IJoC **Media Times**

Times of Literature, Times of the Machine:
Poetic Media Archaeologies

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This article discusses the nexus of time and media in two works of contemporary literature—*Evolution*, by poets and artists Johannes Heldén and Håkan Jonson, and *Fjärrskrift* ("*Distance Writing*"), by writer Lotta Lotass. The works are read in relation to a broad and sometimes sweeping discourse on loss of time and history in contemporary culture, and they can be seen as examples of how innovative literary practice explores the problem of time and media today. Taking into account the thinking of scholars such as Siegfried Zielinski and others, I approach the works of Heldén/Jonson and Lotass as artistic examples of a poetic media archaeology in action—excavating the conditions and affordances of various media such as the book, the computer, the teleprinter, and film. From this viewpoint, and through the aesthetic potentials of literature, they can offer a more nuanced and differentiated account of the relationship between time and media than the discourse mentioned above, showing that our experiences of time are always constructed and modulated by the specific ecology of media at work in a historical situation.

Keywords: time, temporality, media technologies, media archaeology, Johannes Heldén, Lotta Lotass, literature, poetry

"Here also one could experience the texture of time as it passed, a shadow train, life's white machine."

Ben Lerner, *Leaving the Atocha Station*

If there is a zeitgeist to be found in our time, it might very well have to do with time itself, and it is then defined in the negative—as a loss of history and time. Numerous scholars and cultural critics have at least, during the last decades, arrived at conclusions and ideas that suggest as much, from Fredric

Jameson's 1980s declaration of the postmodern as dominated by the spatial (Jameson, 1991) to Jonathan Crary's reflections on "the incursion of non-time" (Crary, 2013, p. 30) in the 24/7 society to Franco "Bifo" Berardi's "slow cancellation of the future" (2011, p. 18) and Simon Reynolds's (2011) analyses of "retromania" as the dominant mode of contemporary pop music. "Nostalgic for garbage, desperate for time" sings the pop combo Vampire Weekend, and if nostalgia has been circumscribed as the reactive affect accompanying a posthistorical situation of late capitalism in the 21st century—forcing our lives into a constant present through technological, economical, and aesthetic means—then a certain desperation for time, for being situated in and actually experiencing time as a modulation of existence, as a forming force of retrospection and anticipation, is the expected companion (see Fisher, 2014).

Such analyses and sentiments are not ungrounded, and while being intimately linked to the present, to ubiquitous digital media and global capitalism, they must also be related to a number of sociotechnological changes during late modernity ranging from an expanding infrastructure of railways, road systems, and air traffic—and its concomitant reorganization of the world's spatiotemporal coordinates—to new scientific theories and new technical media such as film and sound recording (see Galison, 2003; Kassun & Macho, 2013; Kern, 2003). There is, thus, a complex history behind the contemporary discourse, a history that, on one hand, makes you suspect that time will always be a problem for us as soon as it is addressed, as St. Augustine once suggested, but that, on the other hand, invites us to consider the specificities of the situation today.

That art and literature have taken up the latter task is no surprise. In this essay I will look more closely into how contemporary literature, particularly poetry, might explore questions of temporality and time in relation to the discourse sketched above—in relation to the workings of digital media, but also, partly, in relation to the 24/7 society described by Crary (2013). Moreover, I want to show how such poetic work suggests that the presumed loss of time can be further nuanced and differentiated as we dig deeper into the configuration and functioning of the media landscape.

The two poetic works that I will discuss are *Evolution* (2013, 2014) by Swedish poets and artists Johannes Heldén and Håkan Jonson, and *Fjärrskrift* ("*Distance Writing*," 2011), by Swedish writer Lotta Lotass. Both works combine and move among media technological platforms and environments, and even though they raise many questions and explore several themes, the issue of time is central to them both. Crucially, the materiality and form, the writing methods and the reading acts that they trigger bring up this issue in various ways. In this, the two works continue a long tradition in literature while at the same time torquing it through operations specific to our own situation. Even if not representative of literature or art at large today, these texts offer good examples of how a more innovative poetic endeavor can add complexity to the problem of time.

One might, moreover, claim that the poetry of Heldén/Jonson and Lotass initiate an artistically inflected excavation of the current media landscape. While bringing up time and temporality—and suggesting that these must always be analyzed as multiple factors—the two works both historicize and display the material embedding of digital media and the meanings attached to them. Accordingly, as the metaphors suggest, I want to frame and analyze the works as examples of an artistic or poetic media

archaeology, as attempts to explore the material underpinnings and the histories surrounding (new) media (Huhtamo & Parikka, 2011; Parikka, 2012).

