

THE NON-NARRATIVE CHALLENGE. A TIME-CRITICAL REMARK

[Related to lecture given at the MAC International Symposium  
*Story, Hypermedia, Digital Human*, Yonsei University Seoul,  
Institute of Media Art, May 2004]

[Foreword]

Is story-telling an anthropological essential in the  
representation of reality?

Annales Sangallenses

Digital story-telling in the moving image

[The cybernetics of feed-back]

Telling by numbers

Archive versus story

Turing tests

**[Foreword]**

Media studies, from my somewhat technology-centric point of view, is not about mass media content analysis, but on media materiality, media codes and media-based aesthetic form. In that sense, narrative as cultural technology is somewhat opposed to story-telling as hermeneutic sense-providing. Once narrative is taken as a cultural technique, it gets accessible to an analysis which sets it in relations to media conditions.]

[Interface-based media culture, in many manifestations, seems to continue cultural traditions of organizing experience in the form of stories and narrative. But there are fundamental alternatives to the notion of "story" in digital space, when calculating replaces narrative and temporal linearity is being replaced by micro-temporal discontinuities. If the idea of the "human" is anthropologically linked to story-telling, it will be reconfigured in digital space. The notion of the "digital human" is an oxymoron: What looks, sounds or behaves like human is itself unseparable from the machinic, as indicated by the telling title of Norbert Wiener's *Cybernetics or communication and control in the animal and the machine* from 1948. According to Gregory Bateson, in creative art man experiences himself as a cybernetic model.

The digital media age reminds humans that maybe there is no natural-born desire for story-telling but a cultural coding or even force called narrative which changes its essence with new media technologies. Let us, thus, face the operativity in digital culture beyond historical nostalgia for narrative. In digital space, a fundamental alternative to the notion and cultural practice of story-telling emerges.

## **Is story-telling an anthropological essential in the representation of reality?**

Humanities are thus confronted with a non-narrative challenge posed by hypermedia. Shall we (re-)turn conservatively to story-telling as the only source of humanities, as old as human history itself, or rather face new, non-narrative ways of communicating in the computer technology world?

In this context, media studies identify the digital human by re-discovering the digitally coded human in cultural history always already.

Story-telling is not an anthropological need; it is not a transcendental, but cultural-technological apriori. The traditional diegetic adaption of time-processing in the form of story-telling has become an anachronism itself in the time of time-based, time-critical electronic and digital media; since film, the reality of technical media is time-axis manipulation (Friedrich Kittler). Paul Ricoeur, in his seminal study *Temps et Récit*, has worked out that narrative is fundamentally bound to the temporal experience. In digital space, though, emphatic notions of time turns into a function of arithmetical micro-timing, since digital media operate radically time-based (in fact time-critical; here time here becomes the decisive factor). Digital culture is in fact a new temporal culture: speed becomes crucial not only in computer games but as well in virtual war and economy - a non-narrative parameter, a kind of operativity which is rather ergodic (a term taken from statistical physics). Ergodic phenomena emerge in cybernetic systems (machinic or human) which operate as an information feedback loop, where a different semiotic sequence is generated each time it is engaged.<sup>1</sup> Virtual creatures may disguise in the form of narrative, simulating stories - but in fact the apparent cinematisation of computer games practically reduces stories to *action*, and „the event space is not fixed before the time of play“ <Aarseth ibd., 35>, between entropy and negentropy. Are there genuine plots which can only be told digitally? In his paper „Cohesive but Not Coherent: Music Videos, Narrative, and Culture“, Steve Jones schematizes narrative as mimetic, analog, and digital, specifying that in digital narrative, a nonlinear „mosaic of fragments“, in fact information, is presented in discrete steps.<sup>2</sup>

---

<sup>1</sup> Espen Aarseth, Aporia of Epiphany in *Doom* and *The Speaking Clock*. The Temporality of Ergodic Art, in: Marie-Laure Ryan (ed.), *Cyberspace Textuality. Computer Technology and Literary Theory*, Bloomington / Indianapolis 1999, 31-42 (33). This definition of ergodic processes somewhat differs from its definition in communication engineering (Norbert Wiener, Claude Shannon).

