ARCHIVAL PHANTASMS

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Between imaginary museum and archive: cyberspace

Cyberspace is not about content, but rather a transversive
performance of communication.[1] "Cyberspace has no memory".[2]
Memorial endurance is being replaced by a limited series of
temporal entities, with the archival paradigm being replaced
by (algo-)rhythmic transfer.

Within the notion of cyberspace, „space" itself is already a
metaphor for something which is rather to be described in
topolocigal, mathematical-geometrical terms. *Cyberspace* is not
a new place of memory, but the transformation of *lieux de
mémoire* into knots and nets. No longer bound to physical
places, the virtual adresses exist in mathematical topologies
only.[3]

If (with supremacy of selection over storage, addressability
over sorting) there is no memory in the (historiographically)
emphatic sense any more, archival terminology - or rather the
archive itself -becomes literally *metaphorical* - a function of
transfer processes.

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[1] See Pierre Lévy, Cyberkultur. Universalität ohne Totalität,
in: telepolis. Die Zeitschrift der Netzkultur Nr. 0, Bollmann
Verlag, Mannheim 1996
[2] Christoph Drösser, Ein verhängnisvolles Erbe, in: Die Zeit,
23th June 1995, 66
[3] See Albert Lichtblau, „Cyberspatial Monuments of Memory", 234ff, in: Gerfried Stocker / Christine Schöpf
(Hrsg.), Memesis. The Future of Evolution, Wien / New York (Springer) 1996

From location to pure address: „Only what has been stored can be located" - rather *vice versa*.[4] In this sense the Internet generates a „new culture of memory, in which memory is no longer located in specific sites or accessible according to traditional mnemonics, and is no longer a stock to which it is necessary to gain access, with all the hierarchi<vi>cal controls that this entails."[5]

Beyond the traditional notion of the archive as *black box*, towards a dynamical conception of complex memories.

The matter of memory is an effect of techniques of recall.

"The debates around the future development of WWW centre on the issue of whether the web is simply a technique of recall from a global archive, or whether it marks the beginnings of a new, inventive relationship to knowledge, a relationship that is dissolving the hierarchy associated with the archive." <ibid.>

As a machinic network of finite automata (a kind of techno-rhizome) the Internet does not provide for an organized memory; there is no central automat. The Internet is being defined by the circulation of discrete states only.[6] Thus the net is conform with radical constructivism in philosophy: Phenomena are always being created actually, but not as permanent or storable entities.

Neurophysiologically, thus memory operates like the imaginary, like the formation of mental images: Since there is no fixed place for images in the mind (at least not locatable); mental images rather are being generated like images on an electric screen which have to be constantly refreshed. Oswald Wiener asks whether it makes sense at all to speak of mental *images*, if they have to be scanned in a time-based process, i. e. as a set of discrete (light-)moments in time.[7]

The term "archive" is frequently being applied to cultural institutions like concert halls, opera houses and theaters; even more to traditional musums and libraries. But in this media alliance, culture should not be thought of by de-differentiating its storage media. The notion and the

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[4] Harriet Bradley, The seductions of the archive: voices lost and found, in: History of the Human Sciences Vol. 12 No. 2 (1999), 107-122 (113)

[5] Howard Caygill, Meno and the Internet: between memory and the archive, in: History of the Human Sciences Vol. 12 No. 2 (1999), 1-11 (10). See Lisa Jevbrett's visualization of the Internet by a coloured array of its fabric of IP-addresses.

[6] Gilles Deleuze / Félix Guattari, Tausend Plateaus. Kapitalismus und Schizophrenie, a. d. Frz. v. Gabriele Rick / Ronald Vouillié, Berlin (Merve) 1992, 31 u. 36

[7] See: Dokumentarfilm von Matthias Brunner / Philipp Pape (Berlin), Am Anfang war die Maschine, D 1999, im Programmheft des X. Internationalen Videofestivals Bochum, Mai 2000

institution of the archive dissolves in(to) the internet. Let us mention, f. e., the HILUS intermedial „Informationssystem Kunst + Neue Technologien" (based in Vienna – to pay hommage to our panel organizator). An advertizing postcard declares three sections: „*ARCHIV*/Bibliothek, *ARCHIV*/Videothek, *ARCHIV*/CD-Rom-Sammlung". Here, the data bank itself is being declared as „archive"; mnemotechnically though it is an archive only in the sense of present informations which are accessable, with the option of permanent *re-call*.

