FileLife: Kurenniemi and the Question of Living Archives

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Abstract

In the age of social media, notions of life and memory are transformed. This paper investigates how the Media Art Group Constant have refashioned the archive of the Finnish engineer and artist Erkki Kurenniemi, who set out to create an archive of his own life for a possible artificial life resurrection in the future. Constant explores modes of life and mediation in their experimental digital archive project. The paper investigates how this this project illuminates the future of archives and social memory through a dialogue with media archaeology, format theory and Actor-Network-Theory.

The New Order

Digital archives transform the order of power and knowledge. Media archaeologists like Wolfgang Ernst have argued that with the advent of codes and computer algorithms as the new *arché* or command system of knowledge, we have to reload Michel Foucault's archaeology of knowledge for a new age. We need to look into how computation and digital files have intervened in the rules governing knowledge. This is where Constant's intervention into the archival remains of Erkki Kurenniemi is exemplary. They do not simply open up the holdings of an archive (what it says and shows), but try to engage with the codes and algorithms or the *arché* itself of the archive, with what constrains the sayable and visible in a digital age. Furthermore, they make accessible this archival infrastructure for their user as a new mode of *sharing* the archive. They focus on the new dynamics or life of some of the smallest items of prosthetic memory, codes and files, on how files are constructed, can be transformed and how they connect to other files. These series of operations seem to lay the ground for new ways of conceptualizing social memory, provoking a set of questions, which may benefit from insights concerning the life and agency of objects in Actor-Network Theory as well as the philosophical and media-theoretical investigation of the concept of life presented in the work of Eugene Thacker.

After Kurenniemi fell severly ill in 2005, he gave most of the collected material from his active life as an artist and a self-archiving protagonist since the 1970s to the Central Art Archive of Finland's National Gallery of Art in 2006, where it is being catalogued and digitized. In 2012, a smaller portion of this was handed over to the art and media group Constant. If Kurenniemi believed in files becoming life, Constant uses the same files to investigate the life of files. As this is the first major computational 'intervention' into this archive, their efforts will be my focus.

Constant (with Nicolas Malevé and Michael Murtaugh as principal investigators) were commissioned by the group KURATOR (led by Joasia Krysa), Kiasma and Documenta 13 to create a prototype of an online archive of the Kurenniemi files. The material they were given can be considered a sample. It consists of almost all the pictures, some of the cassette diaries, a few home videos and transcripts of the most recent diaries (including the digital files from the Newton MessagePad) from around the mid-1990s and up until 2005; totaling one terabyte of information. Kurenniemi's early musical compositions, his experimental films and his gadget and ephemera were not included in the samples.

To understand the complexity at play in the Kurenniemi files and in Constant's work on the files, we have to look at what has happened to the file more generally in the 20th Century. The transformation of the file from being the official record of a political and administrative system to becoming itself a governing entity in a computational network, is actually a revolution with huge ramifications. Not only does it mobilize the file itself; both conceptually and practically the very notion of an archive and its functions (recordkeeping, storage, cancelling, manipulation, destruction, distribution, search and access) undergoes drastic changes.

Files are the stuff that archives deal with. As Cornelia Vismann has shown in her history of the archival 'file', the file has been there ever since the beginning of the modern archive. 'For the administration of the Western world, a life without files, without any recording, a life *off the record*, is simply unthinkable', Vismann demonstrates. Historically files were 'the administrative underbelly of the law and its representation', and from there they proceed to 'trellised, inaccessible chanceries,' Vismann writes. Essentially, files and archives were difficult to access. But with the turn to digital society a significant change occurs in the operationality of files. 'The appearance of files as stylized pictograms or icons on computer screens indicates the end of the epoch of files,' Vismann maintains. This is a bold statement. However, files in a computer are no longer simply files documenting the commands and

protocols of a political system, but are now themselves carriers of algorithms, the new commands and protocols of a computer system. As Vismann writes, today 'files and their techniques organize the very architecture of digital machines […] they ensure access to all internal operations by controlling both instructions and data, as well as their addresses.' [1] The files are no longer simply the static record of the actions of an administration, but have themselves become an integral component of a world of algorithms and codes which carry out a complex series of operations as well as *suturing* them into visibility and remediating them into pictographs looking like old media (a 'document' on a 'desktop' etc.). The operations that control their visibility are, just like the old files, inaccessible to most users. Their operations work in the hidden abode of computational systems, and their operations are so manifold that most users are happy if they can avoid dealing with it.