<sup>2</sup> Presented at the 1988 Popular Culture Association Conference, as quoted in: Brooks Landon, Not what is used to be: The overloading of memory in digital narrative, in: George Slusser / Tom Skippey (Hg.), *Fiction 2000: Cyberpunk and the future of*

Time processing has no exclusive narrative apriori any more, when its dominant medium is not literature any more (as declared by Gotthold Ephraim Lessing in his 1766 essay *Laokoon*) but cinematographical analysis of spatial movement in time, video and computing. Lessing's opposition between space-based visual media and time-based literary media of representation collapses when telling itself becomes counting by numbers again. "Digit" from Latin means number; digital media reduce everything to numbers, be it human or not.

### **Annales Sangallenses**

Story-telling so far has been a model of organizing the experience of time (and death) in a coherent, meaningful way against a fragmented reality - resulting in a "narrative pressure" so great that the interpretation of even non-narrative events is sometimes affected by it. Oskar Negt and Alender Kluge once called this the "violence of coherence".<sup>3</sup> For the humanities in its classical form, "discontinuity was the stigma of temporal dislocation" that it was the story-tellers' task to remove. In digital culture, discontinuity (the essence of the discrete) has now become one of the basic elements of media (archaeological) analysis. "The 21st century dawned with the forecast of rapid changes and as expected, has created confusion and disorder", our conference draft declares. Are we thus in a situation comparable to the one in Europe after the collapse of the Roman Empire, in early medieval times? The lack of social authority was then expressed by nonexplanatory and paratactic epic discourse in contrast to romance, where causality and "focus" are expressed through explicit narrative subordination.<sup>4</sup> Annual registering of events offered their readers simply one thing after the other and resisted connecting the lot into one coherent whole - not subsuming, not creating historical-causal entailments<sup>5</sup>, as can be visually seen in the Annals of Saint Gall, a record of annual events referring to early 8th century Europe. Neither *discours* nor *histoire*: Here, the disorder implied by some of the events is stabilized only by the regular, unbroken procession of years, a cultural technology of formalization (counting) instead of narrative.

---

narrative, Athens, Georg. (University of Georgia Press) 1992, 153-167 (164, Anm. 1)

<sup>3</sup> See Seymour Chatman, *Novels and Films*, in: xxx (ed.), *On Narrative*, xxx, 122, and Oskar Negt / Alexander Kluge, *Geschichte und Eigensinn*, Frankfurt/M. 19xxx, chapter III

<sup>4</sup> See William Brandt, *The Shape of Medieval History* [\*1966], New York 1973, 86, and Erich Auerbach, *Roland Against Ganelon*, in: same author, *Mimesis* [\*1946]

<sup>5</sup> See Jerome Bruner, *The Narrative Construction of Reality*, in: *Critical Inquiry* (Autumn) 1991, 19

709. Hard winter. Duke Gottfried died.  
 710. Hard year and deficient in crops.  
 711.  
 712. Flood everywhere.  
 713.  
 714. Pippin, Mayor of the Palace, died.<sup>6</sup>

With varying entries on wheather or death, on politics or religious matters, the contingent replaces any narrative sense. So we have to realize what "counts" (rather than narrates) under these conditions as events under description. Using McLuhan's terms, this "cold" list requires a reading technique different from "hot" historical (or historiographical) imagination (as described by Hayden White in *Metahistory*).<sup>7</sup>

Remarkably, there can be no entries as well - for the absence of events. Thus the *annalists* operate in a truly binary mode [with *Pure Digital Silence* (Korea)].

Walter Benjamin in 1936, in his essay on the story-teller (*Der Erzähler*), re-affirmed this experience for modernity: when cut of from epic tradition, one cannot communicate any more in a narrative way.