A starting point for my discussion is that media technologies and infrastructures shape or even construct time and temporalities. As John Durham Peters underlines in his recent book, *The Marvelous Clouds,* "Apparatus is the basis, not the corruption, of the world" (2015, p. 28). Such an understanding can be found in the work of a number of thinkers, but here I will relate mainly to what is sometimes called German media theory and to scholars such as Friedrich A. Kittler, Siegfried Zielinski, and Wolfgang Ernst, to outline a mechanical or media-technological codetermination of time.

From TAM to *Psychopathia Medialis*

From a certain viewpoint, literature, especially poetry, has always been an eminent time machine. As Gotthold Ephraim Lessing (1766/1984) claimed in the 18th century in one of the most influential works of modern art theory, poetry, because of its roots in the spoken word, is a temporal art form. Time is its primary medium, just as space is for sculpture and painting. But time has also always been modulated and manipulated in literary works, especially when it has materialized as something spatial—in writing.

This can take place on several levels. On one hand it is possible to jump forward and backward in the represented or diegetic time in narratives, which can be fragmented and convoluted or coherent and continuous. On the other hand, it is possible to play with letters and sentences through mannerist operations that seem to disrupt our understanding of time as linear, progressive, and irreversible. This is the case with such stratagems as palindromes and anagrams, which have been employed extensively in the Baroque period, for example, and in the early 20th-century avant-garde.

The interest in plastic manipulations of language around 1900 might be explained, however, by referring to certain changes in the history of media. Such is the understanding of modernism and the avant-garde of Friedrich Kittler (1990, 1999), who wanted to make a strict distinction between play with alphabetic signs and the effects on time and temporalities that inventions such as film and phonography would have. With such technical media, events taking place at different points in time (and in different places) could be juxtaposed in an amazing way, the speed of events could be increased or decreased, and time could even be made to go backward —a device heavily exploited by early cinema.

Technical operations such as these have fittingly been designated as *time axis manipulation* (TAM), which Kittler (1999) selected as perhaps the most important trait of technical media invented in the late 19th century. Kittler took a particular interest in Edison's phonograph in this regard. Writing and the alphabet had been dominant in Western history in relation to the production and dissemination of knowledge (and much besides), but the material that was processed on a technical recording was not letters or symbols, but sound waves: "What is manipulated is the real rather than the symbolic," as Kittler (1999, p. 35) observes in *Gramophone, Film, Typewriter*. The sounds captured by the machine were not just the ones identifiable by the cultured human ear but also the undifferentiated noises of the world.

To simplify somewhat, TAM and the phonograph disclosed a technical world beyond the human. Certainly this is something that has been affirmed and employed by human actors. One could mention the electronic compositions of Karlheinz Stockhausen, or the German technique of encrypting radio communication during World War I with the help of magnetic wire recordings on high speed. Still, TAM and sound recording in general indicate a transgression of the phenomenological sphere of human perception and points toward the inhuman. The sound as processed by a machine is not the same as the sound heard by an ear.

Kittler's analysis has been pivotal for later work in media archaeology in a German context and elsewhere, not least for the aforementioned Wolfgang Ernst. Ernst wants to distinguish the archaeological approach from media history as codified by human perception and human modes of understanding time: "In contrast to media history—that is, the human vantage point (Vico)—media archaeology tentatively adopts the temporal perspective of the apparatus itself—the aesthetics of micro-temporal processes. A different kind of temporality is represented here" (Ernst, 2013, p. 141). Even if this "different kind of temporality," the *Eigenzeit* of the machine, as Ernst calls it, is ontologically distinct from human time, the gap or difference can be perceived through lags, stops, and glitches in our dealings with media technologies. And it is perhaps at this point that an analysis that takes into account the temporal maladies (the dyschronia) transmitted by digital media should begin—by exploring the material interior of the machine. The works of Heldén and Jonson and Lotass address, as we will see, both the workings of TAM as outlined by Kittler and the temporal specificities of the machine focused in the analysis of Ernst.

This media-archaeological perspective can also take a slightly different form and become more diachronic. Instead of going deeper into the layers of the machine, it is possible to explore the sediments of media history (see Parikka, 2012). This is a crucial aspect of Siegfried Zielinski's (2006) understanding of media archaeology, or *variantology*, as he also calls it. If certain understandings of media history rest upon narratives of progress and sophistication—the contemporary discourses on the loss of time sometimes tacitly assume this—then the task of media archaeology is to problematize such narratives. Zielinski considers these symptoms of a *psychopathia medialis*, which covers up the complexity of every media-historical situation and event. But he also offers a remedy based on a more materialist approach. To counter these stories and in turn breed other generalizing stories (e.g., everything moves faster), we have to search out the hidden passageways in media history, the dead ends and the dead media, for example, to obtain a more truthful account of how technologies have changed and how they affect the experience of time and space.