The Internet *as* archive at all?

"The possibility of using a hypertext network as a universal archive is a dramatic development."[8] But does such a net fulfill the criteria of an archive proper, and second, is such a network of archival value as such? The servers of *archive.org* (located at the University of Berkeley) undertake the memorization of the Internet as represented in websites, but the Internet is rather about links than about storage.[9]: „Das Internet ist nicht *per se* archivierungswürdig. Das Internet ist auch kein Archiv im Verständnis von ArchivarInnen. Das heisst aber nicht, dass Archive im Internet nicht präsent sein sollten."[10]

The totalizing archive would become identical with the computerbased world itself and its net-based presentism.

The primary effort of conventional archival labour is separation and exclusion, not storage: "Le travail en archives oblige forcément à des opérations de tri, de séparation des documents. La question est de savoir quoi trier et quoi abondonner" <Farge 1989: 87>. Such is the difference between an (state-)archive in the strict, memory-institional sense, and the internet.

What seperates the internet from the classical archive is that its mnemonic logic is more dynamic than the culturell memory in the printed archive. Still, the Internet still orders knowledge: apparently without providing it with irreversible hierarchies any more (on the visible surface), but on the other hand the authoritative archive of protocols is more rigid than any traditional archive has ever been. Traffic overload in the computer networks led the Clinton administration to build a new, separtate system - the Internet

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[8] Theodor H. Nelson, Computer Lib - Dream Machines [*1974], Redmont, Wash. (Tempus Books) 1987, 33

[9] See Howard Caygill, Meno and the Internet: between memory and the archive, in: History of the Human Sciences, Vol. 12 No. 2 (1999), 1-11 (2)

[10] Andreas Kellerhals-Maeder, Archive in der schönen, neuen Welt. Auf dem Weg zu einer klaren Position, in: Geschichte und Informatik 12 (2001), 89-108 (95)

II, restricted to scientific (and military) communications.

The internet adopts the so-called *chaotic storage* method in economy:

"[T]he World Wide Web and the rest of the Internet constitute a gigantic storehouse of raw information and analysis, the database of all databases. <...> The more serious, longer-range obstacle is that much of the informationon the Internet is quirky, transient and chaotically 'shelved'.[11]

We are confronted rather with *organizational memory* than with archives in the coventional sense.

Cyberspace is subject to an economy of memory which is not generous with gaps and absences: "In face-to-face interaction, much of what is most valuable is the absence of information, the silence and pauses between words and phrases."[12]

Archival *apartheit* by the internet

The de-materialization of well-known objects forces us to reconsider their identity.[13] The archive, while becoming an inflationatory term, is going to be dissolved in that process and looses its self-evidence which was once based on a juridical epistemoplogy of the state.

Does the archive end in the digital era?

Virtual archives / data space

There is a quality which the internet shares with the traditional archive: „L´archive ne ressemble ni aux textes <but texture / *web*>, ni aux documents imprimés, ni aux `relations´ <in its archivo-techical sense, note 2: „fuilles volantes imprimées, colportées aux XVIIIe siècle et portant le récit de faits divers">, ni aux correspondances" <Farge 1989: 10>, but in a different sense both are nothing but relations, correspondances.

The difference between the classical and the hyperspatial archive is its dynamic, no more just passive option. Such is the use of the term "archive" in the internet, indicating its shift of emphasis on realtime or immediate storage processing, on fast feedback.

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[11] Editorial: The Internet. Bringing order from chaos, in: Scientific American vol. 276 no 3, march 1997, 494 (49)
[12] Steven G. Jones, Understanding Community in the Information Age, in: ders. (Hg.), Cybersociety. Computer-mediated Communication and Community, Thousand Oaks 7 London / New Delhi 1995, 10-35 (28)
[13] Jeanette Hoffmann, e-mail v. 16. Juli 1996

The definition of "hypermail" (in the World Wide Web /
Netscape) reveals its hyper-indexical nature:

Hypermail is a program that takes a file of mail messages in UNIX mailbox
format and generates a set of cross-referenced HTML documents. Each file
that is created represents a separate message in the mail archive and
contains links to other articles, so that the entire archive can be browsed
in a number of ways by following links.

