database

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ABSTRACT

This paper is a theoretical essay on the installation database. database is an electronic reading device that deals with the inversed functionality of three electronic devices: a printer, a video camera and a database. Consequently, it raises issues about the erasure of text, the act of reading in real time (i.e., listening to a printed text), and physical databases. Through the opposition between presence x absence, recording x erasing, memory x forgetfulness, present x continuous time and reading x listening, we challenge the idea of the database as a non-linear and digital structure, and the printer as an output device as well as an information recorder. Critical for the connection of all these concepts is the idea of present time as a time that is always passing by.

1. database

This paper is a theoretical essay on the installation database. database is an electronic reading device that deals with the inversed functionality of three electronic devices: a printer, a video camera and a database. Consequently, it raises issues about the
erasure of text, the act of reading in real time (i.e., listening to a printed text), and physical databases. It consists of four main interfaces:

1. A printer, with a video camera attached to the printer head. When the printer prints it, it also films.

2. A projector connected to the video camera, which projects what the camera “reads” onto the wall.

3. Paper sheets completely filled with text, which function as physical databases.

4. A computer screen showing a blank virtual page.

The initial screen interface consists of a completely white background. As soon as the user starts to move the mouse over parts of the screen the underlying elements become visible. These elements are either black rectangles or keywords from the database. Black rectangles are shown when the respective text in the database is not a part of one of the dialectical word-pairs (i.e. the keyword is shown when it references to some other word in the database). Keywords are words such as “forgetfulness”, “memory”, “present” and “past”. When the user moves away from the currently selected elements, the words (and respectively the black rectangles) fade away to white again. However when the user clicks on one black rectangle it stays black. After clicking a keyword, it is replaced by a black rectangle that stays, thus erasing the correspondent word.

After a while when the user has clicked a couple of times, the screen is filled with black rectangles that are later on used as commands for the printer to navigate the camera. Especially the black rectangles resulting from clicking a keyword on the screen are important navigation instructions for the printer head to move the camera to the
opposing term (which then becomes visible on the projection screen in the process of printing over the keyword).

The printer prints on the pre-printed page (physical database). Nevertheless, instead of printing, it erases the words that the user previously saw on the screen. At the same time, the camera reads different words and projects them onto the wall. These words are antonyms of the words on the computer screen. However, they are not exact antonyms. For instance, you can read “perpetually” on the screen and “too fast” on the wall; or even “promise” on the screen and “past” on the wall.

This happens mainly due to two reasons. At first, because we did not want to make a one-to-one translation of words. Second, because the computer screen is actually accessing a database of quotes, which are on the paper. The quotes are from authors in Literature and Philosophy who have written about the topics we are dealing with: erasure and recording, presence and absence, actual and virtual, writing and oral. Hence the paper functions as a database, which has been withdrawn from the computer. However instead of being made of tables or categories, it is structured in the form of a linear text. The deconstruction is then created by the process of reading.

The words on the virtual paper simultaneously erase their correspondent on the physical paper and project their antonym onto the wall. At the same time the printer is printing, the camera “reads” in a fraction of seconds. This means that the camera allows the reading of a text in the process of erasure.
2. behind the database

The concept of this project was born from the will of working with three main ideas.

1. The physical database on a sheet of paper, in contrast to the digital database.
2. The printer that reads while it is printing — opposing the idea of the printer as a mere output device. With the video camera it becomes an input device at the same time.
3. The erasure in the process of reading. The erasure of the text modifies the database, creating new meanings from the original text.

Furthermore, the video camera only allows the reading/writing of the text in real time.

Our aim was to question the traditional meaning of computer interfaces. And we did that by inverting their basic functionality.

2.1. Databases and Narratives – or how we can access information that is outside the computer

Databases are the expression of our contemporary culture. According to Lev Manovich, they are the very representation of our world, which also “appears to us as an endless and unstructured collection of images, texts, and other data records”.¹

It is interesting to think about databases as cultural forms, because their structure is based on

fragmentation and non-linearity, which are strong concepts that help us to understand the environment where we live in. Nestor Garcia Canclini\textsuperscript{2} affirms that we live in fragmented cities and compares them with the aesthetics of video clips. Like video clips, the city is made of discontinuous images. Walking through the city is like mixing diverse narratives: following the ever changing images from churches from the 17\textsuperscript{th} Century, buildings from the 19\textsuperscript{th}, and of all the decades of the 20\textsuperscript{th}, cut off by huge advertising outdoors where one can see the body of models, new kinds of cars and recently released computers. Everything is dense and fragmentary. Like videos, the city is made of images stolen from everywhere, in any order.