[Narrative discourse tends to deflect attention from data to seemingly meaningful structures of consciousness. The narrative construction of reality as a cultural sense making pattern is responsible for the difference between the practice of acting in discrete steps (mouse-clicks!) and the temptation to *misread* them through the lense of stories. These hypermedia operations transform human teleologies at an incredible speed into feedback-loops. Linear story-telling is replaced by feed-back operations - operations on which bio-logical learning itself is based.<sup>8</sup> Heterogeneously juxtaposed information has to be immediately consumed, at once, and thus turns from narrative to time-critical reactions - as opposed to story-telling, which is extensive interpretation.<sup>9</sup>]

Does the representation of the *factual field* of reality require the form of story-telling or are we, in the information media culture, able to perform data processing as the manipulation of data to produce a more useful form, which we shall call information? "The sequence of operations required to perform a

<sup>6</sup> *Annales Sangallenses Maiores, dicti Hepidanni*, ed. Ildefonsus ab Arx, in MGH, series *Scriptores*, ed. Georg Heinrich Pertz, vol. 1 (Hannover, 1826; Reprint Stuttgart 1963), 72f.  
 Translation quoted from: White 1980: 11

<sup>7</sup> See Marilyn Robinson Waldman, *Critical Response*, in: xxx (ed.), *On Narrative*, 19xx, 244f

<sup>8</sup> Norbert Wiener, *Mensch und Menschmaschine*, Frankfurt/M. (Metzner) 1952, 62 u. 65

<sup>9</sup> Walter Benjamin, *Der Erzähler*, in: ders., *Gesammelte Schriften*, Frankfurt/M. 1972ff, Bd. II.2, 439ff

specific task is known as an *algorithm*<sup>10</sup> - the alternative to story-telling, a digital aesthetics of writing a mere sequence of events in serial, sequential order.<sup>11</sup>

Whereas narrative once was the human art of telling time (orally or in literature), time now is being organized by technology itself, Paul Virilio declares<sup>12</sup> - just like the story-teller can be replaced by the cold camera eye style.

Telling becomes time-critical when it goes online, replacing story-telling by variable configurations of time and non-predictable actuality. Codes only provide for the structural elements of stories, while the user inter-actively has to implement the narrative connections spatially - different from cinema which had a dramatic concept unfolding in time.<sup>13</sup> Digital interactivity replaces narrative, being genuinely based on the the discrete - enumeration instead of stories. Taken to its extreme, this hypertemporality of course becomes somewhat arbitrary. The current crisis of interactive art works and the return of stories in arts indicates a certain conservative nostalgia for narrative dramatization which is (positively) able to make a structuring proposal, a strong argument (transparent to re-configuration, though).

Algorithms displace the classical story-board, representing the aesthetics of CD-ROM: The script is not a screen-play any more (story-telling), but code lines. Here, the programmer is not interested in stories any more; rather he writes discontinuous jump addresses to Hot Spots. Designing a Computer Game today means 95 % of digital administration (setting links), and just 5 % authorship are left. This programming practice is deconstructing narrative scenes into its most elementary morphological units. Linearity (which in the case of film is based on the irreducible material linearity of celluloid already) has artificially to be introduced on CD-ROMs if one wants guide-lines.

In the digital era the question arises whether „hypermedia“ is not already an anarchonistic legacy of the previous media age, a kind of cultural lag, since in digital space all sensual differences between images, sounds and texts are equally dissolved into

---

<sup>10</sup> J. D. Richards / N. S. Ryan (eds.), *Data Processing in Archaeology*, Cambridge U. P. 1985, 1f

<sup>11</sup> See Hayden White, *The Value of Narrativity in the Representation of Reality*, in: *Critical Inquiry* vol. 7, no. 1 (1980), 5-27

<sup>12</sup> Paul Virilio, *Technik und Fragmentierung*, in: Karlheinz Barck u. a. (eds.), *Aisthesis. Wahrnehmung heute*, Leipzig (Reclam) 1990, 71-82 (71)

<sup>13</sup> Monika Halkort, *Datenbankbasiertes Broadcasting - Neue Erzählgenres im Netz*, in: *do it yourself! Kunst und digitale Medien: Software - Partizipation - Distribution*, hg. v. Andreas Broeckmann / Susanne Jaschko, Berlin (transmediale.01) 2001, 155-159 (155)

strings of numbers. When all sensual dimensions are quantifiable - even the temporal resolution -, telling gets liberated from the narrative grip. We get a glimpse of processing cultural experience which does not need stories any more.

