whatever operations of control and randomness. . . . Poems often have as their subject the very nature of control as beauty. The poetic choice . . . is personal, even temperamental: to risk absolute communication or take the risks of extreme control,” in *The Triumph of the Mobile: The Structure of Information, the Language of Computers and Contemporary Poetry* (London: Writers Forum, 2000), 14.
- 74 See the experiments of Paul Baran at the RAND Corporation just before integrating the governmental team of the ARPANET, in Katie Hafner and Matthew Lyon’s book *Where Wizards Stay Up Late: The Origins Of The Internet* (New York: Simon & Schuster, 1996).
- 75 Not by coincidence, a key concept of mez’s writing is condensed in the expression “*free.form*][*ulation*]”]: <http://www.hotkey.net.au/~netwurker/free.htm>, accessed on 03/30/2010.
- 76 Inke Arns & Andreas Broeckmann, *ibidem*, <http://amsterdam.nettime.org/Lists-Archives/nettime-l-0111/msg00077.html>. Link no longer available as of March 25, 2010.
- 77 Alan Sondheim, “Knowledge-Flux,” in *Perforations* 3 (1992), <http://alansondheim.org/FLUX.TXT>, accessed on 03/30/2010.

- 78 Alan Sondheim, "Future-Culture", in *Art Papers* (April/May 1995), <http://alan-sondheim.org/FUTCULT.TXT>, accessed on 03/30/2010.
- 79 M. Wark, *A Hacker Manifesto*.
- 80 This phrase (my translation) comes from Mario Costa's *Internet et globalisation esthétique: l'avenir de l'art et de la philosophie à l'époque des réseaux*, trans. Giordano Di Nicola (Paris: L'Harmattan, 2003).
- 81 This is an expression used by the post-modernist philosophers [e.g., in Mark Poster, *The Mode of Information, Poststructuralism and Social Context* (Cambridge: Polity Press, 1990)], from which the codeworkers have derived many formulations.
- 82 E.g., Alan Sondheim's logorrheic e-mails to the UB Poetics mailing-list, which have caused fierce debates among list-members over the years. While Poetics is peripheral to the new media community, the discourse provoked there by Sondheim closely resembles that of those community dramas cited above (<http://listserv.acsu.buffalo.edu/archives/poetics.html>, accessed on 03/30/2010); see Maria Damon, "Alan Sondheim's Internet Diaspora," (in this essay Maria Damon "examines the links between diaspora poetics and the medium of the internet, especially through characteristics like excess, fragmentation, randomness, and hoarding/spending information/history" (http://epc.buffalo.edu/e-poetry/2005/epoetry05prog.html#_msoanchor_17, accessed on 03/30/2010).
- 83 Andreas Broeckmann, "Notes on the Politics of Software Culture," essay sent on <nettime>, September 4th, 2003: (<http://www.nettime.org/Lists-Archives/nettime-l-0309/msg00020.html>, accessed on 03/30/2010).
- 84 L. Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999); (<http://www.code-is-law.org/>, accessed on 03/30/2010).
- 85 Matthew Fuller quoting Cox, McLean, and Ward, from "Coding Praxis: Reconsidering the Aesthetics of Code" (2004), p.8.
- 86 The artist duo JODI paid homage to Good Times, in <http://www.jodi.org/betalab/goodtimes/index.html>, accessed on 03/30/2010.
- 87 From the article "Good Times," *Wikipedia*, http://en.wikipedia.org/wiki/Good-times_virus, accessed on 03/30/2010.