Zielinski's answer is articulated both within a scholarly context and in relation to artistic practice. In *[. . . After the Media]* (2013), for example, he discusses a number of artists—a prime example is Nam June Paik—who give a critical view of the myth of progress. Moreover, the book concludes with a manifesto, "Vademecum for the Prevention of *psychopathia medialis*," in which Zielinski describes, in a series of paragraphs, what is to be done, also in an everyday context. To sum up his creed, we have "to learn to exist *online* and be *offline*," which he calls a "balancing act" and a "conscious split" between absorption and withdrawal ("in melancholy and bitterness") in relation to the experience offered up by new media. "If we don't succeed in this, we shall become mere appendages of the world that we have created, merely its technical functions" (p. 261). As we will see, the poetic investigations undertaken in

the works that will be addressed—of the book, the computer, the paper scroll, the teleprinter—will also connect to the kind of media archaeology outlined by Zielinski.

Temporalities of the Machine and the Book

The Electronic Literature Conference of 2013—"*Chercher le texte*: Locating the Text in Electronic Literature"—took place in Paris. For this event, the Swedish poet and artist Johannes Heldén, together with artist and programmer Håkan Jonson, composed a new digital piece called *Evolution* (www.textevolution.net). It was to be the first part of a complex intermedial work, completed with the publication of a printed book with the same title in the spring of 2014. The work as a whole immediately received some attention in the international community of electronic literature and was awarded the first N. Katherine Hayles Prize for Criticism of Electronic literature (see http://eliterature.org/2014/06/announcing-winners-of-1st-coover-hayles-awards).

That *Evolution* was awarded in this category rather than in the one for electronic literature proper underlines that the work engages in a critical consideration of the historical, technological, and aesthetic conditions of this genre or mode of writing. This is perhaps more explicit in the paper book, but the digital version of the work also brings up and explores a number of issues on how writing is written and reading is read—to paraphrase Gertrude Stein—in the context of the media ecology post-2000.

These issues become clear when one begins to describe the production process. Even though *Evolution* was conceived of and composed in the early 2010s, its history goes back a full decade. The linguistic and acoustic material used as its foundation consists of the collected poetry written and published by Heldén since his debut book of poetry, *Burner* (2003), together with ambient music that he composed during the same period. This corpus (the poetry is also rendered in English translation) constitutes the work's database, which is made operative through an algorithm written by Jonson. The algorithm was, according to the authors, planned to act as a stand-in for the human poet (the machine as poet), selecting and permuting words ad infinitum.

Even though the content of the poetry generated by the algorithm is highly indeterminate, the composition process is also encoded to take into account certain features of Heldén's previous writing style, such as his manner of spacing and arranging words on a page. There is thus an attempt at marrying individual traits with the seeming neutrality of the program. Moreover, the work of the latter is affected by a series of sequences based on datasets culled from a variety of sources related to nature, such as images of clouds or statistics of tropical storms. Finally, the digital interface that we encounter remediates an iconic book page to frame the machine-generated poems, underlining the hybridity and complexity of a work that aggregates man and machine, nature and culture.
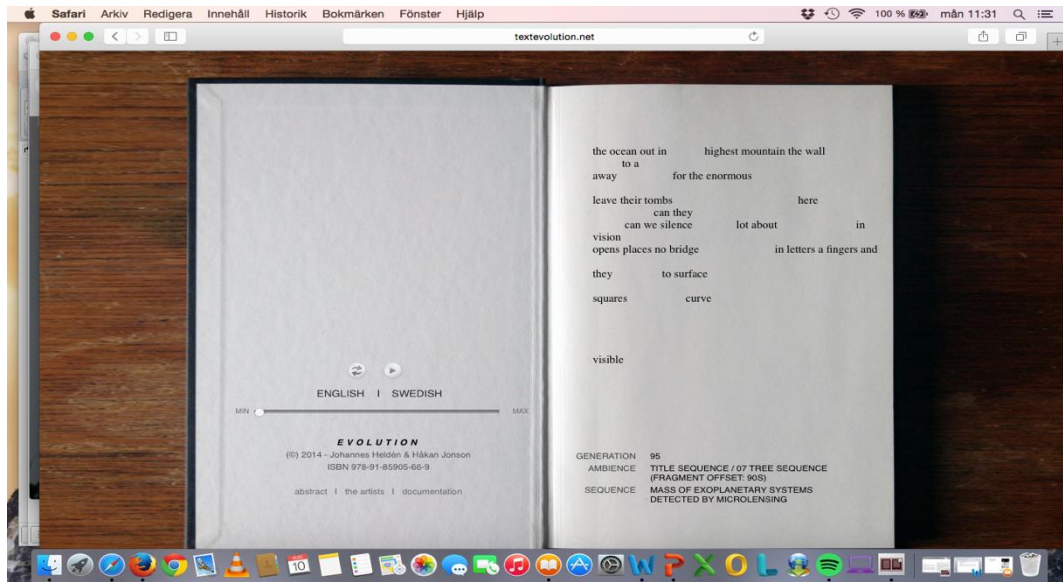
Figure 1. Screenshot from the online version of Evolution *(2013).*