### **Digital story-telling in the moving image<sup>14</sup>**

A century ago storytelling was revolutionized with the invention of the moving image. But the moving image was not invented for story-telling, but as a means for measuring movement - a non-discursive practice.

After having made the old medium (theatre) the medium of the new (cinema), the new moving image technology started to develop its own aesthetics: cutting (technical), editing (conceptual). This means "selection, timing and arrangement of given shots into a film continuity", under-cutting the superficial story on the level of discrete perception. Wsewolod I. Pudowkin's idea of discontinuous film cutting and editing leads to a culture liberated from the primacy of coherent narrative, literally counting with cuts and gaps.<sup>15</sup>

In the 21st century, the power of the moving image is being exponentially increased. The effectiveness of computer-enhanced animation suspends the limits of real life, just like Heinrich von Kleist in 1800 already preferred the mechanic puppet to human dancers for their better anti-gravity movements (*Das Marionettentheater*), and some of his dramas seem to perform the logic of binary electric impulses.<sup>16</sup> Grace in movement can artificially be achieved better than by training of human bodies. This is expressed as well in Samuel Butler's novel *Erewhon* (an acronym for "nowhere") from 1872, where machines perform what Deleuze and Guattari once called "an-organic bodies".

The impact of digital effects on live-action storytelling is not just being extended exponentially, but films like *The Matrix* (written and directed by the Wachowski Brothers) with a kind of data rain visually represent the complete take-over of the digital as power regime: the compiling and filtering work of networked servers making the user slave.

According to Marshall McLuhan, the media form of communication inherently affects its content. So what is the bias of the digital

---

<sup>14</sup> See the essay by Charles B. Slocum "The History of the Future: We Have Seen It, and It Was Digital" <= www???

<sup>15</sup> Wsewolod I. Pudowkin, *Über die Montage*, in: *Texte zur Theorie des Films*, ed. Franz-Josef Albersmeier, Stuttgart 1979, 77f

<sup>16</sup> See Gerhard Pickerodt, Heinrich von Kleist. Der Widerstreit zwischen Mechanik und Organik in Kunsttheorie und Werkstruktur, in: Hanno Möbius / Jörg Jochen Berns (eds.), *Die Mechanik in den Künsten*, Marburg (Jonas) 1990, 157-168

moving image? Digital storytelling is not so much about the viewer choosing from alternate endings but rather a function of automated algorithms which combine key-words in a voice-over story with a data bank of video files, such as realized in Lev Manovich's so-called *Soft Cinema*. The system randomly (by the LINGO program) selects from a video data bank short movies which superficially fit to the textual stories displayed:

While the voice over which narrates the stories was edited before hand, everything else is constructed by the software in real time, including what appears on the screen, where, and in which sequence. The decisions are based partly on a system of rules, and are partly random. <...> *Soft Cinema* can be thought of as a semi-automatic Vj. <Handout DEAF03>

The split screen layout is taken from well-known financial TV.

<einspielen Movie-Clip "soft-cinema-documentation.mov">

This media installation combines narrative with loops; its form leads to data-based cinema.

### **[The cybernetics of feed-back]**

Digital aesthetics, with its *Windows* perspective, its archival desktop-metaphors on interfaces and with its hypertextual logic privileges the topological - mapping rather than telling. This aesthetics is already re-invading classical media like film, f. e. Mike Figgis' *Time code*, and the "dreamlike quality" in David Lynch's film *Lost Highway* delinearizes cinematographic story-time itself.

Cyberspace is not primarily about space but about cybernetics - the transformation of linear narratives into nodes and nets. No longer bound to physical places, the virtual addresses exist in mathematical topologies only.<sup>17</sup>

According to Heinz von Foerster, cognitive processes in humans are comparable to computable cybernetic algorithms.<sup>18</sup> Jacques Lacan's essay on "Cybernetics and the Language of the Unconscious" discovers algorithmic procedures as a target for psychoanalysis, with the so-called human subject being itself an automaton in the sense of "cybernetic doors" (how he calls it), on/off operations, switching.

