From:

While literature in computer-based and networked media has so far been experienced by looking at the computer screen and by using keyboard and mouse, nowadays human-machine interactions are organized by considerably more complex interfaces. Consequently, this book focuses on literary processes in interactive installations, locative narratives and immersive environments, in which active engagement and bodily interaction is required from the reader to perceive the literary text. The contributions from internationally renowned scholars analyze how literary structures, interfaces and genres change, and how transitory aesthetic experiences can be documented, archived and edited.

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Acknowledgments

Jörgen Schäfer and Peter Gendolla

Introduction

Regarding our specific interest in "electronic literature," "digital literature," "net literature" or whatever the subject matter might be called, this is the fourth book in a series of publications resulting from German-American co-operations that have addressed the subject from different perspectives and in consecutive steps. The first book, *The Aesthetics of Net Literature* (2007), had already made clear that it seems necessary to make revisions in the traditional models analyzing literary communication. In particular, the triad of "author," "work," and "reader" had to be extended into the technical aspects of media: Literary processes emerge from *techno-social networks* (Gendolla and Schäfer). The second book, *Literary Art in Digital Performance* (2009), very deliberately concentrated on the close reading of individual literary projects (Ricardo), whereas *Reading Moving Letters* (2010) addresses research approaches, institutional and curricular frames as well as didactic questions in various scholarly environments (Simanowski, Schäfer and Gendolla).

The traditional models of literary communication in computer-aided and networked media have undergone considerable changes; notably they have to be supplemented with the "autonomous" part of the technical medium and, for quite a while, also other output and input devices than monitor, keyboard and mouse have to be included.

But what does this easily said proposal really mean? In what way does the reading of a printed text differ from the reception of a computer-generated poem, of a hyperfiction, of a collaboratively written story or—which is at the center of our interest in this book—of literary works or processes in spatially defined media like the Cave (e.g., Noah Wardrip-Fruin et al.'s *Screen*). We have to include into this question also Locative Narratives where recipients are navigated by GPS through real space reading fragments of a story. And—despite all changes in the dispositives of mediality brought on by the present upheaval in media—in what way do all these projects carry on the long history of literature that has already survived several media upheavals?

Therefore, developing a theory of literature in computer-based media requires critically recapitulating the basic terminology of literary studies as well as the history of reception of established *literary theories* and their usefulness, for example, of formalism or reader-response criticism. We believe that this cannot be avoided in debating our issues if we do not want to remain within the realm of text or communication theories—as unfortunately is often the case— which may be used just as well in the analysis of non-literary communication

or if we do not want to continue using computer sciences or software design approaches that persist in drawing on aspects of programming technology.

Literature in computer-based media, as well as *every* literary text, activates expectations that then are broken and continued in imaginary form. Here the attributions of meaning have to be conceived of as interactive processes between man and machine. Especially when such literature expands into the physical realm are the ruptures activated *technically* and therefore they are by no means only cognitively processed. Rather, they invite direct physical activity *with* the sign processes, i.e., they incite the immediate "writerly continuation" with the whole body, thereby filling the "gaps."

Therefore, the discussions regarding the prevalent literary theories are by no means finalized. On the contrary, they still need to be reappraised much more closely regarding the following problems:

- whether and to what extent they are able to explain the practical integration of established literary ideas, subjects, forms and procedures into the intentions and activities of authors/readers;

- questions of the technical "support," translations, and automations addressed in a narrative, or poetical manner or through staging them;

- and in what way they have to be revised or dismissed.

1 Beyond the Screen: Reconfiguring Space and Time in Literature

This correlation of performativity, performance and meaning is the focus of the essays in Part One. *Jörgen Schäfer*, in his essay, outlines a theoretical framework for the analysis of literature in computer-based media, especially in spatial environments. He links approaches from literary studies, particularly from reader-response theories, with considerations from the Actor-Network Theory as well as from semiotics, computer and cognitive sciences, thereby confronting questions of the changes in media dispositives and those of the authors'/ readers' reactive possibilities with that of the literariness of the observed objects.

In doing so, he is referring to the views of the distinguished linguist *Ludwig Jäger*, among others, who for the first time puts his ideas up for discussion in the electronic literature community. In cultural studies and their diverse disciplines, he argues, it is a familiar phenomenon that media refer to each other and that they intramedially allude to themselves in recursive loops. Cultural semantics are generated, conserved, disrupted and modified in a field in which communication unfolds as a symbolic game of interacting and interwoven me-

dia, as an assembly of different methods of "cultural reconceptualization" (Manovich 47). Behind these diversities of communicative processes in oral, written, and visual media—no matter how varied they are regarding their medial and aesthetic aspects—we can identify a fundamental approach of cultural semantics that we can describe as logic of transcriptive reference. Jäger's contribution, going beyond the idea that transcription is a fundamental procedure of cultural semantics, reveals some of the principles that underlie the practices of cultural reconceptualizations attempting to show that and how they are characterized by an epistemology of disruptions.