If cities (and our lives) are organized in a database-like structure, how do we read this database? How can we narrate the city again? Extending the idea to the computer realm, and facing the computer as a database machine, it is even more important to ask: how can we access data in computers? In this context, it is not difficult to see the computer as a story telling machine. A machine made of a large amount of storable data, which connects this data through meaningful associations — something like Vannevar Bush’s Memex.

Bush, right after World War II, was trying to make sense of the large amount of information that was being produced. The main problem was not anymore how to produce information (because information production was increasing very fast), but how to access it. Thus connecting this information in a logical way would be much easier than, say, listing items in an alphabetical order, as a traditional encyclopedia does. Nevertheless, in doing this, Bush was also creating a new kind of narrative: a narrative that had no previous order and which was created by the person who links the

\textsuperscript{2} CANCLINI, N. G. 1995.
information available. This concept was coined by Ted Nelson in the sixties under the name of Hypertext.

Creating Memex, Bush was facing the world as a database. The relationship with technology is always a two-way path. On the one hand, the vision of the world as a database influenced the organization of computers as database machines. On the other hand, the computer structure also influences our way of being in the world, what causes us to structure our thought in a database-like structure. It is possible to say that new technologies reflect our culture as well as our culture reflects new technologies.

The great contribution of Vanevar Bush was creating a different model of interface to access the huge amount of data: an interface based more on our way of thinking than on a hierarchical encyclopedic structure. Consequently, without the proper interface databases become meaningless. Manovich\textsuperscript{3} sees the computer environment as a scenario constituted by two main characters: the interface and the database. The database is an assemblage of elements, subdivided into categories. And the interface is a way of accessing the database, and of rearranging its elements in a linear and human-like way. In this context, diverse interfaces can be created to access the same database, pointing to different “readings” of it. Hence, the concept of interface is as important as the concept of the database, because one cannot work without the other.

Notwithstanding, unlike Manovich and according to Janet Murray\textsuperscript{4}, we do not believe that the logic of the web is anti-narrative — it is fragmented. Digital narratives can be seen as kinds of narratives that use digital media as support, but need humans (and interfaces) to make sense out of them.

\textsuperscript{3} MANOVICH, L. 2001, p 37.
\textsuperscript{4} MURRAY, J. 1999.
Furthermore, in questioning the traditional separation between narratives and databases, we have created a database that is already a narrative. Our database is structured in a linear way (and not in categories, as usual), but can only be accessed in a random way. On the sheet of paper, there are quotes and linear text. However, the user has only access to it through the computer screen. On the screen, parts of the database can be visualized, emphasizing the fragmented structure of the web as well as the hypertextual model: one can only access parts, never the whole. It is similar to a map that is there to be explored, but it is folded and the user can only see fragments of it. Also, in the projection, the user is only able to see other parts of the database. Although these parts are different from the first ones, they are connected through meaning: an opposite meaning that describes the very meaning of the whole project. Moreover, when the user finally gets the printed paper (after it has been printed by the printer) it is still not possible to access the whole, because parts of it have been erased. Therefore, all interfaces work with the goal of making each part of the piece complementary to each other. Only the three parts together (monitor screen, video and paper) can represent the whole database.

In database, each interface acts as a different layer of meaning. Each one (screen/printer, printer/video camera and paper) lets the user access data from a different perspective. For example, if the user sees one word on the screen, s/he is going to see its opposite on the wall, thus creating a tension between what is read on the screen and what is expected to be read on the projection. In addition, another tension is created in the moment the paper is printed, because everything that has been read before has disappeared: the words on the screen because they have been erased by the printer, and
the words in the projection because they are lost within the text, the completely linear text. In the end of the process, the database is modified and holds another meaning.

