

# ***Deletion Process\_Only you can see my history:*** **Investigating Digital Privacy, Digital Oblivion, and Control on Personal Data Through an Interactive Art Installation**

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## **ABSTRACT**

**In light of recent controversies surrounding massive data collection by corporations and government agencies, digital privacy, the right to oblivion, and data ownership have become increasingly important concerns. This paper describes the author's artwork, *Deletion Process\_Only you can see my history*, an interactive art installation based on her eight-year personal search history in the Google search engine. While the personal search history maintains a sense of privacy, according to the company's own declaration, the author reveals this archive to viewers in order to raise awareness and provoke reflection on the aforementioned subjects. The author discusses her motivation, describes the making process and the decisions made at each step of designing the installation, while integrating at the same time a deeper discussion on the place of digital privacy and oblivion within the contemporary approach to art and technology.**

## **Introduction**

Queries on search engines, status updates, friendship connections, preferences generated in social media, geo-location data from smart phones, purchasing history, and more provide businesses, governments, and scientists a wealth of insights and a new way of understanding the world.

The increased practice of surveillance and the continuous accumulation of data and metadata have been met by a parallel increase in their study. A dedicated open-access electronic journal, *Surveillance & Society*, was created in 2002, designed to address and push forward the then-nascent transdisciplinary field of surveillance [1]. The journal continues to publish work that bridges disciplines and perspectives.

What David Lyon refers to as the “electronic panopticon” [2] has led to a contemporary existential crisis, questioning the construction, reinvention, and privacy of the individual and his identity, the right to be forgotten, and the control and distribution of this personal dataset. Building on Michel Foucault, Gilles Deleuze underlined the telos of panoptic discipline and the rise of “societies of control” [3]. He argues that much remains to be discovered about the forces that control societies. What is clear is that a strategic shift in power relations is underway.

Complementing the formal academic study of surveillance, the topic has also drawn the attention of many digital artists [4]. In *Surveillance & Society*, Jonathan Finn names several researchers from different disciplines who interrogate the subject.

Within this theoretical frame and in the context of related artworks, this paper presents two versions of an interactive installation. In the first version, the personal search history dataset is opened to the public upon consent. In the second, the same dataset is presented on a website.

Before delving into the descriptions, I will start by providing some context on the aforementioned subjects.

## **Context**

### *Digital forgetting and oblivion*

Witnessing humanity's historical efforts to preserve memory, one might conclude that forgetting is a weakness of the human mind. In fact both forgetting and remembering are active processes of equal importance.

As Liam J. Bannon states, “forgetting is a necessary mental activity that helps us filter the incoming sensory flood and thus allows us to act in the world” [5]. Viktor Mayer-Schönberger [6] and Alexander Luria [7] mention cases where remembering everything had detrimental effects on a person's cognition. The positive impact of forgetting has been recognized by society as well. People are given a fresh start by having their past criminal records erased and credit information from long ago expunged.

In the digital world, organizations such as Google have gone to great lengths to preserve everything that passes through their machines. A user's search history, emails, and sites visited can be stored potentially forever. Google itself encourages users to preserve everything—one of the selling points of their services is that subscribers won't have to delete any of their data in order to make space [8].

Amassing all this data is seen as the next generational step in delivering better, more personalized search results. Companies collect and store all of this data, because the basic revenue model of the internet is built on the invasion of users' privacy. As European Consumer Commissioner Kuneva stated, “Personal data is the new oil of the internet and the new currency of the digital world” [9].

### *Dataveillance and privacy*

Since personal data is often managed by third parties, serious issues regarding the privacy of the individual have been raised. People are often prevented from having knowledge of how their information is being used [10], and its aggregation can lead to probabilistic predictions based on behavior patterns.

Many people are unaware of the extent to which their electronic activity is recorded, while others put forth the “nothing to hide” argument, which stems from the faulty premise that privacy is about hiding hideous actions [11]. The European Union has unveiled the Data Protection Regulation, which includes a provision for the “Right to Be Forgotten” [12] in order to update European privacy laws to the shifting digital landscape.

### *Data ownership*

The issue of data ownership and data governance gains importance in this data deluge. Individuals are becoming increasingly aware of the value of their data and they are less willing to give their personal datasets away. Crucial questions arise about legal rights regarding use, access, and distribution of personal data. The digital footprints left in the continuously improving algorithms result in improved personalization, meaning more successfully targeted search results for the user.

On the other hand, the aggregation of information about the thoughts, needs, and desires of the user lead to better insight into the individual, as Neil Lawrence rightly observes [13]. The queries

and desires that users type into the search engine are connected to their profiles, and offer a detailed description of what and how they think.

