THE EXPERIENCE OF THE UNIQUE IN READING DIGITAL LITERATURE

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Introduction

Historically, literature was the first of the arts to enter the phase of mechanical reproduction. Since the mature phase of print technology the uniqueness of a book has not been an issue (with the exception of certain collectors items). Rather, importance has been laid on the uniqueness of the expression (the author says something that nobody else has said before, or, says something in a way that nobody else has done before) and the uniqueness of experience (my reading of a book is always different compared to any other readings).

With digital literature we are facing a wholly new situation. Cybertextual literature[1] possesses devices for creating a different textual whole for each reader and reading session. Even though the piece of computer code underlying the work remains the same, the surface level may be different on each and every run. In this situation the reader may truly face a unique text, something that nobody else may ever see.

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[1] For the definition of cybertextuality see Aarseth 1997.

The dynamics and variability of digital texts are tied to the temporal potentiality in programmable media. The notion of uniqueness, in its turn, is a consequence of the programmed dynamics.

Textual Time

One way to classify temporal possibilities in programmed texts is the following:

Limiting reading time. Text appears on screen only for a limited period of time. The period may be long enough for a thorough, focused reading, but it may also be used to challenge the reader, force her to read on the limits of apprehension.

Delaying reading time. Whereas it is practically impossible to implement means to hinder the reader of a print book to browse through the pages with any speed, or to jump over dozens of pages on one turn, it is extremely simple in digital cybertext to force the reader to wait for a fixed time before it is possible to proceed from one text passage to another.

Limiting the reading opportunities. The text may only be accessible at certain times, or only for a limited period of time. An extreme case here would be what Gonzalo Frasca (2001) has termed 'one-session game of narration', which, as the self-explanatory phrase tells, can be accessed and read only once, after that the text either erases or changes itself. Another hypothetical example would be (borrowed from Eskelinen 1997) a text which can only be accessed during office hours, or a text which is different if either on day-time or night-time.

Temporally evolving texts. This category includes text which evolve continuosly, thourgh additions posted by the author or the readers, or both. The addition or modifications may also be programmed according to certain variables outside of the text (stock marker rates, environmental factors etc.), so that no authorial intrusion is needed after the initiation of the text (even though it may be quite hard to guarantee that feeds from external web sources would stay in existence for longer periods).

The ideas above mainly refer to the reading time, but the time within the textual work, fictional time, may be even more interesting in theoretical terms. Temporality in traditional print texts is a highly problematic notion. It is possible to use direct temporal points of reference, which situate the events described in specific historical period, but often these are not available. The truly problematic issues, however, are duration and speed. The relation between the time used for narrating certain events, and the time those events lasted cannot be precisely determined. Gerard Genette has proposed a solution through the concept of *pseudo time*: the amount of text used to describe an event as measured in lines of text determines the speed of narration (Genette 1980). Thus, if the events of a life time are recounted in a few pages, we have the feeling that narration is speeded up, that the discourse time is faster than the story time. Or in another direction, if a simple event like choosing a proper tobacco pipe from a rack is recounted in twenty pages, we have the feeling that the discourse time is slower than the story time. Somewhere in between, there is the balance where discourse time and story time are seen as approximately the same. It should be noticed that pseudo time is really not a temporal measure at all, but a spatial one: pseudo time is counted in number of words, sentences and pages used to describe certain event(s).

With temporally dynamic cybertexts, however, we need also to take into account the measurable true time, as we can, for example, define the duration for each node (for example, in Stuart Moulthrop's *Hegirascope* each node gives way to the next one in 30 seconds). Thus, we have at least the following four temporal levels for cybertexts with narrative content[2]:

1. *user time* (the time the user spends reading the cybertext)
2. *discourse time* (the time of the narrative discourse)
      -pseudo time
      -true time
3. *story time* (the time of the narrated events)
4. *system time* (the time of the cybertext system states)

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[2] For more thorough discussion on this issue, see Eskelinen & Koskimaa 2001.

One more aspect of temporality deals with simultaneity. There are two issues involved: events which occur as a temporal sequence are all present, in the form of the whole text, simultaneously and they are all equally accessible to the reader, but on the other hand, simultaneous events are rendered sequential in narration (simultaneity being established with such notions as "At the same time…") It seems to me that one of the most promising areas of research within digital literature is the reorganization of these temporal issues through the dynamics of system time (the succession of the processor cycles pacing the execution of the code), reading time, and textual (fictive) time. When we enter the code level of cybertext, we face issues such as genuine simultaneity enabled by parallel processing, and apparent simultaneity based on the fact that system time is divided into so small units that a human perceiver is experiencing as simultaneous applications which are actually handled sequentially. Also cyclical and linear time play both a role here, as code is typically using loop structures but the system clock is ticking linear timing as lapses from the moment when the processor was started. It may be technically possible to consider the various temporal levels separately, but on the experiental level merge together in a novel way. Trying to grasp the temporality of cybertext bears crucial implications for the wider notions of temporality within digital culture.

Uniqueness, Repetition, and Entropy

As examples of cybertextual works which might prove fruitful as subjects for this sort of temporal analysis we could mention John Cayles *The Speaking Clock* (which is an overt reflection on time keeping) or Wardrip-Fruin & alii's *The Impermanence Agent*.