Another important opposition is the tension between physical and digital databases. By placing our database on a sheet of paper, we are inverting the common significance of databases as digital structures and looking back to the predecessors of today’s databases: libraries and encyclopedias. But, unlike libraries and encyclopedias, which structure their data in a hierarchic tree-like way, our database is linear — it is narrative. This inversion is related to the comparison that Manovich creates between syntagm / paradigm and narratives / databases. According to Roland Barthes, “the syntagm is a combination of signs, which has space as a support.”5 If we take the example of written language, the syntagm represents all the elements that we choose to create a sentence, which are structured on a piece of paper. On the other hand, the paradigm represents all the virtual words that could have been on the paper, but were not actually used. “Put differently, the database of choices from which the narrative is constructed (the paradigm) is implicit; while the actual narrative (the syntagm) is explicit.”6 Manovich affirms that new media inverts this relationship, because the database (the paradigm) is given material existence, while narrative (the syntagm) is dematerialized. Hence, paradigm is actual; syntagm, virtual. By placing our database on a sheet of paper, it does actually have physical existence; the user can hold it in his/her own hands.

6 MANOVICH, L. op. cit. p.231.
2.2. A printer that reads — real time and the relationship between the inside and the outside

In addition to the database, the interfaces themselves are the elements that create the meaning of the work. The next two topics are closely related to the inversed functionality of technology. The first one is related to the role of the printer as an input device and the act of writing/reading in real time. The second one deals with the erasure of writing.

As long as there is a video camera attached to the printer head, the printer also functions as a reading device. Consequently, instead of being used as an output device, it also works as an input device, similar to a scanner, but it does not store information. A scanner is an electronic device that reads and record information. It transforms analog documents into digital files, putting information into the computer. Generally a printer acts in the opposite way: it prints digital documents and records them on paper, creating analog files. Hence it withdraws information from the computer — from the virtual realm to the physical world.

**database**’s printer works with two basic oppositions:

1. The printer does not print, but erases.
2. The printer (or the camera) reads, but does not record.

Therefore, the existence of the text is ephemeral, because it disappears in seconds — as soon as the printer goes to another line.

Here we have the basic and most archaic opposition between reading and writing or, in another perspective, between speaking and writing. Writing was invented as a way
of recording information. With the emergence of writing, it became possible to freeze ideas and words for later access. In this context, the interface\textsuperscript{8} used (that is, the physical support used to write on) was critical for the permanence of the writing. For example, books made of parchment were much more durable than other ones, which used papyrus as support. Also, writing on papyrus was better than writing on clay. The more durable the interface, the longer the permanence of the information recorded. In opposition to spoken words, which are ephemeral, and exist only at the very moment they are spoken, writing has an “infinite” duration (depending on the duration of the interface where it is inscribed) — it deals with time in a slightly different way.

This issue becomes clear when we look at the era before the invention of writing, that is, to oral cultures, and their relationship with time. In oral cultures, all the knowledge was transmitted by means of speech and story telling. Consequently stories had to be repeated again and again, from generation to generation, in order to be remembered. This connection between time, speech and memory is going to be critical to the development of our work. Pierre Levy\textsuperscript{9}, in \textit{Les technologies de l'intelligence}, shows how memory evolved since the oral period (when story telling determined society), until the digital ages (where we have a kind of “hypertextual” memory). In the oral period, time was circular and knowledge was transmitted by telling stories. Then the act of telling a story had a great importance, creating something like a collective memory, because culture was based on oral discourse. It is important to stress the double role of

\textsuperscript{7} And our database is actually an interface as well.
\textsuperscript{8} Here we are referring to the expanded meaning of the word interface. This concept was born together with the computer culture to designate the mediator between humans and computers (that is, a way of allowing humans interacting with machines). Soon it had its meaning expanded into another kinds of mediation, signifying almost everything that could mediate any communication relationship. In another words, the concept of interface can be understood as a way of re-representing information in order to connect two distinct instances.
narrators and storytellers: they were the ones who transmitted and stored knowledge (information) as well as the ones who interpreted this information.

When writing emerged, this relationship was destroyed. Two separate instances emerged: information storage devices (walls, clay tokens, papyrus) and people who read and interpret the information. Also, writing began to function as a memory device. Writing something on a paper was like memorizing it. Consequently it became possible to store a considerable amount of information, and retrieve it later. Henceforth, information could be organized in a different way, leading to a more linear way of thinking, because stories did not need anymore to be repeated again and again. Aristotle’s definition of narrative as something that has beginning, middle and end exemplifies this thought model. The linear way of reading also transformed the way people dealt with time: from a circular time to a linear time. It transformed our way of thinking, too. Linear thinking is a consequence of writing (especially occidental writing) and it was strengthened with the advent of printing.