---

<sup>17</sup> See Albert Lichtblau, *Cyberspatial Monuments of Memory*, in: Gerfried Stocker / Christine Schöpf (eds.), *Memesis. The Future of Evolution*, Wien / New York (Springer) 1996, 234ff

<sup>18</sup> See Heinz von Foerster, *Kybernetik und Erkenntnistheorie*, in: same author, *Kybernetik und Bionik*, Oldenburg 1974

## Telling by numbers

Our conference draft tells us that "the definition of 'media' itself begins as a material and spiritual form of 'storytelling'"; but no! on the contrary, the earliest (media-)archaeological traces of writing (symbolic inscriptions) from the Iraque area is numbers rather than pictograms, counting rather than narrative language.

Digital story-telling is about deconstructing narrative elements to smallest, meaningless units. Let us remember: the digital did not start with the computer (which, more precisely, means the binary code), but from the moment when an unknown adaptor of the Phenician alphabet in ancient Greece added singular letters for vowels to the known consonant writing system, in order to be able to record mechanically, even phono-graphically what could have been so far only orally performed: the Homeric epics (the *Iliad* and the *Odyssee*). The "hot" (McLuhan) vocal alphabet, not being dependend on the reader's interpolation in reading aloud, implicitey deconstructed the idea of the uninterrupted flow of story-telling of poetic bards by deconstructing speech into single meaningless units (the letters of the alphabet) from which all kind of linguistic meaning could be re-composed. This technological operation philosophically implied that the world as such (physis) might be composed from single atomic units: the idea of the "elements" (denominating both the letters of the alphabet and the smallest physical units) was born by this media technology.

The media-archaeological project (at least at Humboldt University of Berlin) tries to proove that the aesthetic and the artistic has been arithmetic from the beginning, with ancient Greek terms like "techné" encompassing both the artistic/aesthetic and the machinic. And of course, deconstructing the world into smallest elements (letters of the alphabet, elements in physics = "stoicheia", musical harmonies according to numbers) has been an arithmetic operation since.

Today, the digital age re-enacts this procedure on a even more fundamental level, since not only speech, but images and sound and whatever is being decomposed when given to the computer. Bits are indifferent to cultural meaning.

The draft of our symposium asks: "Are humans no longer the masters of the universe, but merely one of the many neatly aligned fragments in the digital matrix?" Already Pythagoras declared: the world consists of numbers. Like a Moebius-loop, this trope of media culture now returns to us.

"Er/zählung" (narrative) is a pun which works only when written down in German; but even in English it is worth to remember a different, non-narrative etymological meaning of telling: „to be able to distinguish things“, to be able to *tell one thing from the*



other". Even closer to this, "to tell" as a *transitive verb* means to "to count things". The media artist David Gordon, in his gallery cinema installation *24 hours Psycho*, media-archaeologically undermines the thrilling story by slowing it down ultimately to the single frame. Time-based media lead to the re-entry of narrative as calculation, as can be demonstrated in media art installations such as Angela Bulloch's *pixel boxes* which slow down and enlarge digitized film frames to an almost abstract extreme. Counting movies by pixels (and be it the most Hollywood-like) is an indexical procedure, no story any more.

After arithmetics took over the world the only things that were left out were for a long time precisely the aesthetic and the artistic (bound to story-telling), but now they have also become encompassed by the digital. One needs to reframe the way those fields are media-epistemologically addressed (Ana Pinto).

The aesthetics of the discrete versus the continuous is the challenge. Continuity is a make-believe of subjective experience and still its guarantee (expressed by Michel Foucault in the introduction to his *Archaeology of Knowledge*), since humans have been culturally, politically and ideologically trained to experience experience exclusively through an organizing structure of the narrative kind. In digital culture, though, this narrative structure is being replaced by an archival grid of data processing.