- 88 In A. Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore: John
Hopkins University Press, 1997), Chapter 7.
- 89 *ibid.*, p.149: MUDs are artifacts, “certainly . . . intended to be read. This makes
them textual, and [makes] the unique aspects of MUD communication . . . well
worth comparing to other types of texts.”
- 90 Claude Shannon and Warren Weaver, *A Mathematical Theory of Communication*
(Champaign: University of Illinois Press, 1963).
- 91 See the entry entitled “Spam Jam Poetry—Jodi and mailing-lists,” posted on
March 25th 2006 on my blog *camille.pb/e-textualities* (<http://eduspaces.net/camillepb/weblog/10606.html>, link no longer available as of March 25, 2010).
- 92 JODI, <blast> <Fr13th>, <http://www.thing.net/eyebeam/msg00068.html>, ac-
cessed on 03/30/2010.
- 93 Jordan Crandall, in an e-mail sent on February 13th 1998 on *Eyebeam*: [http://](http://www.thing.net/eyebeam/msg00069.html)
www.thing.net/eyebeam/msg00069.html, accessed on 03/30/2010.
- 94 See also other examples of this: code-handling mistakes, commands, and filtering
techniques are pretext for a robotic simulation dialog between bots and members;
“No Subject,” February 3rd, 1998: <http://www.thing.net/eyebeam/msg00005.html>,
accessed on 03/30/2010; “<blast> Politics/the Net as medium/Other,” April 28th,
1998: <http://www.thing.net/eyebeam/msg00516.html>, accessed on 03/30/2010.
- 95 “What does it mean to live in a world where problems can be programmed
away? And when, in that world, should we program problems away?” Lessig,
op. cit., p.13.
- 96 Lessig reformulates this distinction in terms of digital and judicial code, the for-
mer bearing material determinations over user behavior.
- 97 My translation and emphasis; in Rieder and Thévenet, “Sphère publique et es-
paces procéduraux” (paper presented at the conference *Enjeux et usages des*
TIC: Aspects sociaux et culturels, Bordeaux, France, September 22nd-24th, 2005)
([http://archivesic.ccsd.cnrs.fr/index.php?action_todo=search&view_this_](http://archivesic.ccsd.cnrs.fr/index.php?action_todo=search&view_this_doc=sic_00310244&version=1)
[doc=sic_00310244&version=1](http://archivesic.ccsd.cnrs.fr/index.php?action_todo=search&view_this_doc=sic_00310244&version=1), accessed on 03/30/2010).
- 98 Another name for an “error aesthetics”; the 404 code shows up on the web when
a page cannot be found.
- 99 B Rieder, “Les agents informationnels, médiateurs du dialogue humain-ma-

chine,” introduction to “*Traitement du savoir par les Agents Informationnels*,” (Masters thesis at Université Paris-8, 2003); <http://www.boson2x.org/spip.php?article91>, accessed on 03/30/2010.

100 See in particular the works of the Critical Art Ensemble

101 The term “Neterature,” close to the various neologisms (Netiterature, NeoNeteratures, netiteratur) Mez created in order to give a name to these new textual forms found in codeworks, is what seems to be largely used when referring to these practices.

102 I am thankful to Professor N. Katherine Hayles for allowing me to cite her unpublished article, “Mapping and Navigation in *Reagan Library*.” The copy I refer to in this paper was passed to me by Professor Stuart Moulthrop in 2003.

103 Nabokov, *Speak, Memory*, 12.

104 The color of each space may vary in accordance to the operating system and browser run by the user. For instance, Stacey Bailey and company (2000) use the designations “dark blue,” “grey,” “light blue,” and “red” to describe the four spaces in their reading guide to *Library*, which slightly differ from what I see on an IBM PC-compatible screen.

105 A few links in the finalized text may remain affiliated with random-page selecting script. For example, two links appear in the “Pavilion” node of the black space after it reaches the final state. The first link/anchor, “what you see,” leads to a defaulted destination (the “Floater” node of the red space). On the contrary, the second, “where that takes you,” takes one to a randomly selected destination.