There is a definition of the function of archives n the
internet in a narrower, precise meaning:

It was soon realised that each site providing its own anonymous *ftp* area
with its won material would make it difficult to find and catalogue the
information available. The answer to this problem was to provide archives;
machines dedicated to the task of serving files via anonymous *ftp*. These
archives collect together material from other anonymous *ftp* areas scattered
through the Internet and present it in a single location. The job of the
archive maintainers is to keep the archives up-to-date and to try and
organise them in an orderly fashion.[14]

Thus, the internet "archive" becomes radically temporalized.
It is rather hypertemporal than hyperspatial.

Navigating (in) the archive

With Internet search engines like *Netscape navigator*,
hyperspace remembers its essence in the etymological sense:
cybernetics, that is: navigation of a ship on the open sea
<see Wiener 1948>.

This comes close to the „taste of the archive" as described by
Arlette Farge: „Elle est difficile dans sa matérialité" <Farge
1989: 10>, that is: almost amorphous (see the figure of
Morpheus in the cyber-movie *Matrix*). La comparaison avec des
flux naturels et imprévivibles est loin d´être fortuite"
<ibid.>.

"Celui qui travaille en archives se surprend souvent à évoquer
ce voyage en termes de plongée, d´immersion" <Farge 1989: 10>
– a cyberspatial key notion indeed. But then, the archival
definition of the basic unit of archives, the *fond <engl.?>*,
is less metaphorical than the maritime comparison:

Ensemble de documents, quels que soient leurs formes ou leur support
matériel, dont l´accroisement s´est effectué d´une manière organique,
automatique, dans l´exercice des activités d´une personne physique ou
morale, privée ou publique, et dont la conservation respecte cet
accroisement sans jamais le démembrer.[15]

Which brings us the *the two bodies of memory*, both physical
and virtual.

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[14] "Information and archives on the Internet",
http://www.hensa.ac.uk/www94/internet.html
[15] J. André, De la preuve à l´histoire, les archives en France,
in: Traverses 36 (January 1986), 29

Is the internet archivable?

The *Internet Archive* "may provide the raw material for a
carefully indexed, searchable library. The logistics of taking
a snapshot of the Web are relatively simple. <...> The
software on our computers `crawls´ the Net - downloading
documents, called pages, from one site after another. Once a
page is captured, the software looks for cross references, or
links, to other pages. It uses the Web´s hyperlinks - adresses
embedded within a document page - to move to other pages."[16]

Temporality is addressed to hardware:

„We chose hard-disk storage for a small amount of data that
users of the archive are likely to acces frequently and a
robotic device that mounts and reads tapes automatically for
less used information. A disk drive accesses data in an
average of 15 milliseconds, whereas tapes require four
minutes. Frequently accessed incormation might be historical
documents or a set of URLs no longer in use." <Kahle 1997: 83>

„We plan to update the information gathered at least every few
months. <...> In future passes throught the Web, we will be
able to update only the information that has changed since our
last perusal." <Kahle 1997: 83>

Such an "archive" can only me a mapping of the Internet:
„Still, the archive gives a feel of that the Web looks like
during a given period of time even though it does not
constitute a full record." <Kahle 1997: 83>

Authors are allowed "to exclude their works from the archive."
<Kahle 1997: 83>.

Not only data, but their formats ask for preservation:

"The Commission on Preservation and Access in Washington, D.C., researches
how to ensure that data are not lost as the standard formats for digital
storage media change over the years. In another effort, the Internet
Engineering Task Force and other groups have labored on technical standards
that give a unique identification name to digital documents. These uniform
resource names (URNs) <...> could supplement the URLs that currently access
Web documents. Giving a document a URN attempts to ensure that it can be
trced after a link disapears." <Kahle 1997: 83>

Does the internet need an archive, or is *is* it itself already
a memory?

Our memory culture is still accommodated to a thinking in
discrete finite states, not dynamically.

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[16] Brewster Kahle, Preserving the Internet, in: Scientific
American, vol. 276, no 3 / March 1997, 82f (82)

Do we need digital time-capsulas? The loss of websites from the internet is symptomatic for the systematic disappearance of digital cultural commodities (called information now).