The Sociality of Files

Constant use open source software to interact with the Kurenniemi-files, *and* they document, step-by-step, the codes they use. In this way they both rely on and foreground a dynamic memory network of shared codes. Their focus on the potential for constant sharing and reworking directs our attention to a different concept of social memory when such processes constitute the materiality of both our 'objects' and 'frameworks' of memory. Early on in their Kurenniemi-online log-book Constant writes:

> When starting an archive project, one reveals the sociality inherent in the documents. All items in an archive are shared objects. They are produced in a transaction, through collaboration with instruments (pen, paper, camera, recorder, etc), software agents (programs, algorithms) and people. [2]

The world of new media is constructed through models of sharing and enclosure. Constant's approach demonstrates an underlying politics of sharing which implicitly critiques most social media web 2.0 platforms, since they tend to hide and copyright their algorithms.

As Eric von Hippel has shown, the internet and its culture has become a new ground for collaborative innovation. He calls it 'democratizing innovation', and the development of open source software is a key example of 'user-centered innovation systems' which 'supplant product development carried out by manufacturers'. [3] Constant is part of this turn to user-centered innovation based on openness. Codes are developed and shared in teams, and this sharing is expressed as collaborations between human and nonhuman capacities. Algorithms give instructions as to how a certain feature is supposed to interact with

other types of software and so on. Files *make* new connections and links. Computer files operate precisely by always 'assembling new allies', to paraphrase Latour. The very definition of 'open source code' is that it is meant to be implemented in new media in such a way as to be open for further elaboration and manipulation. It assembles allies (and foes) by default.

The development of free and open-source software (FOSS) is a form of collaborative innovation which aligns itself nicely to the way files work. Computer files *work* by collaborating with other files in series. These collaborations involve several layers of transactions on a synchronic and diachronic axis. Diachronically they rely on forms (such as open source software and algorithms) that has been tested and tried out in a series of earlier innovations, collaborations and practices; synchronically they communicate and collaborate with other programs and instructions to execute their tasks. Constant applies the knowledge of FOSS communities on archives. They work on other arenas than most such communities, and thus extend their practices of sharing further than most FOSS communities. They move from 'sharing in' (sharing in a restricted community of experts) to 'sharing out' (sharing with a larger public) to even 'sharing across' (having the non-experts comment and intervene in their practices). Let us look more precisely into how they organize their acts of sharing within an archive context.

Constant is committed to several acts of sharing. They want to share Kurenniemi's files. Forging accessibility is something most state archives and national libraries in the Western world do (unlike many private archives), and such archives and libraries (unlike private book repositories like Google Books) are committed to free and open access to their search and metadata standards. However, while libraries, for instance, try to enter the digital age without radically changing their system of metadata standardizations, FOSS communities like Constant openly applies their knowledge of how metadata regimes are implemented in digital files in new ways, and how they co-evolve with other ICT standards relating to formats, files and protocols. Constant want to share this new infrastructure of archives and files. They do this in a critical way, and the story behind their alternative approach in this particular case is curious.