In a statement attached to the online version of the work, Heldén and Jonson present some of the ideas behind it while also situating the piece in a media-historical context:

> *Evolution* is an online artwork-in-progress designed to emulate the texts and music of poet and artist Johannes Heldén, with the ultimate goal of passing "The Imitation Game Test" as proposed by Alan Turing in 1951. With *Evolution* we aim to examine and dissect the role of the author; when new poetry that resembles the work of the original author is created or presented through an algorithm, is it possible to make the distinction between "author" and "programmer"? And is it even relevant? . . . The purpose of the work is not to deromanticize or deconstruct the role of the author, but is rather the ongoing exploration itself. Where will it take us, and perhaps more importantly, what will happen along the way? The release of *Evolution* will mark the end of Johannes Heldén writing poetry books. He has, in a sense, been replaced. (Heldén & Jonson, October 10, 2015)

Despite its downplaying of the ambition to "deconstruct" the role of author, the description above makes it pertinent to link *Evolution* to an artistic avant-garde characterized by similar ambitions leading back to futurism, Dada, and surrealism, passing through the 1960s, and continuing into our own time period. But here it is more important to pay attention to the emphasis on the exploratory aspects of the endeavor: "where will it take us" and "what will happen"? This invites a consideration of the different processes in the work—those of writing and reading—and the multiple temporalities at stake.

As mentioned above, *Evolution* consists not only of the digital online version. The printed book presents yet another variety of materials, such as samples from the machine-generated poems, a performance script, self-declarative comments and statements, and a few microessays on *Evolution* and digital literature in general (Cayley, 2014; Engberg, 2014; Ingvarsson, 2014; Lien, 2014; Lindhé, 2014; Olsson, 2014). Most notably, however, the pages of the book are covered by thousands of lines of code from Jonson's algorithm (Figure 2). This adds another layer to the acts of writing and reading. The poet and programmer reads Heldén's previous poetry, computer software reads and converts the poems into binary digits, the algorithm reads the poetry data stacked in the database, and the readers of poetry read the poetry on the screen and, perhaps, reflect upon these reading acts by reading the comments and essays in the printed book and by reading the code intended for the machine, which will probably generate allegorical readings.
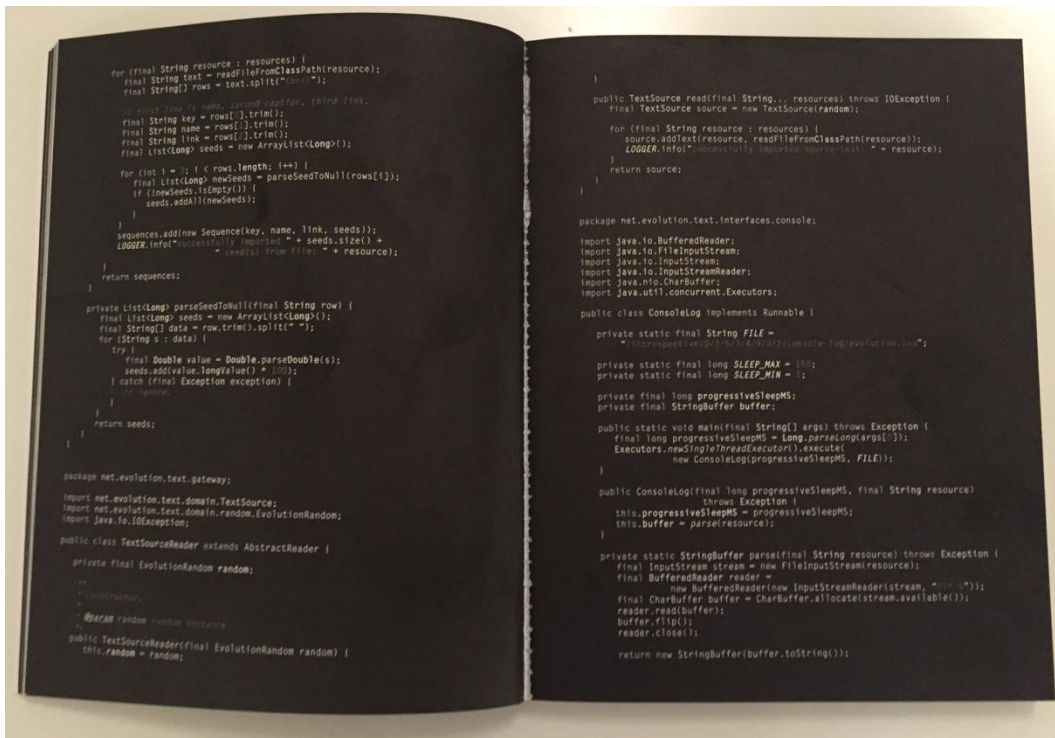