In this vast ocean of information (created by both data and metadata) there is a desperate need to find meaning. For that reason, Google (and all search engines) utilizes algorithms for data-mining in fields such as artificial intelligence, pattern recognition, economics, etc.

At the 2016 Transmediale festival in Berlin, Matteo Pasquinelli [14] discussed the two universal functions of algorithms for data mining: pattern recognition and anomaly detection. He writes: “beneath the surface of the web, gigantic datacenters have been turned into monopolies of collective data. If networks were about open flows of information (as Manuel Castells used to say), datacenters are about the accumulation of information about information, that is metadata” [15].

He continues, explaining that pattern recognition seeks to recognize something meaningful in the landscape of apparently meaningless data, to find what Manuel DeLanda has described as the emergence of singularities. Anomaly, he continues, can be detected exactly within this regularity of patterns. In that sense pattern recognition and anomaly detection are the two epistemic tools of algorithmic governance [16].

### **The Art Practice**

This deluge of information and the introduction of digital technology into many realms of everyday life has provided fertile ground for artists who add a critical voice to the discussion around dataveillance and society. In “Art in a Time of Surveillance,” Peter Maass provides a thorough list of artists working on these subjects [17].

The most significant compendium of related work is the 2002 exhibition catalogue, *CTRL [SPACE]: Rhetorics of Surveillance from Bentham to Big Brother*, published by the ZKM Center for Art and Media in Germany [18].

The list of artwork on these subjects is rather long and includes several that, like *Deletion Process*, reveal private/personal information to the public. From 2000 to 2003, Eva and Franco Mattes, in their work *Life Sharing*, made the contents of their hard drive open to the public online. It was possible to read their emails and search their folders [19, 20].

Since 2002, when the U.S. government mistakenly listed him on its terrorist watch list, and after being interrogated for several years by the FBI, Hasan Elahi has made his whereabouts known by publishing his GPS coordinates online in real time in *Tracking Transience* [21, 22].

*PRISM*, a work by Danja Vasiliev and Julian Oliver that successfully hijacked the cellular connections of at least 740 phones—without any interaction from users—and sent text messages during the opening night of Transmediale 2014, was taken down the same night [23].

To complete this short list, Laura Poitras, director of *Citizen 4* (the award-winning 2014 documentary film concerning Edward Snowden and the NSA spying scandal), is currently the subject of a 2016 solo exhibition at the Whitney Museum in New York [24].

The following sections discuss the philosophical implications of forgetting [25] and describe two versions of an interactive art installation in which I use my private data in order to provoke and disrupt public debate on the issues of privacy, dataveillance, and data ownership.

As an artist working across media, with a background in cultural anthropology, I consider artistic practice to be also a form of research. For that reason, with this art project I attempt to investigate our digital culture and our potential to reclaim ownership and control of our digital lives, and to gain an understanding about the current and future conditions regarding technological progress.

#### **The Art Project: An Interactive Installation**

Google offers a wide range of online services. In order to access them, the user has to create a Google account which consolidates the user's activity under one name. Once logged in, most users choose to remain so while browsing the internet. This allows Google to match each user to all terms searched.

10,650 search terms, the corpus of my web history during the period 2008–2013, are used in this project. For each term searched, Google stores and provides the time and date of the search, the search results clicked on, as well as the frequency that these were visited.

When I was working on the first version of the project back in 2013, the company's account policies made it painstakingly difficult to download one's own data; custom software in Python and Ruby had to be written in order to obtain it. Since April 2015 these policies have been changed and it is possible to download one's search history and store it locally.

This project comments on digital privacy, the right to be forgotten, and the ownership of personal data. Most of the searches are personal and rather banal; but at the same time, this search history composes a rich and detailed user profile in Google's data centers, to which the user has few to no rights. Google Inc. assures users that their search history is strictly private—as stated on its website, “Only you can see your history.” Both versions of this project are described in detail in this paper.

The Google engine is the only search engine used, since it was the only one that I used from 2008–2013. Moreover, this search engine is a unique paradigm of a business corporation that dominantly indexes and documents the public archive. The capacity of search-engine advertising based on such databases to reach consumers at the precise moment their desires are transmitted and tracked through search entries is a key component of the engine's economic advantage [26].

The potential of the state and other actors and agents to use Google's database to monitor, understand, target, and make determinations about the activities of particular individuals who have searched through Google makes it a potentially dangerous mechanism of surveillance and social control [27]. Furthermore, Google's ubiquity, hegemony, and consecration mean that its power to shape access to information is unprecedented; accordingly, PageRank has received considerable academic attention [28]. It is indicative that the verb “to google” was added to the Oxford English Dictionary on June 15, 2006 [29] and is used worldwide as a synonym for searching for information on the internet.

