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| Museums of Losses for Clouds of Oblivion

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Abstract

This paper describes the overdose situation of documentary production fostered by social networks and its impact on the traditional forms of storage and the contemporary memory culture. It situates the specificity of net art in its connection to dynamic and systemic environments of flow, over which there is no control, implying new conservation parameters and investigates the particular aesthetics. It problematizes the political instances that have turned the Internet into a surveillance environment, denying access to older sites and affecting the preservation of online art. In the end, it presents how we are working with Museum of Contemporary Art of the University of Sao Paulo (MAC-USP), in the development of a methodology to deal with net art pieces in the museological universe. The discussion is based on the case of *The Book after the Book* website (1999), which required a series of updates and reprogramming of codes in the process of migration to the museum collection. Based on this experience, we suggest a reflection about net art museums as museums of the unfinished, unrepaired and unrecovered. This strategy may allow dealing with irreversible losses, without counting on the following process of disappearance of the artworks.

Keywords

Net art conservation, post Internet, digital patrimony, digital museums, surveillance

There have never been so many records, and yet it has never been so difficult to access our recent past. We are on the verge of a documentary overdose, covering all media formats. But there is also an undeniable intensification of obsolescence processes, which wreck equipment and distribute

broken links everywhere. This phenomenon is rooted in the “conflation of memory and storage that both underlies and undermines digital media’s archival promise.” And this is not a result of technical characteristics of the medium itself, “but rather due to how everyday usage and parlance arrests memory and its degenerative possibilities in order to support dreams of superhuman digital programmability.” (Chun 2008: 148-149)

The issue goes beyond the emergence of different storage scales and the pace at which content is made available online. Taking as a reference the current imagery production, it is estimated that every two minutes the world produces more photos than the total shot by humanity in 150 years and that every minute 300 hours of video are made available on YouTube (Eleventh 2014).¹ It is a whole new culture of memory that subverts the principles of traditional archiving, based on the logic of document selection, disposal and organization. How to deal in the field of preservation and conservation with files that disappear, works that stop functioning, services that vanish from one day to the next? How do these impact art museums?

Transmission aesthetics

I speak from the artist's point of view. Of someone who has been working on the web since the 1990s. At that moment, the web was believed to be a field of open possibilities, new formats of creation and circulation. Artistic production was done independently, appropriating elements from other websites, open to public participation and incorporating features offered by networks and their infrastructures. A set of attributes that was later conceptualized as "database aesthetics" and "information curation" which caused some of the major problems for the conservation of the first net art works such as *The Book After The Book*² (1999) by myself.

1 <http://www.internetlivestats.com> .

2 *The Book After The Book* was released in the exhibition NET_CONDITION in ZKM (Center for Art and Media Karlsruhe, Germany) in 1999, as a result of a scholarship granted by Fundação VITAE, which does not exist anymore. It is considered a pioneering work of net art, in the studies on the presence of women on the Internet and in the field of cyberliterature. There are many references to this work in different university programs around the world, as well as in books, exhibition catalogues, and academic research. For a detailed approach, see Anne-Marie Boisvert, “Das Buch Nach dem Buch,” in *Im Buchstabenfeld: die zukunft der literatur*, ed. Peter Weibel (Graz: Neue Galerie Graz, 2001), 67-76 and Kimberly Knight’s essay at *Transliteracy Project* webpage by University of California (2006).

The Book After The Book is a net art work that reflects transformations suffered by literature and reading in the context of the Internet. It centers on non-linear narratives, works that give programming language textual and aesthetic contents and creations that discuss and problematize the condition of reading, the book and the reader in the passage from print interface to the web (Figs. 1-2). As Knight (2006) describes, it brings into focus