Figure 2. Code from Heldén and Jonson, Evolution *(2014).*

In its translations and transports between different sign systems and media—from code to language, from book to machine to screen to book—*Evolution* comes forth as an aesthetic exercise in what N. Katherine Hayles (2005) has called "intermediation." It is a poetry that explores the material conditions of writing and reading. In this, the work also brings up questions of time and temporality and how these are always intricately related to questions of media technologies. There are multiple temporalities at play in the work, which are codetermined by the affordances of the computer and of the book and by the

specificities of human perception and cognition. I will point out a few of these temporal traits (and the analysis can be brought much further, by taking into account the soundtrack, for example).

Let us start, then, with a first encounter with the digital interface. As a reader, when accessing the URL of *Evolution*, you are invited to view the iconic image of an open paper book, laid out on a wooden desk, with standard bibliographical paraphernalia present, including title, copyright, and ISBN (see Figure 1). However, a few elements also deviate from paper/print standards—a menu from which you can choose the language you prefer for the poems (English or Swedish), hypertext links to information about the work and its authors, and a gauge for setting the speed of the poems. All of these deviations can be seen as media transpositions of features present in printed books—you can access bilingual editions of poetry, you can usually browse from title page to jacket or back cover to get information on the author, and you do establish a certain pace and speed in reading. Still, the temporalities are different here. The timing of the machine will intervene and modulate the timing of reading.

Computers operate in the interval between nano- and milliseconds, an interval that is hardly perceptible to our senses. Even if not possible to experience directly, the difference between the time of the machine and the phenomenological time of human experience can be addressed. This is doubly inscribed on the first screen of *Evolution*—symbolically, by the embedding of the links in a space that looks like a page from a paper book, and materially, through the actual speed of linking, a speed that is quite different from the one that usually animates the rhythm and pace of book reading.

The temporality evoked here might be discussed in relation to what Wolfgang Ernst, in his much more technically informed analyses of media, has called the *Eigenzeit* of the machine. Ernst claims that this time—more on the side of *kairos* than *kronos*, to use the ancient Greek distinction—is connected to the "sub-sensorial" and to events and contingencies rather than to extensions and continuity (Ernst, 2012). Such events are embodied in the electric signal processing, in the fast calculations of data, the timing of which we cannot experience but that might be said to manifest itself in lags and glitches, as noise in the channel, as disruptive breaks in the experience of reading a text on a screen, for instance.

Somewhat ironically, as it is supposed to insert an element of human control, such disturbing events are brought up in *Evolution* through the gauge and the setting of the speed of the poetry that is generated. The pace of the forming of words and sentences ranges from *min* to *max*, but it soon becomes obvious that, whether we aim at setting a pace that feels natural or give up this attempt and experimenting with different speeds, a constant sense of delay or deferral (dyschronia) will prevail. On the surface, the reader controls the (timing of the) machine and the (timing of the) reading. On closer scrutiny, this is illusory. Time as event and contingency disrupts the reading.

Such delays and disruptions can be interpreted as a celebration of literature's indeterminacy, its defamiliarizations of everyday experience, and the discovery of something new in reading—in line with a modernist aesthetic. But it can also be linked to the computer and the kind of writing and reading it makes possible. Even though it might be too far-fetched to actually analyze *Evolution* through a theoretical lens offered by Ernst's chronopoetics, the work wants to explore the discrepancies between a human temporal

experience—historically shaped and consolidated by book reading — and the temporal specificities of the digital machine.