#### *Deletion process: Table of disclosure (version I)*

The entire Google web history was downloaded and this unique local copy was transferred to a Raspberry Pi microcomputer. Following this, all web history associated with me was deleted from the Google servers. A screenshot of the empty profile was taken and printed as a certificate (Figure 1).

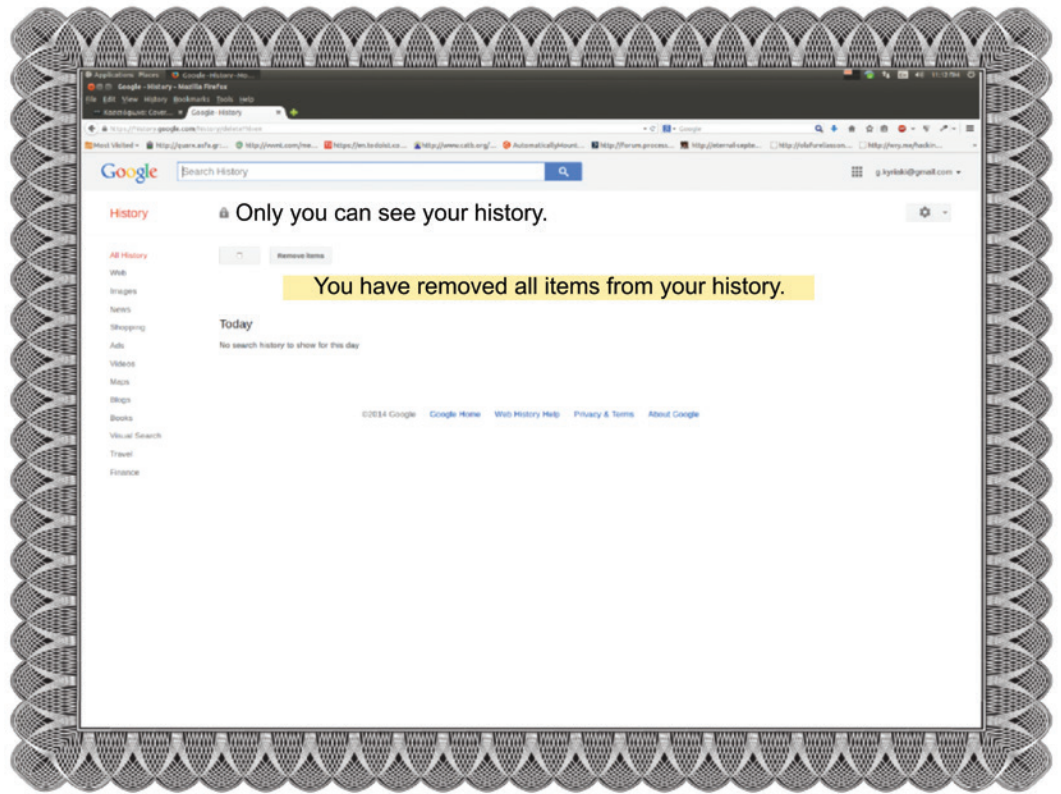


Figure 1. A screenshot of the empty profile was taken and printed as a certificate. (© 2015 Kyriaki Goni)

Additionally, a hardcover book containing the entire web history, including its associated metadata, was printed and encased in a glass box on a handcrafted table (Figure 2). The microcomputer running a web server hosting the aforementioned data was embedded inside the table while remaining visible under a glass cover.

A button on the table activates the wireless transmission of one search string from the personal data, along with its timestamp, to all connected devices. This is summarized to the spectator with the following sign next to the button:

This button initiates the transmission of the artist's personal web history.

If you consent:

1. Press the button
2. Connect your device to the *Active Oblivion* network
3. Visit any page using your browser

If the spectator consents to the data transfer, the singular piece of information he receives appears on the screen of his device. Along with that, a notification appears stating that the transmitted data has just been permanently deleted from the only existing electronic copy.

*Deletion Process\_Only you can see my history (version II)*

I noticed that the first version of the project was more introverted than I had planned; my main scope was to strongly engage viewers in the voyeuristic condition of searching my personal search history. Moreover, the issue of ownership was not brought into consideration. To that end I produced a second version of the project.