[...] the ways in which the machine alters reading and the multiple roles of the machine in the reading process—the machine as reader (browsing tools, etc.), the machine as writer (automatic text generators, etc.) and the machine as interface between the reader and the text.

```
<html>

<head><script LANGUAGE="JavaScript">
<!-- Original: Fred S. Tucker (Slurpie_Tucker@yahoo.com) -->
<!-- Web URL: http://members.tripod.com/~Slurpies_Page -->

<!-- This script and many more are available free online at -->
<!-- The JavaScript Source! http://javascript.internet.com -->

<!-- Begin
function makearray(n) {
this.length = n;
for(var i = 1; i <= n; i++)
this[i] = 0;
return this;
}
hexa = new makearray(16);
for(var i = 0; i < 10; i++)
hexa[i] = i;
hexa[10]="a"; hexa[11]="b"; hexa[12]="c";
hexa[13]="d"; hexa[14]="e"; hexa[15]="f";
function hex(i) {
if (i < 0)
return "00";
else if (i > 255)
return "ff";
else
return "" + hexa[Math.floor(i/16)] + hexa[i%16];
}
function setbgColor(r, g, b) {
var hr = hex(r); var hg = hex(g); var hb = hex(b);
document.bgColor = "#" + hr + hg + hb;
}
function fade(sr, sg, sb, er, eg, eb, step) {
for(var i = 0; i <= step; i++) {
setbgColor(
Math.floor(sr * ((step-i)/step) + er * (i/step)),
Math.floor(sg * ((step-i)/step) + eg * (i/step)),
Math.floor(sb * ((step-i)/step) + eb * (i/step)));
}
}
function fadein() {
fade(0,0,0,255,240,232,223);
}
fadein();
window.location="redefinicao.htm";
// End -->
</script>

<title>O Livro Depois do Livro: Favoritos</title>
<meta name="GENERATOR" content="Microsoft FrontPage 3.0">
</head>

<body>
</body>
</html>
```

Figure 1. Giselle Beiguelman, *The Book After the Book*, 1999, original code of the “interval pages.” ©Giselle Beiguelman

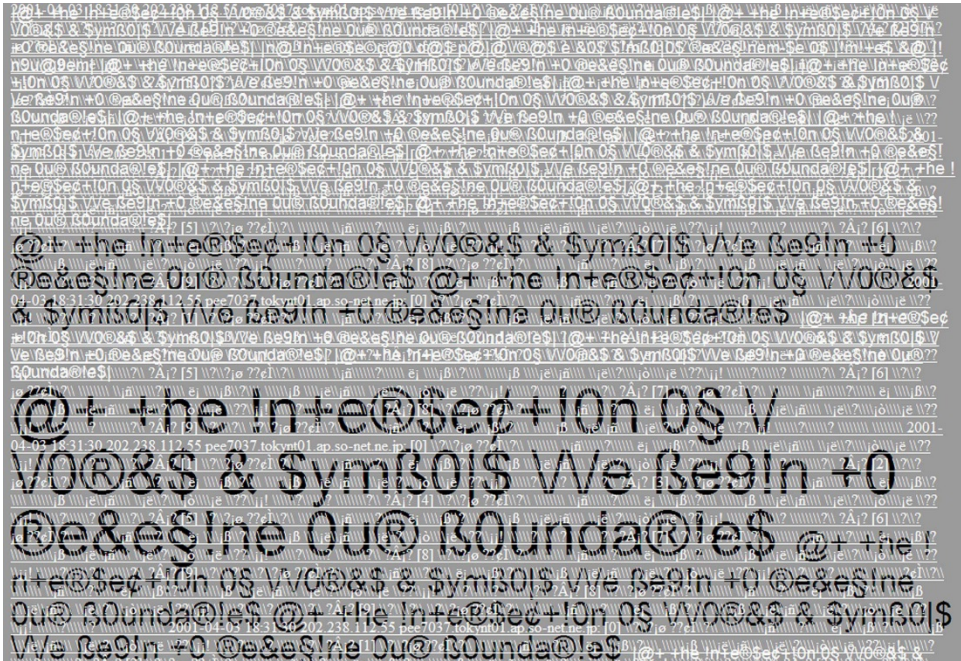


Figure 2. Giselle Beiguelman, *The Book After the Book*, 1999. ©Giselle Beiguelman

The website features an imaginary library whose bookshelves, which accommodate cyberliterature and web art sites, are intercepted by reading intervals. These intervals are empty pages with no endpoints that vanish from gray to white and their role was strategic. Placed between the “shelves pages”, the intervals main function was to prevent the return to the shelves through the browser arrows, forcing a reading that would break the orientation parameters of the print environment. Today this transition, despite its relevance to the work, is imperceptible, given the speed of the nowadays connections.