Due to the often sexually explicit content of some of Kurenniemi's video and image files, much of the material is 'unshareable', because of privacy rights, despite Kurenniemi's own desire to share. These restrictions forced Constant to invent new ways of presenting the material. Even if some of the images are unsharable *as* images, that is, on the level of 'cultural material' (the visible layer of data), they are still 'sharable' as 'techno-mathematical material' (the data underneath the visible layer). They open up the

files to affordances the law could not imagine. Indeed, their algorithmic approach allows them to share what would otherwise be unsharable due to legal restrictions. The legal restrictions release a playful retake on the archive. Constant addresses the files so as to activate dormant affordances enabling them to assemble new connections and allies through interactivity and sharing. The source codes organizing their archive are not only free and open, sharable in themselves, but make objects 'not for distribution' sharable. Their 'active archive' is an experiment in sharing. In their view, the entire Kurenniemi archive-body is a source code to be shared.

> In this essay, we take the archive-body to be an exemplar of an active archive, not as fixed materials or a mere collection of objects but something more like source code that is modifiable and shareable. [4]

They follow the hacker ethics. Their online archive does not share files in the way most online archives do ('click to open'); the want to share the digital infrastructure of the archive itself. They operate in between an experimental archive and a git hub (an archive for shareable software).

Navigation through their archive is difficult. It does not have one single interface, but several entries and few overviews, and is more like a hypertext with a plethora of samples, links and extended blog commentaries resembling a lab log or a research paper in progress. Their layout brings out associations to an anti-immersive Brechtian web-editor promoting *Verfremdung* and reflection, rather than classification, overview, and easy availability. They resist the merchandization of a collection. They address the potential construction of an online archive rather than the finished product, and finally, their commitment to the politics of sharing turns archiving into an ethical issue way beyond the Kurenniemi holdings. Nevertheless, it is all done in the spirit of Kurenniemi who was himself committed to the hacker ethos of the 1970's.

Essentially, Constant opens up a single file in its multiplicity. They activate the file's data, codes, histories, fixed and potential connections as well as its possible transformations. This involves at least three different *forms* of sharing:

> 1) They share the files. This is done by opening up the other side of the file to access the data governing its affordances and metadata; this enables them to legally share information about a file that would otherwise be legally unsharable.
> 2) They share the knowledge of sharing. This is their most elaborated mode of sharing and involves several operations: they use free and open source software (FOSS) to

access and read the files; they call it 'seeing through the lens of algorithms ', and they manipulate FOSS for their own purpose and share their code amendments with their user so that he or she can activate them elsewhere.
> 3) They share the knowledge of their users. This is in some of their samples done by inviting the user to interact with the files by tagging them on the fly.

Furthermore, these processes of sharing add new data to the archive, and become part of it. The archive, here, is an evolving and dynamic entity without closure. Below we will examine how these modes of sharing are specific to a digital age and how they challenges our long standing understanding of social memory as related to the way things are shared in a society.

Sharing and Social Memory

What happens to social memory in a time of altered connections between humans and technologies? Today memory needs to be rethought in relation to a more general politics of life. The proliferation of discourses that view technologically mediated life as a self-constituting entity are understood, by many critics, as a key symptom of a new form of biopower. If the new emphasis on life issues is at times taken to indicate the return of 'real bodies' and 'real materiality' – a new metaphysics of presence – It is more precise to say that the new biopower is premised on revised conceptions of the body as well as of materiality. There is, for instance, a tendency to see an extension of life principles and biological functions in the realm of digital technologies. Eugene Thacker writes, 'the major problem concerning life has to do not with its definition … but with the very *plasticity* of life, [as] a shape-shifting quality.' [5]

Such renegotiation of the question of life is a key feature of computing history. In its early stages, computer science suggested that intelligence (in Turing's version) and memory (in von Neumann's version) were not exclusive to humans and could be reconstructed in a computer. Now, Thacker explains:

> The very concept of life itself begins to dissolve and dissipate, while still remaining in use and in circulation. What if life is not assumed to reach its pinnacle in human life? What if life is only incidentally, and not fundamentally, an anthropocentric phenomenon? And what if life actually has very little to do with the presumed self-evident nature of the living? [6]

Such insights are fueled by phenomena such as biocomputing and the development of biosynaptic computer chips and are becoming part of standard medicine. Thacker uses the term biomedia to discuss

the 'technical recontextualization of biological components and processes'. The body is reconceptualized as 'compiled' through modes of information processing, modeling, data extraction, and *in silico* simulation. Kurenniemi prefigures such 'compilations'.