N. Katherine Hayles to a certain extent links with these thoughts, as her article focuses on the impact of so-called "ubiquitous computing" on human cognition. She analyzes the consequences of "reality mining" by RFID (radio frequency identification) tags that are currently being embedded in product labels, clothing, credit cards, and the environment. The amount of information accessible through and generated by RFIDs is so vast that it may well overwhelm all existing data sources and become, from the viewpoint of human time limitations, essentially infinite. Hayles argues for understanding the constitution of meaning as a "multi-layered distributed activity," as a result of "context-specific processes of interpretation that occur both within and between human and non-human cognizers."

This is exemplified by *Maria Angel and Anna Gibbs* who explore the new materialism of the corporeal body in electronic writing and online environments. They argue that electronic environments have a strong relationship with affective modes of communication highlighted by their appeal to sensory novelty through technological innovation—new media platforms proliferate the potentials for combining visibility with aural and tactile modes. Their essay argues for a new materialism in electronic culture, one that has serious implications for the way that we understand memory.

Roberto Simanowski demonstrates in a close reading of two interactive installations that they do not simply create an event as "a period of time to be lived through" (Bourriaud 15). Looking at *Still Standing* by Bruno Nadeau and Jason Lewis and Zachary Booth Simpson's *Mondrian,* Simanowski maintains that these pieces do not only offer two different concepts of the interactors' actions and hence body experiences; they also engage in a very difficult way with the issues of inter- and transmediality and thereby refer to the history of the avant-garde movements of the early 20th century.

These essays illustrate that the recipient of literature in computer-based and networked media cannot just sit in front of a computer screen and use his mouse and keyboard for navigating through the text. On the one hand, *mobile media devices* such as mobile phones, GPS and PDAs are being used, while on the other literature finds its way into *mixed reality environments* in museums, gal-

leries or research labs. Thus, new combinations of physical, virtual and symbolic spaces emerge. We might even say metaphorically that literature, after it has passed through the needle's eye of book culture, seems to *revert* to the multimodal patterns of action and forms of antiquity, of the Middle Ages or of the Renaissance: to ritualized space-body-text stagings, to forms of the Living Theater, or to spontaneous street happenings. This, however, is taking place on a completely changed media-technological level which involves the whole body in the media activity. When sensors and effectors mediate between the recipients' movements of the body, their gestures and mimic and the linguistic signs, then the spaces of the "real" world and the poetic or narrative spaces of literature enter into a completely new relationship with each other.

The second section is opened by *Andrew Michael Roberts*, who demonstrates that digital literature has always been beyond the screen. In many of the practices and framing ideas of electronic literature, he identifies recurrences of key conceptions of modernism and postmodernism such as literalization, enactment, difference, movement, etc. Nonetheless, as he argues, literature is embracing new forms of expression influenced by the evolving mediatechnological possibilities and the increased involvement of the recipient's whole body.

Anna Katharina Schaffner, in a wide and historically dense survey, traces the reconceptualization of poetic space from Mallarmé's *Un Coup de dés* [*A Throw of the Dice*] via the word experiments of Concrete Poetry to their "mobilization" by means of digital technologies. By doing this, she explores the relationship between "concrete" and "digital poetry" more closely by analyzing how two of the main concerns of the concrete poets—the poetics of space and the exploration of the concrete materiality of the medium—translate into the digital domain.

Two doubly gifted persons are presented next who are able to combine their practical work in an exciting way as authors and programmers of projects in electronic literature; recently especially of Cave writing projects with the theoretical analysis of these processes. *John Cayley* reports on writing and the practice of literary art in the immersive 3D audio-visual environment of the Cave at Brown University, addressing the use of text-as-surface in a three-dimensional space. He develops a conception of new media as "complex surfaces" based on Cave writing courses to confront the relationship between language and embodiment, language and materiality—always attempting to develop a specific *literary aesthetics*.

Noah Wardrip-Fruin analyzes how the relations between audience experience and underlying processes apply to interactive works. Referring to Cayley's conception, he focuses on such works that turn the recipient's attention to the complexity of their "complex surfaces." While most authoring of electronic literature has so far focused on data and processes, Wardrip-Fruin argues for

using innovations at the surface levels to allow for new literary and artistic experiences.

