Who Chooses What the Reader Reads? The Cybertextual Perspective

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The subject of literary scholarship includes the author, the literary product, and the reader; all of them are embedded in the socio-historical context. The editor as a subject position (i.e., an institution) is crucial in deciding what books or (in the case of a literary magazine) shorter texts will be published and therefore publicly available in printed form. This paper considers the problem of selection at another level that emerges as an important issue particularly in literary works based on computer technologies. From the cybertextual perspective, Espen Aarseth points out an important distinction between multiple literary-aesthetic experiences and different configurations of the material substrate (e.g., the letters on a screen), which are only subsequently followed by aesthetic concretizations. In the case of new-media literary texts, works that adapt to users are common. The signs themselves that enter the reading act are variable. The impression of the re-emergence of the substantiality of the text is false and the consequence of the "textual machine" is not an "authorless" condition, but the split in the author function, often literally into two persons: the constructor of the apparatus and its user. The selection becomes one of the key methods. This text highlights relevant issues for literary scholarship based on illustrative examples: first, the issue of digital communities and collaborative authorship and, second, the issue of automatic generation of poetry. A particular phenomenon are texts produced by information technologies themselves that nevertheless draw on socio-historically dependent utterances.

Keywords: information technology / new media / authorship / interactive literature / cybertext

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The utterance and speech communication (Mikhail Bakhtin)

With respect to speech communication as the never-ending exchange of utterances structured as dialogue, Bakhtin's concept of an utterance is constitutively defined by the change of speaking subjects. When a person produces an utterance it is endowed with a sort of "energy" that functions unambiguously at the level of power-knowledge.[1] Bakhtin studied literary

phenomena by focusing on the dialogue taking place within and beyond the boundaries of particular literary works. The fundamental element in Bakhtin's theories is "an utterance."[2] An utterance is a unit of speech communication. It is always concrete, indistinguishable from its context of culture and from the context of the particular individual personal situation of the living speaker.

The "normal" publication of a printed book: Writing and choosing

If the boundary between utterances is the end of the act of enunciation, then the "speaker" of a book is a person that accepts the responsibility for the published book as a complex utterance that is being read by its readers. To produce this type of a "secondary utterance" three institutional subject positions are required: (a) the author, who fixes the textual material on some material medium; for example, ink on paper, (b) the author-editor, who (critically) reads the prepublication versions of the text, and (c) the editor-publisher, who mediates between the "privately" finished text and the existing state of the literary system – that is, its economic and political aspects (both in the broadest meaning of the term). The aforementioned roles can be construed as Foucault's subject positions and can be embodied in a single person; however, as activities they necessarily exist separately (e.g., the authors themselves could be funding, publishing, and promoting the text). It is usual that, after choosing a text for publication, an editor influences its modifications, whereby the acts of reading, choosing, and (re)writing form a dynamic field of interactions that in the end produces the final textual object,[3] which defines the boundary to its addressee, the reader (by, of course, also anticipating her response).

Scheme of communication in a textual adventure game

In his book *Cybertext*, Espen J. Aarseth uses the terms "cybertext" and "ergodic literature" as a theoretical perspective that points to the ways in which dynamic texts construct the versions of text that the reader subsequently concretizes in the literary-aesthetic experience (Ingarden). Aarseth uses the term ergodic (from the Greek words for "action" and "path") to describe the user's actions and decisions that influence the appearance of the text. What this method emphasizes is the crucial difference between a text that in its material existence does not change and where the readers al-

ways read the same letters on the one hand, and on the other hand a cybertext, which is a textual machine consisting of (i) textons, an archive of text fragments, (ii) traversal functions, the algorithms regulating its functioning, and (iii) scriptons, the elements that the reader actually encounters, because the traversal functions select them from the archive of textons and arrange them in a particular order (a sequence or a composition). A textual adventure game is an example of a single-user cybertext, which is a game at the same time. The user reads ergodically and actively produces a path through the work according to the rules that are an integral part of the text. The user navigates a character (an avatar) through labyrinths by means of textual inputs. A typical example of the genre is *Adventure* (1976) by William Crowther and Don Woods.[4]

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WELCOME TO ADVENTURE!!  WOULD YOU LIKE INSTRUCTIONS?