106 I learned of the term “noise filtering” from Moulthrop in one of our chats regarding *Library* in 2003. The concept of the prefinalized text as imbued with noise is hinted in one of the NOTES: “Do you have a problem with noise.” Another two phrases in relation to noise that might pop up in the prefinalized text are: (1) “Like cutting off your noise to spite your face” and (2) “Like putting out more noise to blight our fates.” An insightful discussion of Phrase (1) is available in N. Katherine Hayles, “Mapping and Navigation in *Reagan Library*,” 6-7. Therein, Hayles contends that the noise bobbing around in the prefinalized text “is information” rather than “an obnoxious nuisance,” viewed from the perspective of “John Cage’s philosophy that human intentionality prevents us from

encountering the infinitely varying surprises the world has to offer, [sic] letting noise come through our perceptual filters is one way to circumvent human intention and open ourselves to the on-going creativity that bubbles all around us.”

- 107 Hayles, “Mapping,” 12.
- 108 Hayles, *Writing Machines*, 61-62.
- 109 Hayles, “Mapping,” 58.
- 110 Hayles, “Mapping,” 1.
- 111 Hayles, “Mapping,” 18.
- 112 Ronald Reagan, “Address to the Nation on Defense and National Security.”
- 113 The conversation between a father and his son in *Hegirascope* runs through these nodes: HGS021.html, HGS022.html, HGS054.html, HGS055.html, HGS104.html, HGS155.html, HGS15.html, HGS157.html.
- 114 For an exploration of these “two facets” in *Hegirascope*, see Shuen-shing Lee (2005).
- 115 Licia Calvi, “‘Lector in rebus’: The Role of the Reader and the Characteristics of Hyperreading,” 102.
- 116 The term coined by the author of this essay, and introduced for the first time in his paper *The Moving Words*, 2001.
- 117 Maurice Blanchot, *The Space of Literature*, 217-218.
- 118 Martin Heidegger, *Poetry, Language, Thought*, 43.
- 119 Heidegger, *Poetry*, 94.
- 120 Heidegger, *Poetry*, 74.
- 121 Alexander Galloway, *Protocol*, 219.
- 122 C.P Snow, *The Two Cultures*.
- 123 The author of this paper has explained his notion about the “service of art” in his essay *New media art as research: art-making beyond the autonomy of art and aesthetics*.
- 124 Janez Strehovec, “The Moving Word.”
- 125 Roman Ingarden, *The Literary Work of Art*, 1177.
- 126 Noah Waldrip-Fruin et al. “Screen Profile.”
- 127 Jay D. Bolter, *Writing Space: The Computer, Hypertext, and the History of Writing*, 144.

- 128 Lev Manovich, *The Language of New Media*, 78.
- 129 *Film-text* is also the title of Mark Amerika's new media art project, dealing with the augmented concept of digital, multimedia, and post-verbal textuality shaped by film and computer games features.
- 130 Filippo Tommaso Marinetti, *Marinetti: Selected Writings*, 131.
- 131 Manovich, *The Language of New Media*, 325.
- 132 Robert Burnett and P. David Marshall, *Web Theory: An Introduction*, 89.
- 133 David Crystal, *Language and the Internet*.
- 134 Viviane C. Sobchack, *Screening Space: The American Science Fiction Film*, 202.
- 135 Andrew Murphie, "I'm Not Joking—Lacanian Nostalgia Ain't What It Used To Be."
- 136 Steven Johnson, *Interface Culture*.
- 137 As an example of such endeavors in finding new technical possibilities for screening the digital poetry, one can mention *Shadows Never Sleep* (2008), the experimental textual piece of Aya Karpinska, which is devoted to the *iPhone* and adapted to its very instrumental features. For the final story in this collection, she chooses to focus on the ability to zoom in and out of the screen's visible area. This "zoom narrative" (Karpinska's expression) is a physical interface for children to stretch, swipe, and dive into text. The option of zooming has been changed from pure technical use to, let us say, the literary one.
- 138 Giselle Beiguelman, *Poetrica*.
- 139 This term encompasses larger scope than digital poetry, which is just one field of media poetry.
- 140 Eduardo Kac, "Holopoetry," 129.
- 141 For example, this poem by Arnaldo Antunes: "As coisas" / O que (se) foié (s) ido. / "Os peitos" Mulheres têm doispeitos. Os homens têmum peito só."
- 142 Editor's note: translation by the author of an extract from <http://paginas.terra.com.br/arte/PopBox/emmc.htm>. Link no longer available as of March 25, 2010.
- 143 Philomela is a character in Ovid's *Metamorphosis*. She also inspired the beautiful thesis of Serge Pey about poetry: *La langue arrachée* (snatched tongue).
- 144 <http://www.livresdesmorts.com/>.
- 145 Roland Barthes, *Sade, Fourier, Loyola* (Seuil: Paris, 1971), 95.