This understanding of *Evolution* is supported by how time and temporality, entropy and speed coalesce into themes and tropes in the text. Such issues, along with electricity, signals, subatomic processes, and the like, belong to the evocative lexicon of Heldén, whose writing is, by no coincidence, heavily indebted to the genre of science fiction. On the other hand, these are supplemented by an exploration of processes taking place on a completely different time scale. Heldén's poetry has always been concerned with questions of ecology and nature and the long *durées* of natural history, with what has been called "deep time" (see Gould, 1987), which is focused in some of his most recent works, such as *Terraforming* (2013) and the installation *Field* (2015) (see www.johanneshelden.com).

These themes will also surface in the poetry generated on the computer screen in *Evolution.* The title, of course, suggests as much. More importantly, such temporalities are also packed into the material and structural conditions of the work. As we observed earlier, the algorithm in *Evolution* depends on a number of sequences for its output—sequences consisting of datasets culled from sources pertaining to natural phenomena, the weather, and climate change such as "atlas of extratropical storm tracks 1998–1999" or "northern hemisphere land-ocean temperature index in 0.01° Celsius, 1880–2014" or images of bugs and clouds (see Figure 3).
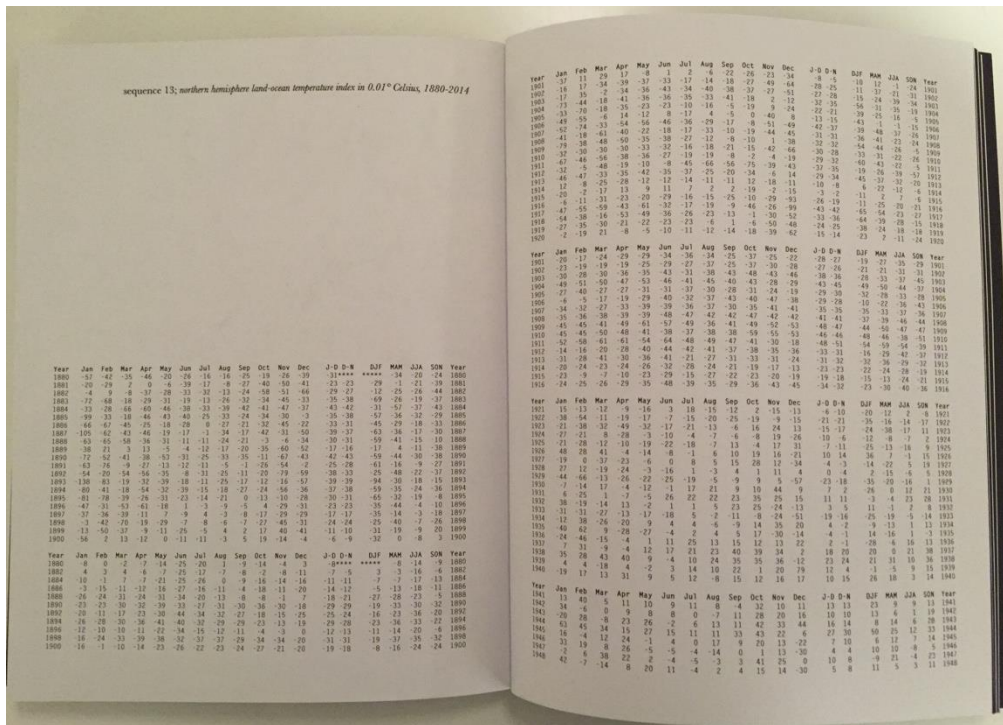

Figure 3. Sequence from Heldén and Jonson, Evolution *(2014).*

Thus it is highly motivated to speak of a sedimented temporality in *Evolution*—on the one hand, the time of human experience, modulated and refracted by our engagement with books and computers, and on the other hand, the times and worlds of the inhuman or posthuman, either materialized through the microtemporalities of the machine or the macrotemporalities of nature and the planet.

Poetic Media Archaeologies

Evolution can be described as a poetic work obsessed with time, as literature so often has been, but in a manner that is congenial with a present situation marked by the ubiquity of digital media. At the same time—and this must be emphasized—this obsession comes forth partly through a contrast between the digital and print. If the book version of *Evolution*, with its lines of "unreadable" code, is a reminder of the technical materiality of the digital, of what conditions the mutating clusters of words on the screen make possible—the interface effect—then the reading experience of code on paper, the protracted time and boredom that it evokes, can also be interpreted as an intervention into the seemingly seamless stream of stimuli, quick fixes (likes), and consumption possibilities that shape online experience today.

It is thus productive to pit the book against the computer and treat *Evolution* as an artistic media-archaeological investigation. On the one hand, it initiates an exploration of the material and temporal specificities of the computer—an operation of synchronic media archaeology. On the other hand, Heldén and Jonson also employ, in the vein of Zielinski, a diachronic method, by using an old medium (the book) as leverage for disclosing some of the historical conditions of digital media. Not only is the generic book remediated on the screen nostalgically and ironically, but the printed version also becomes a sober reminder of how our interface culture is built on code and signals. Moreover, *Evolution* shows how our contemporary media landscape, even if often designated as "digital," is complex and consists of a mix of older and newer media.