Both Kurenniemi and Constant imply that life can express itself through a series of materialities and media. Indeed, there are many possible ontologies of life today, and they also recall Thacker's notion of a 'superlative life' which exists at different stages in history going back to certain ancient vitalist positions where life is seen as 'that which flows or pours forth'. Here life is 'distributive, pervasive, and outflowing'. Life is 'at once everywhere and nowhere, a pure excess and generosity, and yet in itself not any one, single, individual instance of life'. Aspects of this notion reappear in biomedia practices that resituate life in relation to media. Here, life relies no longer on the 'wet lab' but the 'dry lab'; biology is done '*in silico*'. Life expands into media technologies and their specific features and affordances: 'If the encoding process carried patterns of relationships across material substrates, then the recoding process will extend the functionality of those encoded or translated data in ways that are specific to the medium.' This implies that 'the generosity of life is itself irreducible and unlimited, though the particular manifestations of life may in and of themselves be constrained.'

Kurenniemi's work may be a symptom of the general questioning of 'life' identified by Thacker, but it is important to distinguish between Kurenniemi's ideas and other visions of technologically aided afterlife. On the one hand there are ideas about biological afterlife secured through various forms of cryonics; on the other ideas about afterlife secured through information technologies and artificial intelligence. Kurenniemi clearly belongs to the latter strain, as seen in his technical conception of the material body: 'Man is a machine. A machine produced by evolution. I find it impossible to think that for mere nostalgic reasons, such a slime-based system would be preserved', he says in an interview. [7] Yet the specificity of his project resides less in such body/machines vision, than in his emphasis on life as memory – seeing the personal archive as a point of departure for the potentially continued life of an autonomous entity. Essentially, he believed in the future's computers ability to turn the remains of a personal archive into some kind of consciousness. He seems less interested in the emerging field of bioinformatics where both the biological (genes) and the computational (codes) are conceived of as informational structures.

In the latter part of his active life, Kurenniemi took increasingly interest in an ecological perspective in which flesh-based life on earth is viewed as detrimental to the environment. He believed that artificial forms of consciousness could be stacked in small balls and sent to outer space: cultural heritage would be salvaged in the sense that these balls of consciousness could enjoy the Earth's past as some kind of digital entertainment in outer space. He also discusses the politics of cloning and how certain democratic freedoms can be sustained in a posthuman artificial world of clones and extraterrestrials. In this respect he was several decades ahead of many of his compatriots who have only recently started working on what they call the constitutional rights of extraterrestrials.

Constant's online version of Kurenniemi's life is severed from any direct association with the extraterrestrial aspect of his afterlife. They do not talk about consciousness or artificial intelligence. Their horizon of operationality belongs to the Internet-culture. Unlike Constant, Kurenniemi was prevented from experiencing the way in which digital networks have turned life into a series of interconnected events. In the transition from early computing to Internet-culture, 'life' is extended in a variety of ways and associated with the ongoing researches in biocomputing. While Turing and von Neumann was interested in computational explanations of human-centered attributes such as intelligence, learning, or memory, biocomputing focuses on molecular processes. At this level, 'life' is both nonhuman and intelligent. Life is both an automatic process and an intelligent process in the way it relies on heritage, memory and interaction with its environment. It is informational and networked. Modern biology represents in other words a shift in the human-computer relation from an emphasis on mind (and cognition) to an emphasis on 'life' as articulated in complex networks. Thus, in the 'PC era', computing is seen as nonconscious, distributed, and a parallel to 'life' rather than to mind, cognition and intelligence. Constant foregrounds this trajectory by capitalizing on the inherent life of files, their dynamic sociality. In their work, Kurenniemi's life becomes extended as a networked entity. He is shared, distributed and transformed by a network of users and producers. This development is allied to the social turn within computation, and it also comes with a catch. As Jose van Dijck writes, making the web social actually means making 'sociality technical' – a development that some would see as another instance of the instrumentalization of social relations. Constant is aware of this and endeavors to project an alternative to a homogenizing sociality by instantiating Kurenniemi's 'life' through a hacker ethos based on the use open source code. How does this transform the concept of social memory?