Many authors tried to challenge this linear way of facing time by creating structures that dealt with multiple and concomitant times. Gottfried Wilhelm Leibniz, in the 17th Century, writes about the concept of the virtual in philosophy, creating the theory of incompossible worlds and divergence of series. He faced the world as an assemblage of different possible worlds. These worlds, although all of them were possible, were incompossible with each other. Consequently they could not exist together, or in the same world. If we consider the possible as a face of virtual, we can say that there are lots of virtual worlds, but only one of them can be actualized at a time. In the very moment one world becomes actual, it automatically eliminates all other possibilities. Leibniz created

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9 LEVY, P. 1993.
series of worlds, actualizing the best sequence of all, the one that was chosen by God. In the Theodicy, Leibniz explains: “Here are representations, not only of what happens, but also of everything that is possible. Jupiter reviewed them all before the beginning of the existing world, arranged the possibilities into worlds, and chose the best of them all.”

Radicalizing G. W. Leibniz’ idea, Jorge Luis Borges writes “The Garden of Forking Paths” where, instead of bringing into existence one linear series of worlds, he aims to actualize them all. Facing the world as a labyrinth where we must decide where to go in each bifurcation, he suggests a forking in time, not in space:

“In all fictional works, each time a man is confronted with several alternatives, he chooses one and eliminates the others; in the fiction of T’sui Pen, he chooses — simultaneously — all of them. He creates, in this way, diverse futures, diverse times which themselves also proliferate and fork.”

If the hypertextual reading happens by following a sequence of links, and actualizing each link at a time, Borges radicalizes this idea, actualizing all the possibilities at the same time. However even though one can speak about non-linearity in a hypertextual reading it is evident that each one of us create a particular linearity. The same goes for the database. The way we access a database is not linear, but the associations made among the accessed items form a chain of information — just like the Memex worked.

Back to Levy and the idea of separating different eras according to the model of reading, we can say that digital era transforms again our way of reading: not anymore linear, but connected. In this context, telling a story assumes a different significance,

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10 LEIBNIZ, G. W. 1934, p.263.
11 BORGES, J. L. Labyrinths. 1962, p.26
because the order is no longer given by the author, but depends on which links the user follows. This means that the role of the author (that is, who tells the story) has slightly changed. The hypertextual author is not anymore the one who writes a story from the beginning to the end, but the one who stores information to be accessed in different ways. Any similarity with a database is NOT a coincidence. An interesting story that exemplifies the hypertextual narrative was told by Michael Joyce, who wrote the first electronic hypertextual story, “Afternoon, a story”. He gave his novel to a friend and asked his opinion about it. His friend, then, started reading it, and reading it, and when it was almost one o’clock in the night he stopped and called the writer, saying that he was feeling very uncomfortable, because he had no idea when the story was going to end or even if it had an end at all. Then the author laughed and said that he could never know if he had read everything because every time he read it, the text would take him into different ways. But, in fact, that did not matter at all. Saying that, Michael Joyce was dislocating himself from the position of a traditional author. On the other hand, worrying about reading everything is a very common reaction when we are not accustomed to hypertext and still thinking in a linear way. This does not mean that hypertext is non-linear. It is, in fact, multi-linear — the difference is that who creates the linearity is the reader, not the author. And it also has another characteristic: it is open-ended.

We still do not know how these changes in the way of reading and understanding narrative are going to affect our society, culture and way of interacting with others. However, it is important to notice that since the emergence of the writing culture a new role was developed, that of the reader, in opposition to the narrator. According to Italo Calvino,
“Listening to someone read aloud is very different from reading in silence. When you read, you can stop or skip sentences: you are the one who sets the pace. When someone else is reading, it is difficult to make your attention coincide with the tempo of this reading: the voice goes either too fast or too slow.”

In database, the video camera plays the role of the one who reads. It reads the paper and projects it onto the wall. But the user is only able to read the words (or to listen to them, in the traditional sense) at the very moment they are projected. It thus creates a real time reading which is analogous to what happens when someone listens to a narrator. It is necessary to follow the rhythm of the printer, because the user cannot really hold the text in his/her hands. It is only possible to access it through the printer. According to Calvino, “the text, when you are the reader, is something that is there, against which you are forced to clash; when someone translates it aloud to you, it is something that is and is not there, that you cannot manage to touch.”