- 146 Roland Barthes, *ibid.*, p.85.
- 147 Questionnaire-based project, led by Claire BELISLE at the University Lyon 2 ISH.
- 148 Gregory Chatonsky, "Read me," *La Révolution à New York a eu lieu*, <http://www.incident.net> (Points to home page of site, not article itself) (accessed on 5/20/2006).
- 149 Reiner Strasser and M.D. Coverley Strasser & M.D. Coverley, ii-*In the white darkness*, <http://nonfinito.de/ii/> (accessed on 03/03/2010).
- 150 Hervé Micolet, "Peinture et littérature chez Yves Bonnefoy," *Littérature et peinture*, textes éunis par Serge Gaubert et Radu Toma, Bukarest, Presses Universitaires de Bukarest, 2003, p. 45.
- 151 Hervé Micolet, "Peinture et littérature chez Yves Bonnefoy," *ibid.*, p. 40.
- 152 Pascal Quignard, *Petits Traités I*, Paris, Maeght Editeur, 1990, p.132.
- 153 See Michel Foucault, *Ceci n'est pas une pipe* (Paris: Fata Morgana, 1973), 22.
- 154 See Michel Foucault, *ibid.*, p.28.
- 155 Xavier Malbreil, *10 poèmes en quatre dimensions*, www.0m1.com/10_poemes_en_4_dimensions/index.htm (accessed on 03/03/2010).
- 156 In English, "When words and things were one."
- 157 Michel Foucault, *Les Mots et les Choses* (Paris: Gallimard, 1966), 58.
- 158 In English, "cloud."
- 159 In English, "swim."
- 160 In English, "When there was"—"neither content"—"nor container."
- 161 In English, "When words contained action."
- 162 This is a play on words that cannot be translated, a "chou" (pl. "choux) is a cabbage, when it is pronounced (approximately like the word "shoe" in English), it imitates the whistling of the wind.
- 163 In English, "whistle."
- 164 Sophie Calle, *Vingt ans après*. The work is offline for the moment. The archived screen video, http://www.labo-nt2.uqam.ca/repertoire/vingt_ans_après/plus, accessed on 3/30/2010, helps the reader to understand at least the animated parts of the work.
- 165 Gérard Genette, *Figures III*, 244.
- 166 Gérard Genette, *Figures III*, 245.

- 167 Henri Suhamy, *Les Figures de style*, 87.
- 168 Henri Suhamy, 87.
- 169 Gérard Genette, *op.cit.*, p. 28.
- 170 Jean Clement, “Du texte à l’hypertexte: vers une épistémologie de la discursivité hypertextuelle,” <http://hypermedia.univ-paris8.fr/jean/articles/discursivite.htm> (accessed on 03/14/2006).
- 171 Paul Ricoeur, *La Métaphore vive*.
- 172 Jean Clément, “Fiction interactive et modernité,” <http://hypermedia.univ-paris8.fr/jean/articles/litterature.html> (accessed on 03/14/2006).
- 173 Philippe Bootz, *Formalisation d’un modèle fonctionnel de communication à l’aide des technologies numériques appliqué à la création poétique*, PhD dissertation, Université Paris 8, 12/13/2001 (<http://tel.archives-ouvertes.fr/tel-00012165/fr/>, accessed on 03/30/2010).