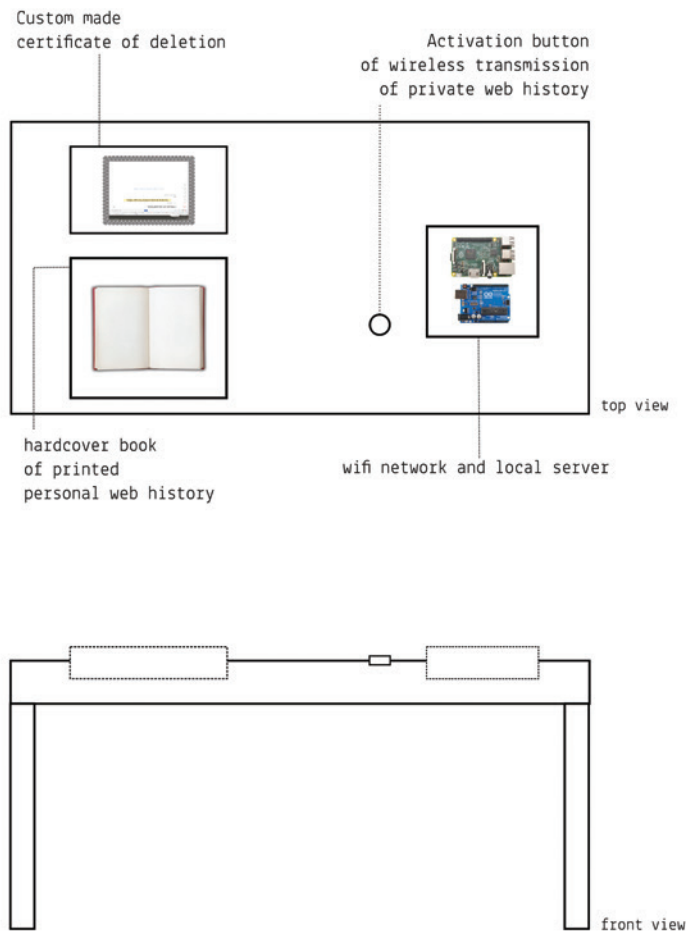


Figure 2. Top and front view of the Table of Disclosure. (© 2015 Kyriaki Goni)

The main difference between the two versions was that the second one was online, completely open to the public [30]. The consent button was abandoned, so now everyone has unlimited access to my personal history archive. Regarding the data ownership, I decided to sell parts of my search terms, in a kind of humorous and provocative act (Figure 3).

As mentioned above, the 10,650 terms that I searched for over the last eight years have been downloaded from my personal search history and stored locally. In the second version of the work, the search terms are depicted as white squares on a webpage (Figure 4).



Figure 3. (left) *Deletion Process\_Only you can see my history*, installation at Dialogue #10: Art, New Technologies and Social Media, November 2015. Interactive installation, URL, server, custom software, Raspberry Pi, thermal mini printer, archival prints mounted on dibond 120 x 67 cm, 20 prints, 17 x 22 cm. (© 2015 Kyriaki Goni); (right) my search terms on sale. (© 2015 Kyriaki Goni)



Two eroding processes access this search history and delete one random word forever, turning the respective white square into a black one in the aforementioned webpage. The one process is initiated by the computer and the other is triggered by the viewer. In that way the work develops itself over time without the control of the artist. The computer and the number of viewers interacting with it *in situ* affect its development in time. There is a synergy between the computer and the viewer, leading to the total deletion of my personal search history. In both cases of the deletion process the deleted search term is printed on paper, turning the digital archive into a physical one. At the end of these processes all terms will have been deleted and the webpage will be completely black. The printed paper will be the only remnant of the personal search history and it will be cut into pieces, exhibited and offered for sale as a playful and provocative comment on the distribution and control of personal data (Figures 4 and 5). The continuously growing physical presence of the printed paper is rather intense and provides the work with a performative and material characteristic, almost like a sculpture developing in time (Figure 6).

From an aesthetic point of view, the choices made were the simplest possible, allowing an abstract and therefore almost poetic approach to these extremely complex notions. In my opinion, the facts that the work develops over time, through the joint processes performed by computer and viewer, and that this whole action is presented online, are very important to the aesthetic effect of the project.



Figure 4. *Deletion Process\_Only you can see my history*. Screenshot from the website. Detail, thermal mini printer and Raspberry Pi. (© 2015 Kyriaki Goni)

### Thoughts and Reflections

This project provided me valuable insight into the complex notions of dataveillance, data ownership, and digital oblivion. At the same time it is a physical manifestation of complex processes brought together by the human brain and machine-learning algorithms.