With *Speaking Clock* it is worth paying attention to the dialectics of cyclical and linear time, which may also be phrased as the question between emergence and repetition. This piece translates current time to short poems, based on the materials forming the round clock shape (see Figure 1). The circular movement of the clock dials is replaced with the never-ending procession of the poem(s). As the text material is limited, words will be

repeated, and even lines or pairs of lines in a les frequent cycle. The piece constantly reminds the reader that she is witnessing unique experiences, with each new line of poem a moment has passed from present to history. There are various versions of *The Speaking Clock*, some of them turning the situation upside-down, the clock is stuck to certain specific time (commemorating certain historical events), and all new poems unavoidably refer to that moment. On the semantic level the interpretability of the poems varies from lines with apparent meaning to other much obscure sequences. Whereas in the physical reality time is linear, as indicated by the constant increase of entropy, and in most traditional texts the textual pseudo-time leads to opposite direction, decrease of noise, *The Speaking Clock* ambiguously oscillates between these poles of natural time and eschatological time. In its original form *The Speaking Clock* is, after all, generates what we call pseudo-unique texts, as the predetermined text materials and algorithm used at some point renders the process repetitive (if run long enough). Cayley has, however, visioned version of this piece with online feed of world news as the source material, and this version would offer genuinely unique texts as long as the online feed functions.
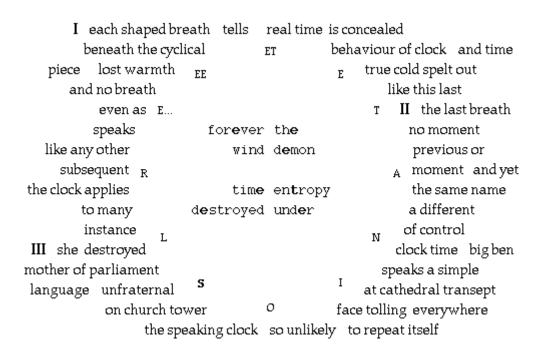

Figure 1. *The Speaking Clock* by John Cayley

Described very shortly, *The Agent* is a combination of a narrative text with illustrations and an agent-programme monitoring the WWW traffic of the machine where the piece is run. The narrative is a biography, the memoirs of Wardrip-Fruin's grandmother written down by himself and illustrated with pictures taken from the family album. This memoir is shown in a small window supposed to be open on top of a web browser and possibly other running applications. The text is proceeding automatically in a quiet pace, new 'pages' appearing after a set interval. While the programme is running and the text proceeding, the agent-programme is continuously scanning the WWW traffic of the computer. According to a certain procedure, the programme selects some of the web pages the reader/user has recently visited, cuts parts of those pages (fragments of either text or images) and pastes these fragments on the memoir text. Thus, the longer *The Agent* has run, more and more of the original memoir is replaced by materials borrowed from the web pages visited by the reader. At some point, then, all of the original materials appear erased, a collage of borrowed web materials having taken their place.
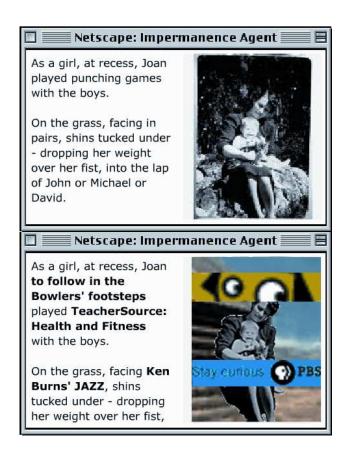
Figure 2. Two screenshots from *The Impermanence Agent* by Noah Wardrip-Fruin & al.

We may observe here some quite obvious intentions. First, there is the issue of memories, how they are gradually fading away, more recent impressions taking their place. Also, there are the traditional photographs which refer to a certain reality, serving to witness the once-existence of certain persons and events contrasted with the pixelated digital images, often totally without a referent in the physical world. *The Impermanence Agent*, then, may not be the current world's *Remembrance of Things Past*, but rather the opposite, a demonstration of how the world gone by is quickly being replaced by new cultural formations.

One of the notable issues here is, how the piece makes the reader/user aware of the unique moments of everyday life. In relation to architecture, Benjamin makes a distinction between tactile and optical means of receiving buildings. He then goes on to

mention how "[o]n the tactile side there is no counterpart to what contemplation is on the optical side. Tactile reception comes about not so much by way of attention as *by way of habit*" (Benjamin 2008, 40). Much of our daily Web browsing activity is more tactile than optical, we go through certain chores of pointing and clicking our way from page to page, not necessarily paying too much attention to their contents. *The Agent*, by juxtaposing elements form these semi-unconsciously visited pages to the new context of the piece cuts them off from the habitual reception, and render them as objects for contemplation. Through WWW the whole world seems to be at our hands, but *The Agent*, even if just incidentally, brings *distance* to these everyday elements. The combination of the very concrete fading away of memories, with the alert attention to the present moment makes *The Agent* in such a powerful way to remind its readers of their own temporal existence.

Conclusion

"The function of film is to train human beings in the apperceptions and reactions needed to deal with a vast apparatus whose role in their lives is expanding almost daily." (Benjamin 2008, 26.) If we replace the word 'film' with digital literature (or digital media) and leave out the 'almost' we will get the claim that the function of digital literature is to train human beings in the apperceptions and reactions needed to deal with a vast apparatus whose role in their lives is expanding daily. I would like to give this a positive, empowering meaning, where 'dealing' is not merely using, but rather controlling or, at least, understanding the apparatus of the ubiquitous digital technology. With the shift from mechanical to digital reproduction we have entered the field of programmable media, where 'reproduction' is not really a viable term. Instead we are dealing with generation, versioning, modifying and other such ephemeral notions. All this is deeply temporal in nature, and as our media is getting better in capturing the time dimension of phenomena, it offers us a way to observe our own temporal existence at a distance.

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