yes

SOMEWHERE NEARBY IS COLOSSAL CAVE, WHERE OTHERS HAVE FOUND FORTUNES IN
TREASURE AND GOLD, THOUGH IT IS RUMORED THAT SOME WHO ENTER ARE NEVER
SEEN AGAIN.  MAGIC IS SAID TO WORK IN THE CAVE.  I WILL BE YOUR EYES
AND HANDS.  DIRECT ME WITH COMMANDS OF 1 OR 2 WORDS.  I SHOULD WARN
YOU THAT I LOOK AT ONLY THE FIRST FIVE LETTERS OF EACH WORD, SO YOU'LL
HAVE TO ENTER "NORTHEAST" AS "NE" TO DISTINGUISH IT FROM "NORTH".
(SHOULD YOU GET STUCK, TYPE "HELP" FOR SOME GENERAL HINTS.  FOR INFOR-
MATION ON HOW TO END YOUR ADVENTURE, ETC., TYPE "INFO".)
                              - - -
THIS PROGRAM WAS ORIGINALLY DEVELOPED BY WILLIE CROWTHER.  MOST OF THE
FEATURES OF THE CURRENT PROGRAM WERE ADDED BY DON WOODS (DON @ SU-AI).
CONTACT DON IF YOU HAVE ANY QUESTIONS, COMMENTS, ETC.

YOU ARE STANDING AT THE END OF A ROAD BEFORE A SMALL BRICK BUILDING.
AROUND YOU IS A FOREST.  A SMALL STREAM FLOWS OUT OF THE BUILDING AND
DOWN A GULLY.

east

YOU ARE INSIDE A BUILDING, A WELL HOUSE FOR A LARGE SPRING.

THERE ARE SOME KEYS ON THE GROUND HERE.

THERE IS A SHINY BRASS LAMP NEARBY.

THERE IS FOOD HERE.
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Figure 1. *Adventure*, by William Crowther and Don Woods

The following scheme shows three different levels at which the addressee comes into contact with cybertext. (When reading a book, the reader reads it, for example; see the row "Reader" in Figure 2. In addition, she may also ponder the ideology of the publishing house, for example; see the row "Ergodic reader." The game-playing aspect of the ergodic text is absent from a traditional book as static text.)

<table>
<tr><th>Dialogic existence (subject positions)</th><th>Points of material contact with the utterance</th><th colspan="3">Dialogic process of understanding (from left to right, the represented voice loses its ideological potential and becomes a passive object)</th></tr>
<tr><td rowspan="3">Reader</td><td>Scriptons</td><td colspan="2">Literary-aesthetic experience (Ingarden)</td><td rowspan="3">/</td></tr>
<tr><td>Implicit reader – implicit author: interpretation (mutual influence of text and reader)</td><td>Active voices (narrators)</td><td>Voices as objects</td></tr>
<tr><td>Cybertext “punishes” tmesis (Barthes)[5]</td><td>Avatar (embodiment of the reader) as a character in a narrative</td><td>Passive image of the avatar</td></tr>
<tr><td rowspan="3">Game player</td><td>– Game scriptons
– Documentation: traversal function, textons</td><td colspan="3">Gaming experience</td></tr>
<tr><td>Implied player – implied creator: playing (user’s action, possibility of failure)</td><td>Intriguee – intrigant</td><td>Intrigue</td><td>Ergodic log</td></tr>
<tr><td></td><td>Understanding of the game</td><td>Strategic action (negotiation with the intrigant by means of the game voice and the avatar)</td><td>Sequence of game states (partial success or failure, “sated desire for closure”)</td></tr>
<tr><td rowspan="2">Ergodic reader</td><td>Game algorithms – programmer</td><td>Critical reflection on the ideology of the game</td><td rowspan="2">/</td><td rowspan="2">/</td></tr>
<tr><td colspan="2">Unpredictable “emergent behavior,” noise, cyborg author, techno-imagination (Flusser)</td></tr>
</table>

Figure 2. The scheme of communication in a textual adventure game

The scheme integrates reading and game playing. In the case of a book, the user confronts the static fact of the book and the choices of the author and the editor in it, whereas the user of a textual game “plays” the text – her choices influence the outcome and the progression of reading as well. It is important to note that the two activities cannot be considered separately because the gaming aspect modifies the act of reading. (See the italicized texts in the row “Reader” in Figure 2.)