Every time the second version of the work is exhibited, viewers are intensively engaged (Figure 7). Interaction with the work leads to discussion and to further research on the issues the work deals with.

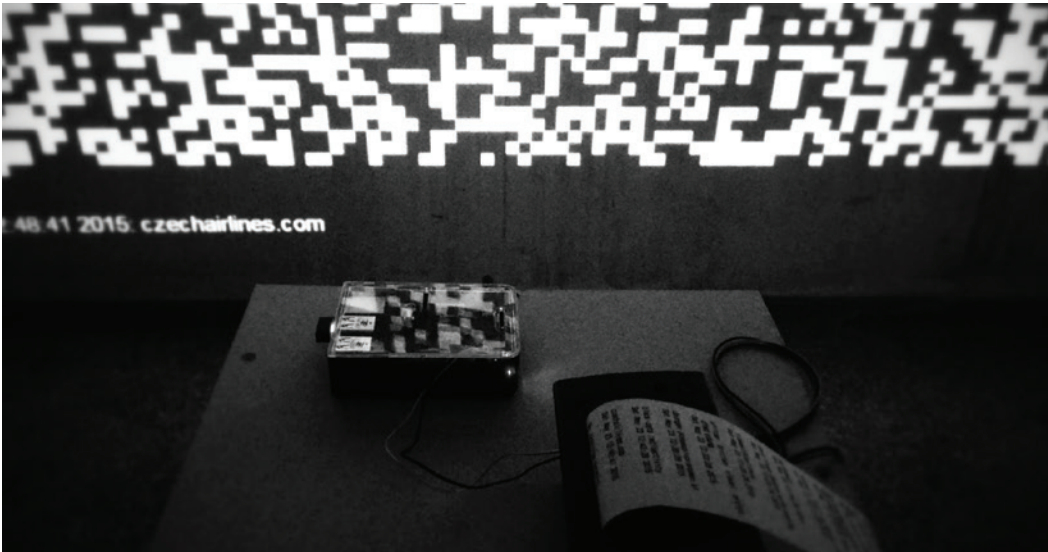


Figure 5. *Deletion Process\_Only you can see my history*, Athens Video Arts Festival, May 2015. Projection of the webpage: Raspberry Pi, mini printer, print. (© 2015 Kyriaki Goni)

The intentional iteration of the exact same search history archive adds a further skeptical comment on the control of personal datasets regarding deletion and oblivion.

The possibility exists for a variation on the second version of the work that would make the whole process real-time, with the use of an API and by inviting viewers to watch and delete what I search for in real time. This version would be presented as a short performative piece for two or three days. It is worthwhile to observe that a real-time version would underline the lack of privacy for the artist herself, and emphasize the exhibitionistic and voyeuristic character of the work even more.



Figure 6. *Deletion Process\_Only you can see my history*, Oddstream Festival, March 2016. Projection of the webpage: Raspberry Pi, mini printer. (© 2016 Kyriaki Goni)

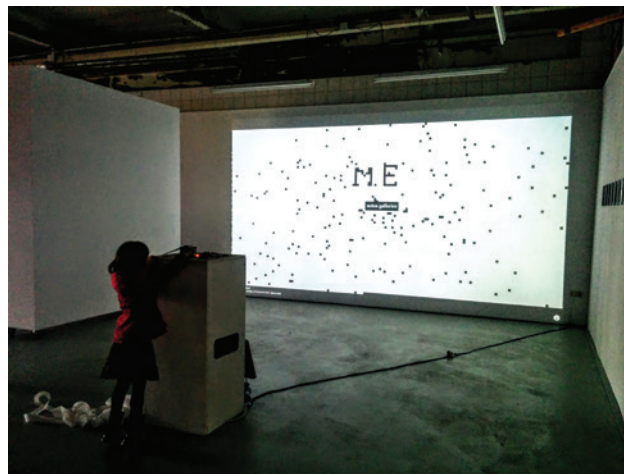


Figure 7. *Deletion Process\_Only you can see my history*, Oddstream Festival, March 2016. Projection of the webpage: Raspberry Pi, mini printer. (© 2016 Kyriaki Goni)



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The installation (version II) has been presented at Oddstream, Nijmegen, Netherlands (March 2016); Contemporary Art Dialogues—Dialogue #10: Art, New Technologies and Social Media, Athens, Greece (November 2015); Athens School of Fine Arts (September 2015); Athens Digital Arts Festival (May 2015); and the Michalis Cacoyannis Foundation, Athens (November 2014).

The artist spoke at Oddstream, Nijmegen (March 2016) and at Hackerspace, Athens, Greece (April 2016).

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