Media archaeology is also a productive perspective in approaching the other literary work haunted by time and media that I want to discuss—*Fjärrskrift* ("*Distance Writing*," 2011) by the Swedish writer Lotta Lotass. During the last 15 years, Lotass has published about 20 books hovering between genres—novel, poem, play, essay—while at the same time gravitating toward a set of interrelated topics, such as the hidden spaces of modernity, technology, solitude, science, violence, and exploratory expeditions.[2] She has also, to a high degree, developed a language of her own oscillating between technicity and archaism, and many of her works have explored the material and medial conditions of literature. For example, the novel *Den vita jorden* ("*The White Earth*," Lotass, 2007) consists of a box of 148 loose sheets that the reader can arrange in different ways, thus organizing a narrative of one's own—an experiment that finds its literary precursors in works such as Marc Saporta's *Composition No 1* (1963) and B. S. Johnson's *The Unfortunates* (1969).

Fjärrskrift continues this line of experimentation with the materiality of literature by taking a step closer to other media and to a hybrid poetic genre such as the artists' book (for previous readings of the

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[2] For an online bibliography of Lotass's work, see http://www.albertbonniersforlag.se/forfattare/l/lotta-lotass/.

piece, see Olsson 2011, 2015). Published in the spring of 2011, the work would materialize in two forms: as a printout on a paper tape (50 meters long) rolled into a flat cardboard box (Figure 4) and as a movie (1 hour and 2 minutes) showing the printing of the work that was executed by Lotass's encoding of the poetic text into Baudot (a code invented by Émile Baudot in the 19th century and a precursor to ASCII), feeding the code into a teleprinter, and transmitting it to a receiving machine that once again translated the message and printed it as capital letters on a paper tape (Figure 5). On the screen we see a close-up of the black shiny teleprinter with a mechanical lever that moves up and down on the right hand side and the white paper strip moving across the screen from right to the left and slowly disappearing out of frame.

Figure 4. Fjärrskrift ("*Distance Writing,*" *2011*),
the paper strip in a box published by Drucksache.

***Figure 5. From the film version of* Fjärrskrift *("Distance Writing," 2013). See also*
*https://www.youtube.com/watch?v=z_xFkg-qa8c.***

It is possible to trace quite a long literary history behind Lotass's work leading back to Giuseppe Mazzolari's amazing didactic poem *Electricorum* (1767), which, among other things, discusses a *machina electrica* that can be used to send messages across distances in space with the help of electricity (Zielinski, 2006). Furthermore, her work finds a group of relatives in the inventions of the 20th-century avant-garde, such as American poet Bob Brown's literature-as-film "readies" (McGann, 1993). There are even earlier artistic uses of the teleprinter to be found, such as French lettrist Isidore Isou's "téléscripteur" from the early 1960s (Bandini, 2003). But, of course, the point of Lotass's work today is to employ the apparatus as an obsolete or residual medium (see Acland, 2007).

The thematic content of *Fjärrskrift* touches upon some of the topics mentioned above. One might even tease out the contours of a narrative from the repetitive, lyrical text: Someone is trying to transmit a message to someone (a beloved?) across long distances. The scenery built up includes an arctic landscape or seascape of cliffs, ice, water, waves, and ships. It is an archaic and faraway place marked by silence, even muteness, which is underlined by visually oriented descriptions and metaphors based on words such as *stone*, *statue*, and *tomb*.

Actually, the text, as the title also suggests, explores space and place to a high degree. The visual and optical (*light*, *mirrors*, *fog*, *haze*, and so on) dominate the poem's vocabulary. Still, questions of time and temporality are also crucial on a thematic level. The *kairotic* event of actually saying and sending a message—"säger orden sänder strimmor" ("says the words sends stripes")—runs as a refrain through the piece, linking, on the one hand, to "sounds," on the other to "sparks," both of which evoke

communication with electric means. But there is also another kind time that is manifested, related to the stasis produced by a landscape of stone and ice—a time close to the inhuman dimensions of deep time encountered in the poetry of Heldén, and that even seems to approach the end of time: "dagar läggs till dagar läggs till nätter läggs till tid . . . på den plats där tiden själv är orörlig" ("days are added to days to nights to time . . . at the place where time itself is immovable"). Thus, one can argue that the text stages an encounter between the time of human action and passion and a vaster, more indifferent time.

Just as important, however, is the time and temporality embodied in the actual watching and reading of Lotass's piece. If we venture to deal with the paper strip in the box—a rare "book" printed in 300 copies that is difficult to find today, and expensive to acquire if you do—the reading act will resemble the reading of a scroll or the scrutinizing of encrypted messages received in the war rooms of the last century. Inch by inch we draw the strip between our fingers, palpating the paper as much as deciphering or interpreting the words. The absence of punctuation and the lack of variation between upper- and lowercase letters will probably have disorienting effects, even though the poetic, chanting repetitions will remedy this to a certain degree. In any case, the act of reading will be slower and more tedious than the naturalized movement through a book and will thus set the material medium and the reader's body as integral parts of the reading experience—and as reminders of how literature is always based on material mediation and is always, then, a bridging of distances.

This material conditioning of the reading act as a temporal experience becomes even more emphasized when we watch the film. Just as with *Evolution*, the time of the machine will put its mark on the viewing-reading—the speed of the teleprinter is too slow to make for a seamless flow of absorption of words but also too fast to allow for reflective pauses or glances to the side. Moreover, and this is even more pronounced when the work is watched on a big screen, the movement of the strip from right to left is the opposite of the usual reading from left to right, which causes interesting shifts and deferrals, countering the tendency to experience reading as a smooth and disembodied operation. Once again, thus, the technological determination of the experience of time will be manifested and explored in an aesthetically resonant way.

Another similarity between the works of Lotass and Heldén and Jonson is then how they contrast media to denaturalize both the book and digital media of our time. As mentioned above, the act of reading will be disrupted and defamiliarized by the move from the book to the teleprinter strip, forcing out a reading that is aware of its technical and material underpinnings. But Lotass will also, through a diachronic media-archaeological operation, historicize the media of today by bringing up a long and dwindling material history of electricity and coding, writing and reading. At first glance, the use of a teleprinter might come across as a merely nostalgic and retro-futuristic move—only a little more peculiar than some uses of vinyl records or audiotape today. But even if *Fjärrskrift* can be attributed with such meanings, the work also points out a more specific and partly forgotten history that precedes the design and use of digital media and that thus reminds us of a long time of labor, misplaced intentions, failed inventions, and dead media—the material layers that are part and parcel of the history of the computer.

Concluding Remarks

According to Wolfgang Ernst, a media-archaeological take on media history should not only make us observe the specific ontologies and affordances of the machine but should also have methodological effects on the practice of scholars and critics. Media history cannot be formalized and presented by the means of smooth narration, but the specificities of technical media must transform the analysis and presentation of their effects upon society, culture, and everyday life. Even though it is difficult to find in Ernst a formalized method—and the field of media archaeology is theoretically and methodologically heterogeneous (see Huhtamo and Parikka, 2011)—one might discover ideas on how to proceed in literary and artistic practices that explore the field.

In the works of Heldén and Jonson and Lotass, the media-specific traits of the teleprinter, the book, and the computer are used to reflect upon how media shape our lives and how we might find ways to think through these circumstances while avoiding the ideological traps of immediacy, openness, disembodiment, transparency, and linear technological progress. More specifically, they force us to consider how time and temporality are produced today and yesterday, how they are always codetermined by humans and media technologies, and how this codetermination will always involve imbalances, conflicts, and tensions. In a certain way, time—this "shadow train, life's white machine," as Ben Lerner calls it, echoing John Ashbery, in the epigraph for my article—is always utterly inhuman. It just takes place, materialized in the slow transformations of mountains and woods or the rapid processes in digital computers, while we, in our specific finitude, try to translate it and transpose it into the temporalities of human life. And these attempts will always be marked by distortions and deferrals—by *Nachträglichkeit*, as Freud once named it, within a different theoretical framework.

In this way, we are certainly afflicted by dyschronia—but it is a malady that is perennial, that has always been with us, in different forms, and that is modulated by the media through which we construct our times. To analyze its symptoms and effects, it is necessary to confront, at close range, the specificities of these media. The loss of time and history is thus relative but nonetheless real and intensely experienced. But to articulate productive time poetics and politics in relation to this situation—to critique the 24/7 society, the colonizing of individual and communal experiences, the widespread surveillance practices, the dysfunctional time perspectives of environmental policy, and so on—it is necessary that the analysis on which such poetics and politics is built dis-covers both the historical and material sedimentations of media and their meaning making.

Here the poetic media-archaeological expedition can be an important tactical move. It not only forces us to acknowledge differences and conflicts between temporalities—of man, machine, and mountain—but also their inherent interdependence and the impossibility of escaping to an apparatus-free habitat where a true time awaits to be experienced.

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