Multi-user discourse

Single-user cybertext is an utterance that nevertheless evokes images of traditional authorship. What is added are the layers of authorship: the narrative layer and the gaming layer. (However, the last row of the table – the "Ergodic reader" – points to issues of emergent behavior that ought to be considered separately.) Aarseth describes an interesting early example of the multi-user discourse, the Multi-User Dungeons (MUD), in which multiple users are invited not only to play the same game together and to "chat" in order to communicate with each other, but also to build – or program – intrigues and narratives in the space of MUD for themselves and other users.[6] Here the authorship radically changes.

Aarseth uses the term "netiquette" to describe the rules that the users participating in a multi-user discourse must follow in order for the project to function. The duality of the language layer and the game layer of the textual adventure game is replaced by the focus on building a community of users by any means possible.

»Digital communities«

In 2004, the Ars Electronica festival introduced a new category called Digital Communities. In 2007 the parallel Net Vision category (i.e., internet art) was abolished and the new Hybrid Art introduced instead. The Interactive Art as a constant of the festival is less telling, and therefore it is important to note that the dividing of the field into non-internet-based and internet-based projects has shifted towards a divide between building societies and hybridizing media. Building societies has in fact included virtually all the works that used the internet as a key ingredient (hybrid art in turn began to compete with the obsolete category of interactive art). The slogan of this programmatic change was "the reclaiming of the internet as a social space*« (Cyberarts 2004* 196; *Cyberarts 2006* 192). The authorship of a multi-user discourse is thus determined by its effect: the digital community as a new form of society.

Alvar Freude and Dragan Espenschied: Assoziations-Blaster (1999–)

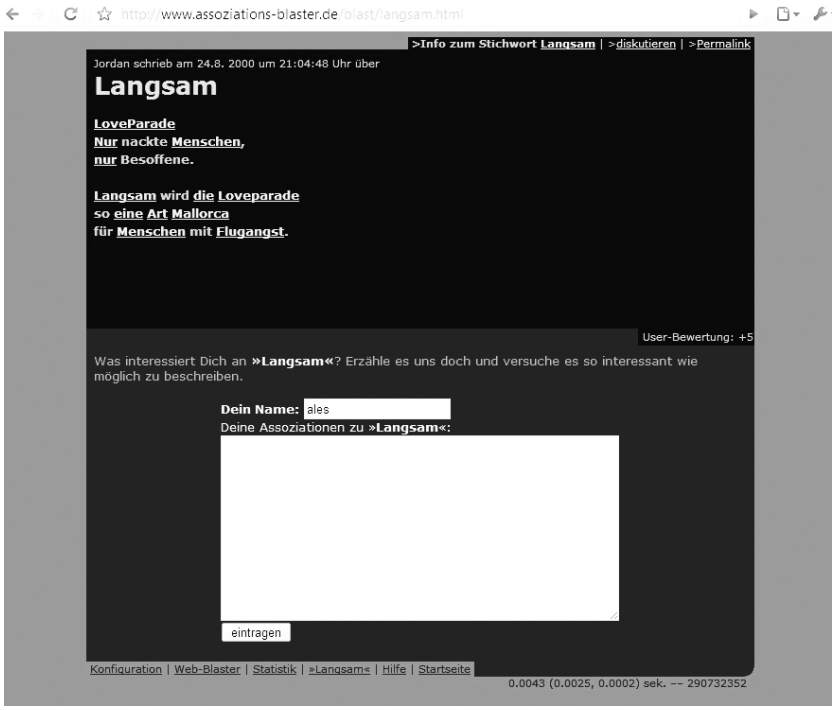

Figure 3. *Assoziations-Blaster*, by Alvar Freude and Dragan Espenschied

An example of a multi-user discourse that constructs a textual experience with literary qualities is *Assoziations-Blaster*[7] by Alvar Freude and Dragan Espenschied. There are two interesting issues to consider. *Assoziations-Blaster* invites users to write associations on given keywords or even suggest new keywords. A system of control is implemented to maintain literary quality: the user has to "show interest" in the project in order to be given a privilege to rate other users' texts or to be allowed to add new keywords, which depends on the users' activity. If one submits longer texts, she gains more power to control the project as a whole. A special filter exists so that the user can avoid reading texts that other users found "worthless." The second interesting point about this particular project is that the German version of the project successfully builds meaningful streams of textual fragments, whereas the English one is a failure – this points to the importance of the literary and new media art systems in spe-

cific language regions for the existence of a new media literary art work such as *Assoziations-Blaster*.[8]