Not only would every return to the library imply a new reading itinerary, but also any selection would mean taking the risk of changing the path, losing the starting point and redirecting the reading. By advancing to a selected work, the reader would be forced to leave the website of *The Book After The Book*. In that sense, the library was a node in a net, a set of revolving shelves, working as a new reading machine. It assumed that it was somehow necessary to break with the culture of the page, by proposing other interface compositions, to read in a data environment. One had

to "get lost" on the site in order to move through its shelves of sand (the reference to Borges' work here is explicit.)³

For conservation, artistic projects like *The Book...* are somewhat tricky works. They involve systems impossible to control for both the artist and the institution. Their preservation would require the possibility of managing the external websites that make up the work and this is unfeasible. It would also need, as we will see later, the recovery of a series of auxiliary scripts incompatible with current web security standards. Besides, it is not possible to recover the earlier Internet context, as this would require restoring the flow of a given moment.

At best, it is possible to locally emulate the ideal rate of data transmission at the time, as was done at the 20th anniversary commemorative exhibition of Olia Lialina's *My Boy Friend Came Back From the War* net art work, held at MU in Eindhoven in 2016, curated by Annet Dekker. One of the most important works of online art, *My Boyfriend...* is a nonlinear narrative, structured in hypertexts, that tells the story of a couple trying to communicate after the war. The work was presented on an old computer with a Windows operating system, equipped with an 800 x 600-pixel resolution monitor, a Netscape browser and a server controlled to slow down local Internet speed to 28.8 kbps (current networks operate with Megabits units—1,000,000 bits per second—as a minimum). Needless to say that this slow connection was not dialed, like the originals from Internet's early days, but rather the result of a technical maneuver on the specific server of the artwork. As Olia Lialina said, "everything is emulated, simulated and fake, but the work is alive in its most precious state" (Lialina 2016).

It is true that the readability of any artwork is changed by its context. However, the Internet creates a brand new situation, in which "through transfer and transmission processes, the context can also become content" (Lovejoy 2004: 223), as is the case of the interval pages of *The Book After The Book*. In this sense, discussing the preservation of net art implies discussing its transmission aesthetics and new archiving models. In Christiane Paul's words:

The contextualization and archiving of net art require new models and criteria for documenting and preserving the process and insta-

3 *The Book of Sand* is a short story by the Argentinian writer Jorge Luis Borges. It describes an infinite book called "The Book of Sand"... "because neither the book nor the sand has any beginning or end."

bility of works that are often created by multiple authors and constantly develop over time. (Paul 2014: 297)

Accessing an art work conceived for the web, outside its speed, resolution, and technical standards and without its minimum technical features compromises the enjoyment thereof. In an interview to critic Tilman Baumgärtel in 1997, the JODI duo emphasized the relevance of the context as content, and the role of data unpacking speed in net artworks, especially those designed in the 1990s. "We work with the speed of transmission on the internet, or rather the slowness of transmission. That would get lost, if it was on a CD-ROM. None of the pages of our site has more than 30 kilobytes to make it accessible. Yet we think: The slower, the better" (JODI 1997).

These aspects reinforce the demand for new conservation procedures in the field of media art, which tend to give up media storage to focus on the preservation of the artwork (Rinehart and Ippolito 2014: 46). We can mention some of them: migration processes between equipment, emulation of systems and updating of the work's source code. Migration procedures involve replacing media and exchanging similar material. Emulations are processes through which routines and behaviors are transferred from one object to another momentarily, "operating as a sort of facsimile of digital files in a new medium," as Jon Ippolito describes it. Finally, it is also used to update the artwork code, which sometimes has to be recreated in order to re-operate in new media environments, a central issue in net art and computer-based works. Some of these procedures, especially those of migration, are more suitable for physical artworks. However, all of them involve a series of exercises of reinterpreting works that are directly linked to their hardware in the process of symbolic construction.⁴