The immateriality of speech is appointed by Jacques Derrida as the main event behind the emergence of the occidental society. He believes that speech is being substituted by writing, but for centuries spoken words have had a privileged position when it comes to the structure of language. Many authors, like Saussure and Hegel, demonstrate the privilege of sound in idealization, and production of concept. They affirm that sound is the very representation of thought. On the other hand, writing is considered as a representation of

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12 CALVINO, I. 1981. p.68.
13 Idem.
sound. For this reason, it is a mediation of a mediation, and a fall into the exteriority of meaning. “There is therefore a good and a bad writing: the good and natural is the divine inscription in the heart and the soul (the speech); the perverse and artful is technique, exiled in the exteriority of the body (writing).”\(^\text{14}\) This perspective follows Aristotle’s conception, who believed that spoken words were the symbols of mental experience and written words were symbols of spoken words. Therefore spoken words had an essential and immediate proximity with the mind.

This relationship between inside and outside, exterior and interior, also connects with the role of the printer in database. Parallel to being an output device — printing the written text, which relates to the exterior — the printer works as an input device — reading the text and projecting it onto the wall. In doing this, the printer plays the role of the narrator, displaying spoken (and ephemeral) words, which related to the interior. In “Plato’s Pharmacy”\(^\text{15}\) Derrida also attacks the Platonic preference for speech over writing, offering a closer reading of the Phaedrus, a dialogue by Plato. It is important to say that Plato is known for his dialogues and for his interpretation of Socrates’ work, who never wrote a line.

Derrida speaks of a shifting from phonetic (speech) to writing, that is, from the ephemeral to the permanent. We are trying to invert this situation by changing the role of the printer as an electronic device: from a recording device to a reading device. When the printer “reads” the text and projects it onto the wall, the text acts like a speech, because one can only read it in the very moment it is being projected. Similar to the act of listening to somebody reading aloud, the printer is playing the role of the narrator. Just

\(^{14}\) DERRIDA, J. 1976, p.16 (parentheses are from the authors of this text)

\(^{15}\) DERRIDA, J. 1981.
like when we listen to a tale, when we must follow the rhythm of the teller, in the installation one must follow the pace of the printer.

Hence through **database** we want to call attention to the process of reading, that is, the process of listening to a written text. When you read a book, you determine your own rhythm. When somebody else reads it for you, you must follow the rhythm. However we are working with writing, rather than speech. There is no sound in the environment, except for the noise of the printer printing. We are working with text and subverting its meaning, which is to store information. The main role of text has always been to conserve the spoken language and make it available for further access. However, in **database**, instead of permanence, there is ephemerality.

It emphasizes the spoken over the written, the ephemerality of language over the recording of information. And, most of all, it stresses the basic difference between reading and listening. The act of listening, principle of the oral culture, occurs in real time. By real time we mean present, moment, in opposition to past and future, to the duration of time. Present is a time that does not exist at all: it is a moment always slipping in two different directions, the past and the future.

Due to the inexistence of present, man lives in all times, but the present. “To breed an animal that is permitted to **promise** — isn’t this precisely the paradoxical task nature has set for itself with regard to man? isn’t this the true problem of man?” writes Friedrich Nietzsche in *The Genealogy of Morals*. It is the capacity of desiring that withdraws the human being from the present and throws him into the future. To desire is to want something that is located somewhere in the future. According to Daniel Dennet

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16 NIETZSCHE, F. 1998, p.35.
17 DENNETT, D. 1996.
what distinguishes the human mind (Gregorian creatures) from other animals (Darwinian, Skineriann and Popperian creatures) is both the capacity to import (mind) tools from the cultural environment as well as the ability to produce future. Writing is the most important mind tool, exteriorizing our thought, and thus largely increaing our memory space. Producing future is the ability to desire, and to get oneself out from the present. He points out that

“an important step toward becoming a person was the step up from a first-order intentional system to a second-order intentional system. A first-order intentional system has beliefs and desires about many things, but not about beliefs and desires. A second order intentional system has beliefs and desires about beliefs and desires, its own or those of others. A third-order intentional system would be capable of such feats as wanting you to believe that it wanted something, while a fourth-order intentional system might believe you wanted it to believe that you believed something, and so forth.”