Arché and the archive: Memorizing the new-born internet in realtime

„It will take many years before an infrastructure that assures Internet preservation becomes well established"; media archaeology attends to the chance, to trace an emerging new medium *in statu nascendi*. Otherwise, "the opportunity to capture a record of the birth of a new medium will then be lost" <Kahle 1997: 83>.

The birth of the Internet, as we know, happened in three discrete steps:

First Vannevar Bush´s *Memex;* then Theodore Nelson´s conception of hypertext - both producs of World War II or its aftermath. Then, the Cold War leads to strategies of de-centralized information transfer, implementing the network ARPANET. Finally we live in the age of World Wide Web as theory and as software (CERN).

Archaeology of the Internet

Bringing a measure of organization and structure to an inherently fluid medium like the Web may help to realize the 18t-century French encyclopedists´ vision of gathering together all the world´s knowledge in one place. Two centuries later Vannevar Bush, the U.S. director of the Office of Scientific Research and Development during World War II, proposed the memex, a desk containing a microfilm reder and stores of film that would serve as the equivalent of an entire research library. The memex would allow different items in the microfilm collection to be linked together and annotated by the reader. Bush´s ideas influenced Ted Nelson, who conceived of the hyptertext system that was ultimately fashioned by others into the Web. <...> The authors, perhaps members of a new generation of encyclopedists, sketch a technological pathway that migh ttake the Internet a step toward realizing the utopian vision of an al-encompassing repository of human knowledge." <Editorial 1997: 50>

Temporal consciousness expires in cyberspace

With the temporal dimension, history is lost as well in cyberspace. What is lacking in the virtual world is the possibility of defects which happens to material artefacts in the course of time, rendering them aesthetically the dimension of appearing „historical" (literally „a sense of the past").[17] Arlette Farge, in the archive, works on „la défectuosité matérielle du document <...> souvent illisible, un mot manquant laisse le sens en suspens; parfois le haut et le bas du document ont subi des dommages et les phrases ont disparu, à moins que ce ne soit à la pliure <...> que se constatent des déchirures [Risse], donc des absences" <Farge 1989: 72>.

Pradaxically, such *ruptures / irruptions* lack in cyberspatial memory.

Search engines

The power of archival memory resides not in the stored data, but in the inventories which make data accessible at all. The concept for an electronic inventory has to be interactive itself.

By performing an *iconic turn* by making a visual memory accessible (f. e. by search engines like QBIC which strive for image-based image retrieval by sililarity or „query by image content"), a technical dispositive gains power over the human imaginary, opposite to the classical, paper- and text-based archive as the realm of the symbolic.

Archives might be interactively generated rather than being just used as read-only-memory - closer to the dynamically generated information in the Internet.

Stop making sense: Virtual memory is a non-semantic quantity.

Does the internet require a memory culture beyond the archive? Do info-robots fulfill the phantasmatic desire of the universal archive?

What is required is a pathology of forgetting.

The absence of absence in cyberspace

In *The Plague of Phantasy* Slavoi Ziek argues that the net or cyberspace is for closing the „real" and by that hysterically is filling in the empty space of the subject as well as that of the system of social representation. Through that the net produces the illusion of completeness, fullness, authenticity, such as new democracy, 100% storage, memory, archive, open communication, transparent interaction, etc. But each system

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[17] See Alois Riegl, <Denkmalkult>

has to negate its own constitutive moment <...>. The panel wants to give space to the following topics: ideological fixations <...> in cyberspace; phatnasies of virtual memory and virtual archives. <Marie-Luise Angerer, *abstract*>

Sterne writes it in his *Tristram Shandy*: „The truest respect which you <sc. the author> can pay to the reader´s understanding, is to <...> leave him something to imagine, <...> to keep his imagination as busy as your own.“[18] There is a sudden irruption of voids by accident (negation).