These practices can hardly be viewed in "pure" format. Exhibitions like *The Art of Participation: 1950 to now*, held at the San Francisco's Modern Art Museum (SFMOMA) in 2008, curated by Rudolf Frieling, and *Waldemar Cordeiro: Exact Fantasy* at Itaú Cultural (São Paulo, 2013), curated by Analivia Cordeiro, are good examples. Besides an opportunity to see historically relevant works of art, interesting experiments in assembling these works were presented that required procedures for migration, emulation, and reprogramming of their codes (Beiguelman 2014: 16-19). Nevertheless, despite the instrumentality of those methodologies for the

4 For a detailed description and examples of these processes with many cases, see Richard Rinehart and Jon Ippolito, *Re-collection: art, new media and social memory* (Cambridge/Mass.: MIT Press, 2014).

recovery of several media artworks, net art continually defies their conventions. In the online system, the obsolescence of machines and programming languages like JavaScript of the 1990s or Flash from the beginning of the 2000s coexists with the absence of the dynamics that characterize most works.

A series of initiatives and projects for archiving and preserving the memory of Internet in general and net art, in particular, have been tested based on the fact that much of the culture created between the 1990s and nowadays has been lost. With regard to projects developed by institutions related to the archiving of net art, there are some pioneer actions. Some of them are: the Rhizome Art Base of 1997, the Variable Media Initiative project, started at the Guggenheim in New York in 1999, and the Whitney Art Port, which commission works and then incorporates them into the museum's collection since 2001.

Independent platforms such as Taxonomedia, coordinated by Vanina Hofman (operating since 2005) and net art latino database, created by Brian McKern, which has already closed its activities, are also relevant. Last, but not least, we draw attention to the Archive of Digital Art 2.0. The project, conceived and directed by Oliver Grau, is not exclusive to works of net art and counts more than 5,000 cataloged works. Started in 1999, it is a continuously expanding database, the result of the joint work of artists, archivists, curators, and publishers.

Other some major examples are the Internet Archive's Wayback Machine⁵, a search engine that enables browsing older versions of websites, and the development of the WARC, "a file format that specifies a method for combining multiple digital resources into an aggregate archival file together with related information that assembles metadata" (Library of Congress 2017). In line with this approach, more focused on dynamic archiving design than on website conservation itself, are Rhizome.org's award-winning Webrecorder⁶ and Old Web Today⁷.

The Webrecorder is not intended for the recovery of websites that have been disabled or stopped working but instead helps to collect what is produced today for the future. It allows dynamic versions of online content to be recorded. Its main specificity is that it preserves the interactivity of web pages, "recording", as they say, "network traffic within the browser while the user interacts with a web page." Moreover, it allows the user to

5 Internet Archive. *Wayback Machine*. <http://archive.org/web>.

6 *Webrecorder*. <https://webrecorder.io>.

7 *Old Web Today*. <http://oldweb.today>.

keep a copy of their material on the project website to download the file in WARC format and browse the content offline.

Old Web Today works like a time machine that enables browsing in older versions of websites in browsers of the time when they were designed. This access, however, means to reframe the interface design of the time and not recovering the contents. This is a lot of work given the various structural changes in HTML (the language interpreted by browsers) from 1995 to the present, which prevent us from even being able to view older works. However, this type of tool is not enough to put resources that have become obsolete and inadequate to current standards of network speed and security into operation.

Clouds and walls

After September 11, 2001, the Internet changed a lot. The Twin Towers attack revealed networks to be double-edged swords, causing the once common speech about them being "essentially good" to collapse (Chun 2004: 149). But this perception created the conditions for the logic of the "unknown unknown"⁸ threat to expand rapidly, imposing a state of paranoia on all instances of everyday life, and infiltrating the most basic routines of the online experience (Galloway 2006).

In this period also emerged what we call Web 2.0. This 2.0 does not refer to the emergence of a new Internet protocol, but to novel information architecture that enables a different use of it. Instead of being just content available for consumption, the Internet becomes a database-based platform for development and creation, using Content Management Systems without demanding technological backgrounds from users. The system, which promises the era of consumer-generated content (CGC), delivers unprecedented concentration in the hands of a few companies. If it is a fact that "databases facilitate access by the many," it is also true that "the connection of so many websites as there are now on the WWW today is only possible through highly connected, automatically operated centers", which only big corporations have the structure to maintain (Warnke 2012: 86).