It is this capacity to desire and believe, that is, to produce future, that distinguishes man from other animals. Man is an animal who desires. In desiring, he wishes and waits, he transgresses time, creating a life in the future. Present does not exist. The idea of the present time that is always slipping to the past (and the future), being something that we cannot grab, although we are in it, is very well exemplified in the video Nome19 (Name) from the Brazilian poet and musician Arnaldo Antunes. Nome is a collection of video clips that work with the opposition of image and writing as well as its relationship to time. One of the video clips, Agora (Now), shows images passing by

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18 Idem. p.121.
extremely fast on the screen. There is text on them, but the speed does not let the viewer read a single word. At the same time, it is possible to hear a voice speaking “já passou, passou, já passou” (“it’s already gone, gone, it’s gone”). The voice, as well as the images, is cut off, producing an awkward feeling, because you can neither hear the words, nor see the images. This feeling is produced by the sensation that time is running so fast that you cannot apprehend it — because the present is always gone.

Perceiving future also turns man into the only animal that is aware of its death. Therefore, man is finite. Other animals are infinite and immortal because they are not aware that they are going to die. Consequently they live in the eternal present, for time does not matter. According to Foucault, as soon as man thinks, he “merely unveils himself to his own eyes in the form of a being who is already (...) in an irreducible anteriority, a living being, an instrument of production, a vehicle for words which exist before him.” Therefore, to Foucault, there are three instances through which man can learn that he is finite: body, language and desire. All of them have this close relationship to time.

Knowing oneself to be finite is essential to our survival as humans. It implies the awareness of death, the ability of believing and desiring and the construction of a life in the future. If we did not have one of these three elements in our lives, life would be insupportable. That is what Borges shows in the first tale of the Aleph, The Immortal. The writer tells the story of a man in the search for the City of Immortals. In his way, he finds a tribe of troglodytes, men who cannot speak, who do not sleep and barely eat — just enough to keep alive. The author, compassioned by the poor troglodytes, decides to

teach one of them how speak. One day, however, he discovers that this man was nobody less than the Greek poet Homer, who was indeed an immortal. Henceforth, everything else was clarified: the troglodytes were the Immortals. But how could one believe that the tribe of such disgusting creatures was exactly what every man on Earth strived for: to be immortal? Borges explains that “to be immortal is commonplace; except for man, all creatures are immortal, for they are ignorant of death; what is divine, terrible, incomprehensible, is to know that one is immortal.” Having the awareness of one’s immortality implies that time does not matter anymore, because time becomes constant, absolute, infinite. Hence all immortals live in the present: an eternal present, without past or future. In order to exemplify this idea, he tells:

“I have mentioned the ancient quarries which broke the fields on the other bank; a man once fell headlong into the deepest of them; he could not hurt himself or die but he was burning with thirst; before they threw him a rope, seventy years went by.”

Immortality, thus, means living in the eternal present. As long as you are immortal, time does not matter anymore. And the awareness of time is crucial to make humans what we are. The immortals, in this sense, are changed from humans into something else — troglodytes. Beings that do not eat, do not act, because they have the totality of time. Consequently they do not desire, because desiring is only possible if you know that time is dynamic. Desire is localized in the future, and the immortals just have the present.

22 Idem. p. 114. (bold is from the authors)
23 Idem. p. 115.
This situation implies a compression — or an extension — of all times in one. Past, present and future become one and continuous. Hence past becomes present. Borges also describes the immortals as beings that were immersed in thoughts. All the action withdrawn from them turned into a huge amount of thoughts. Consequently, the immortals were deeply disturbed by an infinite memory, because they could not forget. They could not erase the information they received. The erasure of information (in our case, the text) is another characteristic of the installation:

2.3. Erasing the writing — time and memory devices

At the same time the printer “reads” the text, it also erases it. The same interface the user chose to read the text (which is represented by the rectangles on the screen) is going to be printed over the already printed page, erasing it. When the user finally holds the paper sheet, s/he can read everything except for what s/he has previously read on the screen. This process emphasizes the necessity of reading in real time. Instead of recording, erasing; instead of presence, absence. What is present in one interface is absent in the other. If one reads a word on the screen, it is going to be erased on the paper. Simultaneously, if one reads a word on the projection, although it is possible to make a connection with the word that is on the screen, it is going to disappear on the paper. The
first one disappears by absence, that is, it is literally erased by the black ink. The second one disappears by presence: it is lost among all other words within the text.