Archives and collections have always been part of cultural memory, but as archives become digital, they become more dynamic and potentially more like *social* memory. No longer relatively stable storage systems, archives increasingly figure as dynamic living system, constantly transformed and updated, constantly the object of mergers with new

informational clusters and programs. The work of Constant is focused on bringing out the living, or social dynamic in the technological infrastructure of digital archives. Their microscopic work on the life of files in a world of shared data show how the presence of a file, the file in question, does not simply testify to a unique singularity, but to a multiplicity of historic and potential actions. The file is so to speak the 'undead of information', an 'enduring ephemerality'. [8] It is always the result of undead layers of *action at a distance* in both the past and in the future.

After Gabriel Tarde we can investigate how social memory works in a deeper more pre-cognitive way. Memory is whatever creates some form of association or connectivity. Such associations are not found 'in' society, but constitute the social link as such, and may be mapped by tracing movements of imitation and invention. [9] The impact of the newspaper in the 19th century made Tarde speak of imitation as a form of 'action at a distance' – a perspective that has only become more relevant with the introduction of electronic media technologies. Influence 'at a distance' works in, through and around our connected lives, our *filelives*. Constant shows how such dynamics of imitation and invention are capacitated and exploited through digital technologies, generating new connections along the complex pathways of 'living' files. The politics of sharing advocated by Constant shows not only how Kurenniemi's memory files always already existed in connected, disassembled and reassembled cartographies of socio-technical memory arrangements, but also that such arrangements are always battlefields. Algorithms and codes are not neutral tools that neatly implement whatever is given to them – they constitute a transformative field of constant renegotiations and reconnections.

Constant's politics of sharing shows how what differentiates one memory assemblage from another is to a large extent a question concerning different ways of assembling the sociality of files. Their three modes of sharing – sharing the file, sharing the knowledge of sharing and sharing the knowledge of their users – is an approach to memory which underscores the active involvement in the new technological infrastructure of memory events. The new technologies do not represent a dead repository or a neutral tool for memory, they are rather a living systems where memory itself becomes a mode of action. As we have seen, software is not simply mathematics, but a consolidation of long traditions of knowledge, memory, habits and techniques of ordering and remembering. As they are implemented in shareware (FOSS), memory becomes action. Constant foregrounds the *eventness* of memory by entering the operations going on both inside and outside the files. These are operations that make the files speak and remember, work, connect and transform themselves. They do not see the archival

document or file as a single static entity, an image or a text, to be preserved and classified in a static dead repository according to its unique singularity; they activate the file in its living multiplicity, and bring out its networked condition through events of associations and connections where a single file no longer simply represents an image but a series of complex arrangements and operations (DCFs, JPEGs, RGBs and a series of FOSS) each with their own controversies, that can be readdressed directly by well-targeted algorithmic operations.

Kurenniemi wanted his life archive experiment to become a template for mankind. He did not know how it would be remembered or continued, but he devoted much of his intellectual life at projecting the ways and means of doing it. Interestingly, several of the Kurenniemi videos used in Mika Taanila's documentary film, shows, Kurenniemi talking about his life archive at parties and among friends. He opened up his archive and shared his ideas whenever he got a chance – and recorded his sharing. In this way, Kurenniemi's archive was social, improvisational and reflexive from the start. The files contain a self-reflexivity which projects a series of possible future trajectories. Constant's probes into the archive add further trajectories. They do not monumentalize Kurenniemi into an object to be commemorated, but open the files to a multiplicity that demonstrates the dynamic sociality of the file as well as their ability to produce future memories. Constant's living archive is a precarious territory in the sense that the emergence and withdrawal of networked *filelife* depends on a distinct politics of sharing.

References

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