⁸ The statement by Donald Rumsfeld, US Secretary of Defense (2001-2006), became famous at a press conference at which he justified the US invasion of Iraq, despite the lack of evidence of chemical weapons that would threaten world peace: "(...) that is to say we know there are some things we do not know. But there are also unknown unknowns -- the ones we don't know we don't know."

This architecture consolidates the model of cloud computing based on the sharing of servers interconnected via Internet. Social networks such as Facebook and Twitter operate in the clouds, but also software companies like Microsoft, stores like Amazon, iTunes, Google Play, services such as email and virtual drive storage, like Gmail, Outlook, and Dropbox programs, besides governmental organizations of open data.

Usability may be the reason for the success of this model of Internet, but it is also what has turned it into a space populated by fortified "citadels," where people live within a few dominant websites and accessible services. Anyone can participate in them, but only according to the rules prescribed by previously programmed algorithms. The use is costless (not free). Payment is our data that we make available in exchange for the right to use the services of the databases (Warnke 2012: 89).

This wealth of information feeds new surveillance devices, such as those embedded in the controversial 2001 Patriot Act, which by claiming to counter terrorism gave the US government the right to access data stored in several American companies (Metahaven 2012). In this respect, the collective Metahaven states:

Where and by whom sites are registered and data is hosted matters a great deal in determining who gains access to and control over the data. For example, all data stored by US companies (or their subsidiaries) in non-US data centers falls under the jurisdiction of the USA Patriot Act, an anti-terrorism law introduced in 2001. This emphatically includes the entire US cloud—Facebook, Apple, Twitter, Dropbox, Google, Amazon, Rackspace, Box, Microsoft, and many others. Jeffrey Rosen, a law professor at George Washington University, has established that the Patriot Act, rather than investigating potential terrorists, is mostly used to spy on innocent Americans. But the people being watched need not even be Americans. Via the cloud, citizens across the world are subject to the same Patriot Act powers – which easily lend themselves to misuse by authorities. (Metahaven 2012: 3)

Since these companies, such as Amazon, Microsoft, Google and Facebook, have planetary dimensions nowadays, a new "Platform State" has been created based on a surveillance model, performing as a "mega search engine" (Bratton 2016: 120-121). This has led to the strengthening of usage and behavior patterns that cause independent, open and free applications, without any certification, to be potentially suspicious.

Platforms such as Google, Amazon and Facebook, mediated by sophis-

ticated algorithms, have become the Internet itself, expelling everything that does not fit the cloud model into a limbo of not being recognized as standard. This unrecognized standard includes a gallery of scripts and programs that are suddenly "outcasted" from the orbit of browsers and operating systems.

The association between free software and a malicious program is a prerogative of all antiviruses. On the website of Norton Antivirus, one of the most popular programs of its kind, an article explains the risk of installing a free and independent program: "There is no such thing as free lunch. So check out what the motive is behind why the freeware you want is free to begin with. Are they testing the software for bugs or did they make it for fun? Is the freeware simply a guise to trick you into opening your computer up to a virus or spyware?" (Wasserman 2015)

It would be naïve to believe that there are no programmers who use freeware to infiltrate malicious code that can capture user data and infect computers. However, many developers, who do not act within the corporate parameters of the software industry, develop for research reasons, ideological commitments, and aesthetic affinities—freeware to be applied in works of net art. In the algorithmic horizon of the post-Internet world, however, works using these kinds of programs are now doomed.

Dutch artist Constant Dullaart poses the problem by questioning whether art can still play an active role in PRISM times⁹, when "identities are managed by commercially driven algorithms; the URL has died; SSL is broken; most communications are recorded and analyzed for reasons beyond our access" (Frieze 2013). This makes us think that in the post-cloud Internet world, besides technological obsolescence, the conservation of net artworks also deals with ideological obsolescence.