Dene Grigar discusses ways in which hyperlinks are utilized in three-dimensional multimedia performance works that offer a narrative or poetic focus. In the new spaces of three-dimensional performance environments, hyperlinking can be incorporated as a performative element into the work and therefore always makes a purposeful act necessary for the performance to unfold. Grigar argues that hyperlinking may denote a change of scene, the progression of a poem's instantiation or the evocation of musical notes comprising a composition.

The following part systematically discusses completely new forms of "mobile" literature, the so-called Locative Narratives, i.e., the expanding field of literary projects in streets and parks, in exterior locations or those of the city. They are using the previously-mentioned locative media: GPS-tools, PDAs or others, aestheticizing each of them in a quite unexpected turn that inverts the traditional processes of literarization from the "head" back to the "feet": They adapt literary patterns like travel-, adventure-, love-, or detective narratives, returning their imaginary movements back into real ones again.

Francisco J. Ricardo analyzes the practices of layering narrative, image, and sound onto existing architecture and geography in locative art. Using many examples from the 20th and the beginning of the 21st century, he identifies an important conflict regarding aesthetic practices, their framings and conceptualizations; namely, the difference between "place" and "space." Using this difference—i.e., the necessarily limited local conditions and the endless imagination intended in the architectural construction or installation—he shows us how and at what point a "locative narrative" emerges from the "locative consciousness"—or could emerge.

Rita Raley deals with experimental narrative that employs mobile and locative technologies interfacing with the geo-spatial Web. She argues that in such works the recipient is situated as a "participant" or an "experiencer" rather than a "reader." Therefore, the use of mobile and location-aware devices for literature challenges both the instrumental use of such services and the mode of literary experience.

The essays of *Jeremy Hight* and *Jean-Pierre Balpe* introduce the readers to the theoretical premises and artistic practice of two leading artists using various locative media for literary purposes. *Laura Borràs Castanyer* and *Juan B. Gutiérrez* present the so-called Global Poetic System and propose a framework for the design and application of locative media for literary projects.

2 Beyond Genre:
Perspectives of Literariness in Computer-Based Media

If it is true that semantics is always the result of transcriptions between media, then this development affects all human behavior concerning linguistic signs and therefore also the *aesthetic* processes of perception and self-perception. The question thus has to be asked whether we can continue talking of a specific migration of traditional literary forms into computer-based and networked media. Can we continue analyzing such examples as *literature*? Can we still correlate the examples mentioned above with the three traditional genres? In what way can the semantics of literary terminology, concepts and systems be retained or does it have to be revised?

A second partial goal of this book is the accumulation of the proof of both the conservation and the complex differentiation of *literary* forms, structures and qualities in the above-mentioned developments of media. Based on early ideas of Max Bense on the difference between "natural" (traditional) and "artificial" (computer-aided) poetry, *Peter Gendolla* pursues a paradox accompanying the literary avant-garde from Romanticism to the most current electronic installations; namely, that they want to bring back the cold, dead culture into "natural" life and that they are doing this with the most advanced technological procedures. They become more and more "technical" with the impulse not only to dissolve the division of the genres but also to transfer art at least by way of literary means into "natural" forms of life; thus, they are continually developing new forms of aesthetic difference that have to be differentiated from either nature or culture.

Friedrich W. Block looks at the systematic and historical conditions of the emergence of a genre like "digital poetry." He argues that it has been necessary to communicate and spread schemes of invariance and identification to tie together a high variety of artistic practice. For this purpose, concepts and names of genres have been connected with different forms of institutionalization. From this perspective, his essay considers the conceptual and cultural development of "digital poetry" as well as its relation to historical filiations and their transformation. In conclusion, his considerations lead to an abstract reflection of a more general concept of "poetry."

Like him, *Giselle Beiguelman* underlines that it is essential to be aware of the historical continuities as well as of the discontinuities that materialize in electronic literature or art. This is particularly true in Brazil where multimedia poets combine videotext and video with their texts.

Jochen Venus tackles the aesthetics of video games by utilizing a morphological approach that addresses the interplay between the pictorial elements on the screen and the player's actions beyond the screen. Hence, he considers

video games as "simulations of self-action" that allow for unique aesthetic experiences of immersive and remote-controlled role-playing.

3   Beyond the Library:
Preservation, Archiving and Editing of Electronic Literature

Part Three is reserved for a different thematic focus: The performative projects previously mentioned intensify the already difficult problem of the documentation/archiving of, as well as the access to, processes of electronic literature. Therefore, we would also like to address the problem of archiving and editing this rather transitory electronic literature, thereby attempting to advance the coordination between current and planned databases, archives and editions.