Coming from the city of Berlin, I am well prepared to talk about the loss of absence. Spatially and temporally the voids of Berlin are just being replaced by filling them up. The deconstructive architect Daniel Libeskind constructed the Jewish Museum of Berlin around expressed *voids* to remind the visitor drastically of the fact that with the extermination of the former Jewish population of Berlin under the Nationalist Regime there will always be something essentially missing in Berlin, not replacable; Libeskinds wants these voids to prevent from being filled up with surrogates. The other Berlin void though, the Potsdamer Platz, once the center of traffic, then in the shadow of the Berlin Wall an empty biotope, has already been filled up with the notorious Mercedes and – more prominently and significantly screen-orientated – by Sony glass buildings. And even temporally it is true that while there has always been a time of non-events in summer (the so-called summer gap), „we lost the *Sommerloch*“.[19]

What cyberspace does not deal with is absence. Michel de Certeau once pointed at the „absent of history“, a formative void which is rather being obscured than displayed by storage media. It is not the data but the gaps which define the archive. While cyberspace deprives the past of its temporal dimension, memory itself becomes a mere metaphor. If the archive can be defined as the condition of what can be expressed at all, beyond the virtual spaces of memory a crypt emanates which is identical with the physics of storage itself. The phantasmatic equation of digital worlds with the universal archive is not a function of the archive but of archival narratives, an ideology of rememberance, which flourishes against the blind spot of its own un-narratability (while counting with numbers). Cyberspace as navigatable archive claims memory while practicing its reversal: amnemic rituals of cybernetics.

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[18] Laurence Sterne, Tristram Shandy, London (Dent) 1956, 79, as quoted by Wolfgang Iser, Rezeptionstheorie. Eine Retrospektive, in: Utz Riese (ed.), Konstaktzone Amerika. Literarische Verkehrsformen kultureller Übersetzung, Heidelberg (Winter) 2000, 41-54 (49)
[19] Quoted from the Berlin city two-weekly program magazine: zitty 13/2000, 16 (article „Der Sommerplaner“)

In this context, we might rather speak of culturologistical than cultural studies.

With every upcoming of a new media (starting with photography, continuing with the phonograph, then film, radio, television, video and finally the computer) there has been a premature projection of archival phantasies upon it, the phantasma of a recordable total archive of the world (in images, in sound, in data). The quality of an archive, though, in archival theory and practive, is exactly not the totalizing vision of total storage, but rather its reverse, the power and ability to select from incoming information and the licence to destroy irrelevant data (*Kassation*, in German archival terminology).

Any totalizing vision of the archive is, of course, close to totalitarian ideologies.[20]

The French archivist Michel Melot rhetorically declares: „Si vous travaillez pour l´histoire futur, vous aves raison de *tout* ramasser, de *tout* classer, puisqu´on ne sait jamais ... Mais alors?" This is being answered by him this way: „Mais alors, on entre dans l´hallucination de la conservation *absolue* de l´Histoire protégée, de la reconduction du Temps."

Where there are knowledge-archaeological gaps, the aesthetics of virtual space fills them with phantasms – simulacra of phantasms, which do not perform, but simply represent, thus substitute psychic phantasms, deferring them endlessly.

How then to count with the silence of the archive?

There are gaps in the net of knowledge.

"Web indexes now play the same role that atlases did in the 16th century. Both hold an appeal that goes far beyond any possible usefulness. Both lead to dreams of exploring new territories, of discovering new opportunities. Both are evocative because of what they leave blank." <Steve G. Steinberg, xxx, in: Wired xxx>

So is cyberspace external or internal to human memory?

Digital amnesia: Is a technical storage medium at all capable of forgetting (asks Ulrich Reck)?

When it comes to images, the archival phantasm of cyberspace becomes literal:

By far the largest image archive <not an archive at all> is the World Wide Web <...>, which contains images taken from all area ranging from digitized paintings to cartoons. In order to efficiently retrieve pictorial data from very large databases, such as e. g. the WWW, content based methods are an

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[20] Michel Melot, Des archives considérées comme une substance hallucinogène, in: Traverses 36 (Themenheft *L´Archive*), Januar 1986, 14-21

attractive alternative to the traditionally used method of manual textual indexing.[21]

Here already „ideology" begins: with *contentism* (which is always already the realm of the ideological, which operates not beyond).

What remains, is intermediary storage.

The formerly resident memory is being replaced by permanent flow. In antiquity, St. Augustin solved the problem of overflow in classical art of memory by a change of perspective from the fixed *locus* in memory architecture to free floating in space.