Second-generation originals

The Book After The Book is one of many 1990s websites created with open-source programs and free, independently developed, uncertified applications. Today, all this is considered suspicious by the security parameters of the main Operating Systems. Since 2015, it belongs to a museum, the Museum of Contemporary Art of the University of São Paulo (MAC-

9 PRISM is the name of the electronic surveillance system of the United States Security Agency (NSA). It allows you to monitor and retrieve information from phone calls, emails, Facebook posts, Google Drive files, Skype conversations, and a myriad of online activities. The system surfaced following reports by former systems analyst Edward Snowden to the English newspaper *The Guardian* in June 2013.

USP), which has a tradition of working with ephemeral and multimedia artworks, since the pioneering work of professor and curator Walter Zanini who led the museum in the 1970s (Freire 2014).

The difficulties of accessing the website, due to new security standards, raised a discussion about conservation procedures and insertion of this type of work into a museum collection. We decided that this website project, as well as the other net artworks authored by me in the collection¹⁰, would be preserved in their entirety, also by replacing the currently "forbidden" programming resources with open source with certified programs. This new original or "second-generation original" (Lunefeld 1996: 97), and those that will come later is how the work is made available to the public. As research documentation, the website also includes a zipped file with all folders of the first version of *The Book After The Book* and an emulated release of its 1999 edition (Figs. 3-4).

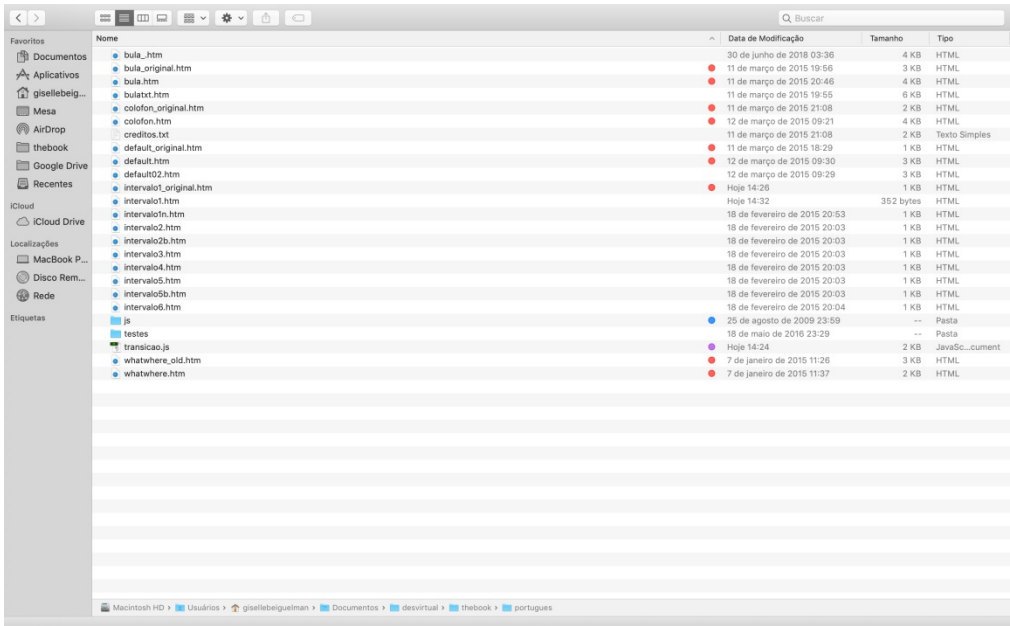


Figure 3. Giselle Beiguelman, *The Book After the Book*—Rebuilding process, 1999-ongoing. In red, original files which demanded new code implementation (structure_the_book_after_the_book), screen shot. © Giselle Beiguelman

¹⁰ Thanks to the initiative of Professor and Curator Ana Gonçalves Magalhães, MAC-USP has now in its collection *The Book After The Book*, which we discussed in this article, the video installation *Cinema Lascado 1: Minhocão*, as well as the following net artworks authored by me: *Wop Art [WAP + Op art]*, one of the first works of art for mobile phones (2001), *Ceci N'est Pas Un Nike* (2002) and web app *I Lv Yr GIF* (2013), with all its previous versions for desktop and printing.