Designing and building databases for electronic literature, however, does not only imply compiling a compendium that is as extensive as possible of the area in question; it also requires continually developing typological categories and criteria. The book therefore contains several articles focusing on archiving, on categorizing and on editing as three thematic aspects of electronic literature.

While there is a large community of video game fans and developers who constantly work on emulating "old" games for changing platforms and thereby safeguarding the access to these games, there are no comparable activities in the field of electronic literature, as *Beat Suter* regrets. The community is too small, so that often even the access to simple browser-based projects which are only a few years old turns out to be impossible. From an archival point of view, the situation is getting even worse as an increasing number of works or projects of electronic literature contain interactive, collaborative or dynamic elements that, *in principle,* cannot be archived. Thus, Suter discusses the impact of writing in computer-based and networked media and—with a particular focus on the situation in Germany—describes the legal, institutional and media-technological challenges.

Joseph Tabbi, who currently is the Director of the Electronic Literature Organization (ELO), gives an account of the work on the *Electronic Literature Directory 2.0*, while at the same time—apart from the technical and structural aspects of such a directory—looking at possible ways of transforming institutional practices within the Humanities if scholars would make consistent and collaborative use of the affordances of network technology in gathering literary works and initiating online discussions around them. He argues "that the oft-noted 'obsolescence' of works published in perpetually 'new' media is an institutional and cognitive problem as much as a technological challenge." His

proposal, originally a blog entry posted at *onthehuman.org*, brought up an intensive online discussion that is documented in the present volume as well.

The discussion on archiving electronic literature can definitely benefit from the experiences made in adjacent disciplines. From the viewpoint of art history, *Katja Kwastek* investigates how the development of a detailed vocabulary can help to grasp and distinguish formal characteristics as well as aesthetic processes of interactive art forms. A thorough distinction of formal and technical characteristics allows for a more detailed examination of works commonly subsumed under quite global catchwords such as "(New) Media Art" or "Interactive Art," "Electronic Literature" or "Digital Literature," "Net Art" or "Net Literature." To actually grasp the aesthetic characteristics of such works, it is further necessary to develop a method for describing the aesthetic processes at stake. This is a challenge for the ontological approach represented by classification systems, as aesthetics are subject to individual interpretation. Kwastek, however, argues that taxonomies can help to identify potential aesthetic processes and to promote research towards an aesthetics of interaction.

While the previous essays deal with the fundamental problems of preserving and archiving electronic literature, *Ravi Shankar*, the founding editor of the online journal *Drunken Boat* for many years and an expert for the presentation of electronic literature and arts, investigates how blogs, listservs and online journals help to build literary communities. Shankar claims that they achieve this by providing open access to pieces of literature and art that perform in ways that could not happen in print. They also encourage potentially unrestricted critical communication as well as active artistic collaboration.

And, last but not least, *Fotis Jannidis* provides an insight into the use of the computer in the humanities. Digitalization and networking have fundamentally changed the working process of creating literary editions. Therefore, Jannidis weighs the possibilities and problems that computer hardware, storage formats, algorithms for accessing the data and strategies for visualizing the data present for the work of textual critics.

The aim of this book is outlining the most significant developments from within the wide field of literary projects resulting from the technological possibilities of the most current computer-aided, space oriented and orienting artistic practices, providing important examples. Currently, this field is just beginning to open up. Since literature for centuries has (almost) only moved in the "flatland" of the books' pages, a new Odyssey is now embarking. Readers of literature have to get out of their "armchairs of tradition"; they have to move into the uncertain outer terrains and experience new adventures, guided by ever-smaller electronic helpers that are becoming more and more indiscernible,

headed for goals unnamed and unknown. This is what the readers have to discuss with each other.

Translated by Brigitte Pichon and Dorian Rudnytsky

Works Cited

Bourriaud, Nicolas. *Relational Aesthetics.* Paris: Presses du réel, 2002.

Gendolla, Peter, and Jörgen Schäfer, eds. *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media.* Bielefeld: Transcript, 2007.

Manovich, Lev. *The Language of New Media.* Cambridge, MA: MIT P, 2001.

Ricardo, Francisco J., ed. *Literary Art in Digital Performance: Case Studies and Critical Positions.* New York: Continuum, 2009.

Simanowski, Roberto, Jörgen Schäfer, and Peter Gendolla, eds. *Reading Moving Letters: Digital Literature in Research and Teaching. A Handbook.* Bielefeld: Transcript, 2010.