What is needed in the case of a multi-user discourse is to establish a social network that can support it. The personalistic theoretic approach proves to be productive for explaining multiple authorship, which involves (a) the author of the system of collaboration, (b) the rules of its functioning that usually need to be constantly under revision (roles of system administrators, a hierarchy of users), and (c) the users that actively participate.

Emergent properties of a cybernetic system?

The emergentist paradigm from the sciences[9] is often used to explain the features in new media objects that a programmer of algorithms has not foreseen. However, the emergentism in computation could not be considered in its "strong," ontological aspect but only in the "weak" epistemological meaning of the term (O'Connor and Wong). In addition, the homogeneous continuation of knowledge from physics to chemistry to biology and beyond, which follows the scientific paradigm (e.g., nonreductive physicalism), is inappropriate for describing the unusual artistic use of language because there is no conceptual foundation to do so. In his theoretical analysis of a "poetry automaton" (*Poesie-Automat*), Hans Magnus Enzensberger attempts to bridge the gap between the primary structure of language and secondary poetic structure – which opposes the primary one – with a compromise. Nevertheless, as a rule art contradicts its explanations through viable systems.

Techno-imagination (Vilém Flusser)

Vilém Flusser approaches the problem of decoding techno-images from the evidential fact that the majority of laymen cannot decode technical images correctly (which includes new media textual objects) because they do not understand how they were produced.

An example of a technological image is the Google web search engine (1996) by Sergey Brin and Lawrence Page.[10] The Google system provides lists of appropriate links to websites to a query submitted by a user. However, the quality of the results is not an "emergent" quality of the machine but a computational quantification of the values of the websites on the basis of links as quotations. The unidirectional nature of a link in the

current World Wide Web can, if one is able to reverse the links, reveal the values of the websites through the analysis of all the acts of all people that made web pages. The breakthrough of Google was initially the application of the citation criterion from the domain of academic journal publication to the World Wide Web.