The process of erasure has always been crucial to human survival. It is possible to talk about erasure from two different perspectives: the physical erasure of writing and the erasure of memory (regarding both writing and memory as information storage devices). The first case is very well exemplified by the palimpsest. The word palimpsest originally referred to “a parchment that has been written upon or inscribed two or three times, the previous text or texts having been imperfectly erased and remaining, therefore, still partly visible.”24 This practice was very common in the Middle Ages, where the parchment used for manuscripts was very expensive and then it became necessary to “recycle” the used material. What happened, however, was that sometimes the act of erasing was not perfect, leaving marks of the previous text under the new writing. This process could unintentionally create several layers of text in the same surface, generating many layers of meaning.

Generally, the palimpsest was created by three steps: writing, erasing and writing again. Nevertheless, in our installation, the last two processes are merged together, because the act of erasing and writing becomes the same — so that erasure is rewriting. In database, the erasure of the old text already acts as a new sort of writing because it produces new meaning in our physical database. The erasure involves both the presence, and the negation of presence of the text, that is, absence. In addition, our device reads and erases at the same time, creating a kind of contradictory situation, because reading is the interpretation of writing and writing is a way of storing information.

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According to Daniel Dennet, what makes our brain more powerful than the brain of other animals is our capacity to extend our thinking to the environment that surrounds us. It is

“our habit of offloading as much as possible of our cognitive tasks into the environment itself — extruding our minds into the surrounding world, where a host of peripheral devices we construct can store, process and re-represent our meanings. The widespread practice of off-loading releases us from the limitations of our animal brains.”\(^\text{25}\)

Of all the mind tools we acquire in the course of furnishing our brains from the stockpiles of culture, none are more important than words — first spoken, and then written. In this sense, writing was created as a way of extending our memory, and consequently, as a way of not forgetting (or erasing) information.

However Jacques Derrida\(^\text{26}\) has an opposite point of view. He affirms that writing is forgetting. According to him, to write is to free our memory from the task of remembering. Hence, it is the act of exteriorizing memory — erasing from memory and writing on paper — that sets it free in order to receive and to record more information.

That is exactly the point that Borges addresses in “Funes, the Memorious”. Funes was a boy who could remember everything. As long as he had an infinite memory, he could not forget anything. But: could he indeed live? After all, “the truth is that we all live by leaving behind”.\(^\text{27}\) Everything was recorded in his mind: every detail, every moment. Nevertheless, Funes was perhaps not capable to think, because he was not able to abstract the world. Also, he probably did not have the awareness of time, because as

\(^{26}\) DERRIDA, J. 1976.
long as everything was recorded in his mind, all times of the past were compressed in the same present time.

An infinite present leads to an infinite memory, because every experience is recorded and none is erased. Whereas memory has generally a positive value, an infinite memory is something negative. The accumulation of infinite memories is almost insupportable and mortals must forget in order to continue to live — or even to think.

The opposition of this idea comes from one of the stories told by Oliver Sacks in “The Man Who Mistook his Wife for a Hat”. In the “Lost Mariner” he tells the story of a man, Jimmy, who could not remember anything. Jimmy, in opposition to Funes, forgot everything. He, however, had not forgotten the past. His long-term memory was perfect and he could remember everything that happened before 1945. Nevertheless, all facts after it were quickly erased from his memory. For instance, if he talked to someone now, five minutes later he would have forgotten it. Nothing could be registered in his memory. Although he believed he was living in the past (somewhere around 1945), he was actually living in the absolute present — a time without past and future. Without remembering, without wishing, he was condemned to NOW. Just like in Arnaldo Antunes’ video, at the very moment the images (and the facts) happened, they were already gone. Just like our installation, at the very moment you can read the words on the screen, they disappear, and become lost again among the innumerable words of the database.

We end up with Borges, again, back to the Immortal. What constitutes us humans is the possibility of living in two distinct times: future (by means of desire) and past (by means of memory). The Immortals lived in the present, which is a time that does not exist

for any human. Furthermore, as they could remember everything, and always carry all these memories with them, remembering was also intolerable. During their infinite lives, they could have the opportunity to do everything, to think about everything, to go everywhere. What means that if they could be anything, in fact, they were not. The radicalization of the presence is the complete absence.

“Like Cornelius Agrippa, I am god, I am hero, I am philosopher, I am demon and I am world, which is a tedious way of saying that I am not.”

J.L. Borges – The Immortal

29 BORGES, J. L. “Labyrinths”, 1962. p. 115. (bolds are from the authors)
Bibliography: