Could a machine think? – Could it be in pain? – Well, is the human body to be called such a machine? It surely comes as close as possible to being such a machine.

Wittgenstein (1984, §359)
“Erkki Kurenniemi is a mathematician, nuclear physicist, expert in digital technologies, inventor, filmmaker, and pioneer of electronic music,” writes Lars Bang Larsen in the *dOKUMENTA 13* guidebook, and he seems to be serious (*dOCUMENTA (13) – Das Begleitbuch / The Guidebook – Katalog / Catalog 3/3 2012, 218*). I can presume that he is not unwittingly exaggerating Kurenniemi’s credentials or being misled by other people. It is therefore difficult to avoid the feeling that, in their enthusiasm, some of those who have found Kurenniemi only recently have not only praised him as a one-man super reactor but also turned him into a half-fictitious being. The aim of this article, then, is to look for firmer ground and study Kurenniemi’s activities in a more critical light. Since his major achievements as an inventor and experimentalist have been discussed elsewhere, I will concentrate my attention on other things. Is Erkki Kurenniemi a nuclear physicist? What does that make me? A spaceman, no doubt. For the moment, let us just stick to the fact that he studied at the University Helsinki and received his bachelor’s degree in sciences in the crazy year of 1968. Eighty years later he wishes to be born again. Who am I to say no.

Man with a Novel Character

For an archaeologist digging up history, a long forgotten rubbish heap may be a treasure trove. As historical beings, however, we
usually hope to leave behind signs of accomplishments that are more refined than garbage bags. Erkki Kurenniemi’s project for the year 2048 falls somewhere in between these two extremes. The idea of recording the everyday life of a person in preparation of his later rebirth via a computer is not altogether improbable in science fiction literature. This is something we should keep in mind, for originally Kurenniemi’s project was nothing more than a series of failed attempts to write a novel. He crystallizes it all in his diary on the first of July 1989: “Today I have once again started the novel 2048, yet again for nothing. I just uncorked the second bottle of wine” (Diary 1 July 1989, EKA).

As the literary critic Matti Savolainen has remarked, science fiction literature is not, and aims not to be, science but fiction using the backcloth and paraphernalia of science or pseudo-science (Savolainen 1987, 183). In Kurenniemi’s case, there is, I believe, reason to emphasize the last five words. Much that appears technical in his texts belongs to that pseudo-scientific paraphernalia. The novel, or text for short, also contains more mundane diary material, but the work never proceeds, perhaps because writing a novel is hard work in general and requires some planning as well as discipline, but mainly because Kurenniemi has little to tell. This acute problem can always be postponed to the future, however, while the next wine bottle can only be opened here and now. At the end of the day the
belletristic motive makes room for other half-sober activities. By leaving his unrealised literary attempt, whatever the reasons behind its failure may be, to the future and to the computer to come, Kurenniemi gives weak artificial respiration to a dream that was always more narcissistic than scientific.

It seems to me that what lies at the heart of the project 2048 is not so much a vision of the coming technological progress as it is Kurenniemi’s idea that all that has been saved of his life could be turned into literature, i.e. meaningful writing. In his email correspondence with the author Leena Krohn in 2003 he still muses: “And yet, my notes on small pieces of paper may contain a wealth of information about my world, down to my handwriting, if all that material is analysed with a programme, say, a million times more efficient compared to what we presently have” (Email to Krohn 31 January 2003, EKA). The main point here is not whether Kurenniemi himself could have concentrated harder and worked enough to produce textual material that deserves future attention, but that a computer should be able to interpret and reveal his often rather dispirited and fragmentary notes as something more than trifles, in other words, turn second-hand information into first-rate thoughts.

The collection of documents from the life of Kurenniemi, now resting on the shelves of museum archivists, contains material where the wish of one’s recreation goes hand in hand with the
most trivial details of life. As you can see, my feelings about this whole endeavour are openly mixed. On the one hand, it brings to mind the decision of the composer John Cage, whom I admire, to give his correspondence to the Northwestern University according to their wishes – on the condition that junk mail is also taken in and catalogued. Cage’s gesture is in line with his artistic view according to which all sounds are equally remarkable, even those of humble or non-artistic origin. On the other hand, I find no artistic line of any kind at the heart of Kurenniemi’s project, only a monotonous thought of the continuance of individuality even after death. In principle, this is nothing new, for the self-centred wish to deposit one’s everyday life, and with it a kind of comprehension of life, to all those who are interested comes close to writing (or blogging) a diary for publication. To make it readable, however, requires almost the same virtues as writing a novel: something to say and skill to say it.

These are things that rarely surface in Kurenniemi’s diary notes. The result is usually fragmentary theoretical jargon or data about daily food, drink and sex. Kurenniemi is not big on reflection, or on poetry. There is yet another problem, and it relates to the rather concrete way Kurenniemi had to record himself and his life at the time. I cannot help thinking that my mobile phone, my credit card and my supermarket customer card register most of my activities far more accurately and with much
less effort than all the bags of receipts he has saved for the 2048. With the help of social media one can take care of the rest. Be it for better or worse, things have progressed by leaps and bounds in the recent years. But who is really interested in this enormous accumulation of material when every attempt towards individuality looks more or less the same?

Reconstruction of Self

At the end of the 1960s, Erkki Kurenniemi created sound effects for the Finnish science fiction film *Time of Roses* (*Ruusujen aika*, 1969), directed by Risto Jarva. Kurenniemi’s contribution is rather small and consists mostly of fictional sounds of computers, automatic doors and telephones. In other words, he produced a collection of various conventional beeps and humming sounds, which helped the filmmakers to underline the feeling of a technologically progressive future. *Time of Roses* tells a story of Arto Lappalainen, a Finnish historian living in 2012, whose aim is to reconstruct the life of an ordinary person from the past, the shop assistant and striptease dancer Saara Turunen, who has died in 1976. Lappalainen interviews people and makes use of archive material, but he has also found a striking lookalike to act as Saara, one Kisse Haavisto, an engineer from the Kuortane nuclear power plant. The film’s idea of recreating the mind and the world of a deceased person points to the same direction as Erkki Kurenniemi’s dream for
2048. In the middle of the film, however, Lappalainen and Haavisto find themselves discussing the problem which arises with the ever-increasing amount of information and its processing.

— Should you have lived in the 19th century, all that would remain of you would be a portrait at most. As for Saara Turunen, we have newspaper clippings, films ... and lots of archive information. And there will be even more about us. But how do you think this will help a researcher?
— Do you mean that it is difficult to tell false information from true information?
— It is more difficult to interpret large amounts of information than small amounts. (Ruusujen aika 1969, 59'58")

Even if computer programmes of the future would be a million times more effective than the old ones, as Kurenniemi argues, and capable of interpreting all the neural nuances currently concealed in his own handwriting, there remains the question of the meaningful use of such high-fidelity reading. What exactly would we achieve with it? Or, more precisely, who would even bother when there are much more exciting things to do? We have just passed the future pictured in Time of Roses, but the year 2048 is still far enough to conclude, if we want, that everything will be multiplied, and improved, by a factor of a million. Some things we will certainly see, for not all of us can
resist the possibility to tinker with the human DNA. Whether that will help us to understand something about the world closing in around us is another matter. As for myself, I hardly know anything about computers, but I have learned to read old books, and it is in the field of artificial intelligence where books seem to age fast but mature slowly.

Browsing through a locally printed work on artificial intelligence from 1989, I noticed how the author expressed his excitement about a project called CYC, which, he says, “aims to transfer an encyclopaedia’s worth of basic knowledge about the world into a machine within the next decade, and thus make it understand what takes place in the world. Even today we have around us all that which in ten years’ time will shine with novelty” (Heinämaa and Tuomi 1989, 264). The mentioned project has now dragged on for a quarter of a century, but no major breakthroughs have been made in making machines understand what goes on in the world. Instead, we, supposedly non-machines, have bought programmes and gadgets, generation after generation, only to see them loose their shine and novelty sooner than expected. In this respect, things have really multiplied by a million. But the essence of computers and software is not that they can help us clarify or organize our old thoughts effectively. On the contrary, every new application creates new kinds of functions and needs and generates collective excitement which seems to confuse our judgement just as much as it leaves us enchanted. If the concept
of a paperless office proved to be a goldmine for manufacturers of printer paper, what can we expect from more adventurous ideas?

**Future in My Pocket**

Erkki Kurenniemi deserves to be called a visionary when it comes to digital technology. One of his most accurate predictions is the sixth paragraph of his article *Message is Massage* from 1971. There he predicts the coming of an all-in-one personal device which will link together most of our implements and media: computer, television, phone and videophone, radio, audio and video recorder, editing table, book, magazine, newspaper, library, school, post office, bank, electric organ, answering machine, walkie-talkie, cinema, theatre, typewriter, calculator, calendar, notebook, clock, camera, microscope, telescope, work place, entertainment, human relations, photo album, museum, art exhibition (Kurenniemi 1971, 36).

Kurenniemi says nothing about the size of this universal device, however, and it is unlikely that in 1971 even he could have imagined carrying all this in his pocket. In the future of *Time of Roses*, the personal machine was still as big as a writing desk. In real life it would take Kurenniemi another three years before he could buy his first hand-held electronic calculator with an LCD
display (Diary 28 December 1974, EKA). In 1974, this simple machine, brought to the market by Sharp, cost over 400 future Euros but could only add, subtract, multiply or divide; more complicated work still had to be done with a slide rule. In those days, future seemed to loom much closer than it actually was – earlier in *Message is Massage* Kurenniemi introduced the idea of a “pocket computer” with a video camera and a small display. This would be the tool of an artist in 1983, he writes. To miss the mark with some twenty or thirty years is common in this line of business, where hopefulness always prevails. The vision itself, however, has proved to be surprisingly accurate.

What Kurenniemi envisioned in his 1971 article (or, rather, an incoherent collection of fragments) belongs to a greater mass of futurological writing which was popular at the time. I will only mention two books: *The Year 2000 – A Framework for Speculation on the Next Thirty-Three Years* by Kahn and Wiener (1967), and its smaller Finnish counterpart *Suomi vuonna 2000 (Finland in Year 2000)* by Haikara (ed.) from 1970. Both books offer a broader view of future society and therefore discuss gadgets in less detail than Kurenniemi. Trends are the same, however, and Kurenniemi hardly stands out as a lonely prophet; much of what he says has always been gathered from printed sources. Through his active working age he was a fervent reader, who followed different strands of scientific facts and speculations (as well as science fiction) in English. It was this substantial input that often
kept him two steps ahead of his colleagues in Finland, artists in particular.

The sources used by Kahn and Wiener were highly optimistic about the future development of computers. Accordingly, the authors stated that by the year 2000, computers are likely to match, simulate, or even surpass some of man’s most “human-like” intellectual abilities, including perhaps some of his aesthetic and creative capacities (Kahn and Wiener 1967, 89). The year 2000 was loaded with exhilarating magic and promise, but as the turn of the century approached, disappointments started to pile up. Space flights, especially, seemed to flop beyond imagination, at least when seen from the perspective of the late 1960s, when the mission to Moon and the film 2001: A Space Odyssey (1968) showed the way to go. Perhaps my bitterness grows from the fact that I never had the chance to become the spaceman I wanted to be. After that it was simply a matter of taste whether The Sims, first released in February 2000, was merely simulating or actually surpassing our intellectual capacities. Computers broke new boundaries, of course, but the way they actually changed our world was something Kahn and Wiener had not foretold in 1967. What they instead concluded in their prognosis appears now all the more interesting: “If it turns out that they [computers] cannot duplicate or exceed certain characteristically human capabilities that will be one of the most important discoveries of the twentieth century” (Ibid.). How
unfortunate and sad that the Nobel committee failed to notice this in 2000.

Three decades earlier Kurenniemi had had his finger on the pulse, and in his 1971 description of the future personal device the words “entertainment” and “human relations” now stand out. It is mostly in these areas that our “human-like” abilities have found their new computer-based homeland. Instead of reaching for higher intellectual goals, much of the calculating power of machines is spent on keeping us busy with games, music, films, self-promotion, chat, gossip and pornography. The last topic was also shyly touched upon in *Time of Roses* where Saara Turunen, the average historical person to be recreated, led a double life. The historian Arto Lappalainen interviews an old man who knew Saara back in the 1970s.

— Yes, she enjoyed filming and I filmed her a little [takes a film reel out of his pocket] ... here are some ... but only confidentially, now that you are researching her.

— But of course, of course.

Later Lappalainen watches the films and comments to his colleague:

— Old creep. With this material we could still blackmail him if we wanted.
— We can’t use these, can we?
— Of course we can ... truth always comes first. (Ruusujen aika 1969, 39’40”)

After Death

At the beginning of his book Confessions Jean-Jacques Rousseau writes that by telling everything about this life he has entered a performance beyond compare. In the next breath he confesses being charmed by his own uniqueness: “I am not made like anyone I have been acquainted with, perhaps like no one in existence” (Rousseau, Jean-Jacques [1782] 2004). The hypothetical Computer-Kurenniemi of 2048 might utter something similar; after all, he would be a unique realisation of the old Warholian slogan “I want to be a machine”. But there is a twist, if not two, in this tale. For how can a computer that passes the Turing test be aware of being a machine at all? Kurenniemi and others like him seem to think that it would in fact cease to be a machine and instead take a step up the evolutionary ladder and become a new kind of life form. Very well, but if it really is a new kind of reasoning entity with more calculating power than we have, why on earth would it like to have anything to do with Kurenniemi’s pedestrian notes and memories? What should it do with his bottles of cheap wine, joints, schnitzels and hunger for sex, with all that not-so-intellectual everyday life that poignantly tells about the realities of our limited bodily
existence? What should it make of Kurenniemi’s brainchild, the *Graph Field Theory*, which is just as deep as staring at the screen of an old tube television at close range while completely stoned.

Keeping in mind that I know nothing about computers, it seems to me that the 2048-project could survive only as long as the computer remains a torpid machine, a machine that runs a programme rather than writes them. One possible resurrection of Kurenniemi would then be a shabby exhibit in the corner table of the museum cafe, a creaking computer that could be turned on for special occasions, like an old hippie waking up in his slow orbit to a sound of a familiar song. “There exist, of course, artists who are facing the future, those who feel being part of a process that genuinely serves progress. The mistake may then be that they identify themselves with a future that they know all too little about,” wrote Marika Hausen in 1970 in the book *Suomi vuonna 2000 (Finland in Year 2000)* (Hausen 1970, 125). Hers is not a lofty vision of the age of computers but something that still, after forty years, makes a good prediction.

The arch of time (from past to future and back) takes an unexpected bow in Helsinki in the autumn of 2013. Parallel to the opening of the Kurenniemi exhibition in Kiasma, yet quite accidentally, the Finnish translation of Thomas Pynchon’s famous novel *Gravity’s Rainbow* is published. The book first came out in 1973, and Erkki Kurenniemi read it in the following
autumn. He must have been one of the very few Finns who had the book in their hands at that time. Kurenniemi’s input was always impressive; the Finnish academia started to take notice of Pynchon only two decades later (it appears that the earliest Finnish article on Pynchon is from 1992).

*Gravity’s Rainbow* was never an easy read and finding one’s way through those 760 pages of wildly overgrown textual shrubbery is an achievement in itself, even though Kurenniemi has nothing to say about the book’s subject matter in his diary (Diary 24 November 1974, EKA). Holding the book now in my hand, I come to think that perhaps it was only the opening quotation from Werner von Braun that etched itself into his memory for further use:

> Nature does not know extinction; all it knows is transformation. Everything science has taught me, and continues to teach me, strengthens my belief in the continuity of our spiritual existence after death. (Pynchon 1973, 1.)
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**Films**