Dissimulations of the cyberspatial techno-archive

Hardware itself seems to be forgotten in cyberspace. Thus David Gelernter formulates the ultimate goal of all software:

to *break free of the computer*, to break free *conceptually*. <...> Cyberspace is unlike any physical space. The gravity that holds the imagination back as we cope with these strange new items is the computer itself, the old-fashioned physical machine. <...> every key step in software history has been a step away from the computer, towards *forgetting* about the machine and its physical structure and limitations – forgetting that it can hold only so many bytes, that its memory is made / of fixed-size cells, that you refer to each cell by a numerical address.[22]

Media-cultural studies have to make the (European) reader accustomed to the necessity of shifting from a cultural aesthetics of storage to an accelerated notion of (delayed) transfer (alluding to a term keyed by Jack Goody).[23]

There is a loss of the katechontic quality of deferral in cyberspace. *There is no memory any more.*

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[21] Stefan Müller / Frank Wallhoff / Stefan Eickeler / Gerhard Rigoll (Dept. of Computer Science, Fac. of Electrical Engineering, Gerhard-Mercator-University Duisburg, Germany), Content-based retrieval of digital archives is using statistical object modelling techniques, in: Conference proceedings volume: EVA ´99 (Electronics in the Visual Arts) Berlin, 12-1 to 12-4 (12-1)

[22] David Gelernter, Machine Beauty, New York (BasicBooks) 1997, 22f

[23] Siehe Stefan Iglhaut, Vom Archivieren zum Navigieren. Anmerkungen zu `Deep Storage´ und zum Medium der Verfügbarkeit, in: Deep Storage. Arsenale der Erinnerung: Sammeln, Speichern, Archivieren in der Kunst, hg. v. Ingrid Schaffner / Matthias Winzen, München / New York (Prestel) 1997, 174-176

Virtual waste land

Against the totalizing vision of virtual storage, the internet might actually reveal the impossibility of being an archive. „Dump your trash" is a call to use the internet as a virtual copy machine of information recycling[24]; their internet server computer *sero.org* helps to turn webpages into a seemingly dusty inscription <see Baumgärtel 2000: 178>.

Do we need an archival structure of the internet in order to render order out of noise?

Thoughts on the cyber-desert might be helpfully imaginative. Surely it´s all about water – maybe that is why cultural studies media analysis writes about "flow" all the time. the equivalent to water is the electronic current now, quite literally. water – money – current: economies of circulation. let us extend it to cultural commodities, and we´ll return to the museum, again. Is there a desert in cyberspace?

Is the cyberspace desert the land of few hits? The land of listservs that nobody reads, the land of homepages that no one visits? Don't forget that a desert, though arid, is alive with plants and animals...so perhaps the cyberdesert is the land of the rugged few, those who use cyberspace to sink roots into otherwise hostile terrain, to find that limited nourishment which is available but hard to get? Of course, talking about deserts in Vienna is ridiculous; how can a city of faded imperial pretensions appreciate an organic system of sustenance and the rugged individualists who thrive there? It's really all about water. What is the essential fluid of cyberspace? [25]

The American company Imagex has created a machine called *Decopier* which sucks printing out of xeroxes to render an empty page. And a couple of artists have created artificial information deserts and voids in cyberspace indeed, such as Mark Napier (New York) with his project *The Landfill*, turning any content of web-pages into graphical raw material. But once again, aesthetics turns out to be ideological, since it sublimely hides the digital truth behind the interface simulacra. The more radical version, though, is the cookie / program *ArchiVirus* created by Manu Luksch, Arnim Medosch and R. Steckel (to be copied from the internet on one´s own computer. Then it decomposes textual documents on the hard disk into its ingredients; alphabetically sorted, all the letters of a file appear on the screen, sense-less, but as a kind of raw material for composing new texts.

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[24] Joachim Blank / Karlheinz Jeron, Information-Recycling, in: netz.kunst. Jahrbuch für moderne Kunst 1998/99, Nürnberg 1999, 92-99
[25] E-mail Susan Crane, 18. Januar 2000

This is a kind of *reverse engineering* of the archivo-literary phantasies developed by Leibniz and Jorge Luis Borges, from letters to litter.[26]

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[26] See W. E., Bauformen des Zählens. Distante Blicke auf Buchstaben in der Computer-Zeit, in: Eckart Goebel / Wolfgang Klein (Hg.), Literaturforschung heute, Berlin (Akademie) 1999, 86-97