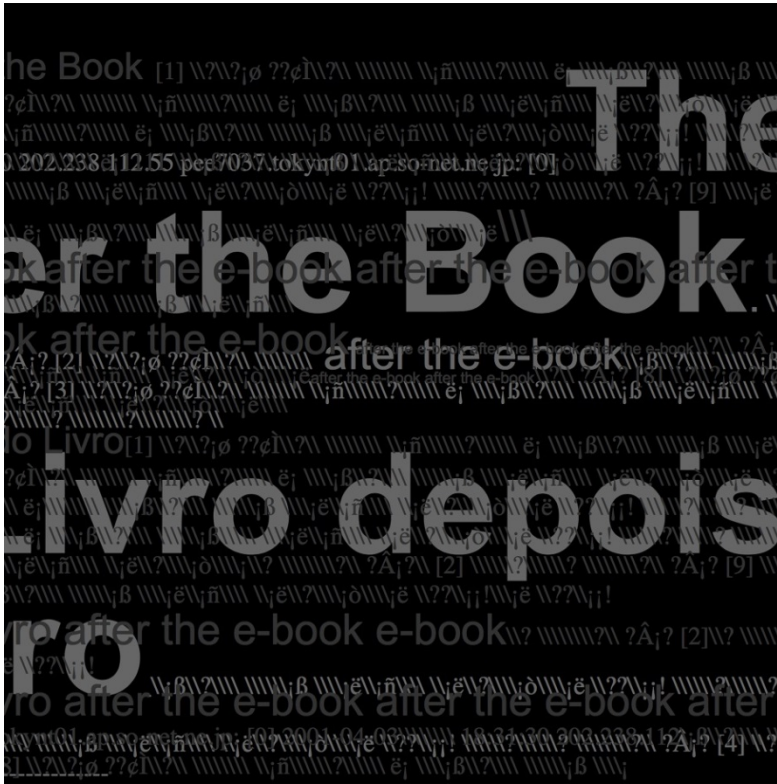


Figure 4. Giselle Beiguelman, *The Book After the Book*, 1999. ©Giselle Beiguelman

The artwork thus becomes a kind of an open palimpsest of recoded layers and rewritten programming languages. Since it is impossible to be recovered due to its contextual nature as well as technological and ideological obsolescence, alternative conservation formats based on updating and emulation procedures need to be taken into consideration. Unlike simulations, which pretend to represent an absent model, mimicking the lack of something, emulations constitute a presence and only exist during the behavior transfer process.¹¹ Updates, on the other hand, assume the need to recycle codes—irrespective of an attempt to recover them—in order to adapt them to new network contexts. This is the method we are working with to preserve it.

Memory is always dynamic and one has to presume that many updates

¹¹ In name and function, emulation processes return to a practice current in the context of 16th-century humanism, *aemulatio*, a form of exegesis and interpretation of texts. It operated from a relation of resemblance "liberated from the law of the place," acting as a sequence of duplicate mirrors, within which things could be imitated without being chained or close to each other (Foucault 1992: 25).

will reach, one day, a profile very different from their first versions. These earliest versions can become completely inaccessible. How will museums respond to these challenges?

If the option is to look for ways to freeze, in some way, the net art environment of a given moment—a task that seems utterly impossible to me—, there is a risk of thinking of the museum as a strange cabinet of curiosities of the future of past. At best, it is an echo of a warning made by Adorno who wrote that the association between museum and mausoleum is not just phonetic. It is the result of a political and ideological work of neutralizing culture (Adorno 1962: 173).

Another possibility is to give up this type of conservation and to think that instead of celebrating a progressively more stable future, by preserving fragments of the past, net art museums tend to be the museums of the unfinished, unrepaired and unrecovered. By doing so, they will allow us to deal with the irreversibility of losses—of hardware, software, and all the affective bonds that social networks increasingly entail—without an imminent process of disappearance. And that does not mean replacing missing files, or simulating previous Web standards. Instead, it assumes that the new original (the "second-generation original") is the main object of collections; the absence, the obsolete and what is impossible to recover as the research target. In a sentence, a museum of losses for clouds of oblivion.

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