[Continuous story-telling has long been the indispensable correlative of the founding function of the subject. This theme has played a constant role since: "to preserve, against all decentrings, the sovereignty of the subject, and the twin figures of anthropology and humanism".<sup>19</sup>

Against the decentring of the subject operated by electronic and digital media the ideological discourse insists on story-telling as the essentially human, since this is politically orthodox: preserving order as such. One function of narrative in digital space obviously is to symbolically (or even imaginarily) compensate for the experience of discontinuities in discrete space.]

### **Archive versus story**

[A workshop at the Washington DC Area Forum on Technology and the Humanities in February 2003 (Georgetown University) under the title *Making Digital Narratives: Archive and Story in New Media* asked: "How do we connect narratives to archives in digital spaces? How do the presentations of digital collections change

---

<sup>19</sup> Michel Foucault, *The Archaeology of Knowledge* (\*1969), London 1972, introduction

narrative possibilities or even challenge the idea of narrative and authority?"]

In his essay on "Data banks as symbolic form", media theorist Lev Manovich points out that in a media culture where the data model becomes primary, narrative becomes subject to data logistics (programming); thus the aesthetics of database inverts the traditional supremacy of story-telling (the syntagmatic) in favour of the paradigmatic (thus non-narrative). "Drowning by numbers" (Peter Greenaway) is the reality behind what appears like story-telling on the computer screen. So info-aesthetics, skilled data navigation and coding is a more transient relation between interface and the machine - the media-archaeological mode, no story-telling.

### **Turing tests**

What does a "digital human" look like? Let us imagine the digital persona (mask) of Marshall McLuhan himself, the inventor of modern media studies, endowed with the voice of the media artist Joulia Strauss from Berlin. Suddenly, "the medium is the message": the digital, never really touched upon by McLuhan, becomes the central topic of media archaeology.

So are able to animate McLuhan's face with his own textual quotes, undeadly. "Will the hypermedia make us all superhuman? <...> How is the human identity changing in the digital-media environment?" asks our conference draft. But maybe any expression like the "digital human" is already a *contradictio in adiecto*. We all know the motif of the deadly Siren songs which are meant to seduce all listeners in Homer's epic *Odyssee*. Already here we face the challenge that what sounds like the sweetest human voices is not human at all. Recording technologies of real voices since undermine the humanist certainties.

When the ethnologist M. Selenka went to the tribe of the Wedda in India in 1907, she made the natives speak or sing into a phonograph which have been preserved and digitally converted in the Berlin Ethnographical Museum.<sup>20</sup> Is this still the human voice which we hear, or its digital re-birth? Is all that noise the recording machine (phonograph) which speaks, like the android lady Hadaly in Villiers de l'Isle-Adam's novel *L'Eve future*, created by Thomas Alva Edison, the inventor of the phonograph, himself? The digital human starts with Edison naming his son and daughter "dash" and "dot".<sup>21</sup> As well in E. T. A. Hoffmann's novel *The Sandman* the lovers of the android Olympia have to be pleased with her monotone linguistic repertoire; Olympia, "froide a toucher",

<sup>20</sup> Quoted after: Max Wertheimer, Musik der Wedda, in: Sammelbände der Internationalen Musikgesellschaft Jg. XI, Heft 2 = Januar-März 1910, 300-309 (300)

<sup>21</sup> See Dieter Daniels, Kunst als Sendung, Munich 2002, 71

though is able to express herself on the piano - a discrete automaton. Furthermore, she manages to sing admirably (from record?), "mais ne sait, hélas, dire que `Ha! ha!´ et `Bonne nuit, mon cher". This leads us to the machinic inside of the human, like the one answer repeated endlessly in Herman Melville's short story *Bartleby* by the protagonist against his office orders: "I'd prefer not to." The iterative is the machinic, just as in computer games the option of "repeat" is symbolically undoing the ontological condition for narrative, death-in-time.

In his essay "Intelligent Machinery. A Heretical Theory" (1959) Alan Turing once declared that a disciplined human being, provided with paper, pencil and eraser is already a universal machine; he calls such a combination of a human with written instructions a "paper machine". And indeed, when we calculate in our mind, we become a function of a formalistic procedure, in fact: a symbolical machine ourselves, non-narrative, non-narratable.