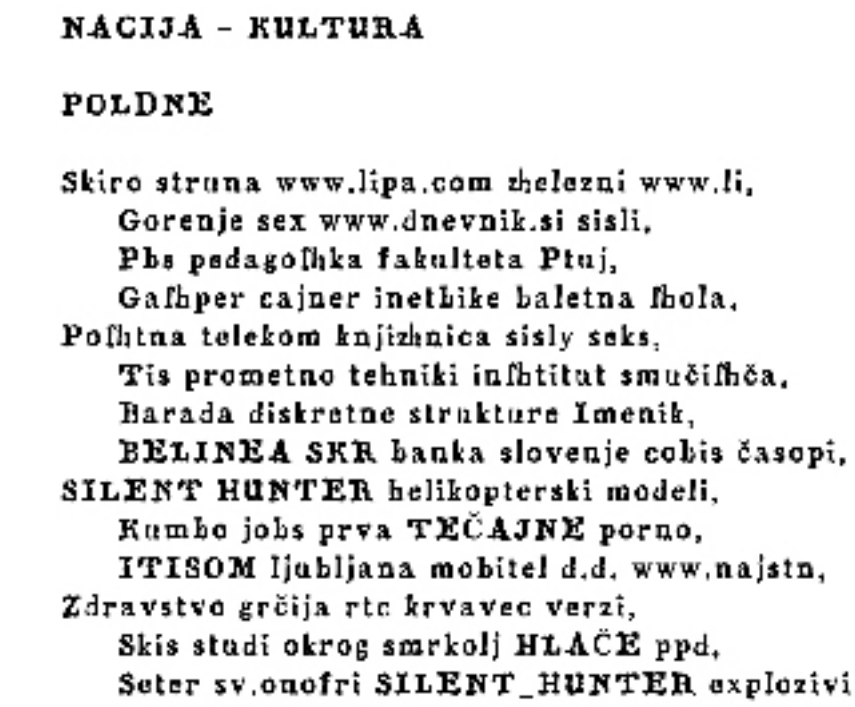

Figure 4. *Nacija - Kultura*, by Vuk Ćosić

A Slovenian literary example is Vuk Ćosić's *Nacija – Kultura* (*Nation – Culture*, 2000), which used the "search-stream," the real-time input to the portal *Mat'Kurja*,[11] to project it in the form of a sonnet next to the Slovenian romantic poet France Prešeren's book of poems, which is one of the key works of Slovenian culture. Ćosić's title should be read mathematically as "nation minus culture" because the search-stream yielded mostly obscenities. What is important is to read Ćosić's work as a techno-image – not a traditional visual image nor a narrative text, but an image of a theoretical concept. Vilém Flusser's theory is useful here because it suggests a theoretical view of the divided authorship – the programmer and the user of an apparatus.

Computational transformations of verbal signs

The new media artist and theorist David Link wrote a historical overview of the early computational production of verbal signs (*There Must Be an Angel*). However, after considering multiple attempts to build artificial intelligence, Link concluded that there is a theoretical limitation that prevents the implementation of language. It is important to bear in mind that information as considered by a computer or a Turing machine exists on a level before the differentiation of symbols into numbers and letters. The reason for this is that information can change into other information without considering any extrasystemic rules. The machine transforms the material states of a medium in order to artificially separate one amorphous materiality into different recordings that are meaningless in themselves.

Conclusion

The condition of mechanical literary systems points to two important conclusions. On the one hand, the computational production of meaning has to be limited to building relationships between singular unities (the computer can execute logical operations on data very quickly, but cannot simulate consciousness or language). On the other hand, the analysis of a new media literary object should focus on the multiple subject positions that participate in its production and particularly point to the boundaries between utterances as exchanges of speakers that take part in speech communication.

NOTES

[1] In this sense, Bakhtin's utterance (*высказывание*) corresponds to Foucault's statement (*l'énoncé*).

[2] It is determined by four characteristics: (i) interchange of speaking subjects, (ii) consummation (it has to be thematically accomplished through the speaker's intention), (iii) expressiveness (the speaker's subjective emotional-axiological relation towards the object and meaning of the content of the utterance), and, finally, (iv) the utterance has to be addressed to somebody (a particular addressee is being taken in consideration. (Bakhtin 60–103)

[3] The material foundation for the literary aesthetic experience in Ingarden's theory of literary art work, the "stratum of linguistic sound formations."

[4] See http://en.wikipedia.org/wiki/File:ADVENT_--_Crowther_Woods.png (30 Aug. 2009). The first example is *Hunt the Wumpus* (1971) by Gregory Yob, and the first

Slovenian example is *Kontrabant* by Žiga Turk and Matevž Kmet (RTV Ljubljana & Radio Študent, 1984).

[5] A figure of reading. "La tmèse [is a] source ou figure du plaisir …; elle ne se produit pas à même la structure des langages, mais seulement au moment de leur consommation; l'auteur ne peut la prévoir : il ne peut vouloir écrire *ce qu'on ne lira pas*" (Barthes 20–21). If the reader skips parts of the text then she does not progress at the game level of the ergodic text because the game requires strict adherence to its rules.

[6] E.g., *TinyMUD* by James Aspnes (1989–1990).

[7] See http://www.assoziations-blaster.de (30 Aug. 2009).

[8] However, this insight is extremely difficult to verify and prove because the analysis would need to clearly define influences leading to a viable literary society, whereas comparable successful multi-user Internet literary projects are difficult to find.

[9] "Emergent entities (properties or substances) 'arise' out of more fundamental entities and yet are 'novel' or 'irreducible' with respect to them. (For example, it is sometimes said that consciousness is an emergent property of the brain.)" (O'Connor and Wong)

[10] See http://infolab.stanford.edu/pub/papers/google.pdf› (30 Aug. 2009).

[11] See www.matkurja.si› (30 Aug. 2009), http://web.archive.org/web/20030401083528/www.matkurja.com/slo/ (2 Feb. 2003, 21 Aug. 2009).

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