
Aeon - An Interactive Experience on Virtual Immortality and the Potential Consequences of Data Surveillance

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Abstract

This project consists of an interactive experience, concentrated in a website, that serves the purpose of provoking a critical reflection on the subjects of Virtual Immortality, Data Surveillance and the amount of personal information that we disclose online, specially to big companies such as Google and Facebook. The critical reflection and ethical debate that the project aimed to raise were made possible through the formulation of a futuristic scenario, that is fictional yet quite realistic, considering the advances on technology that might soon allow Virtual Immortality to be a reality. This futuristic scenario is provided by Aeon, the centre figure of the project and main object of its development. Aeon is the name of a (fictional) company that sells Virtual Immortality through the creation of a personal Avatar that is generated based on the digital footprint of the interested person. This Avatar is activated upon the death of the person in question and that Avatar proceeds to exist on the 'Virtual Space' also managed and made available by the company. This process is simulated in the interactive experience, to exemplify how one company can extract all the data that exists concerning the user as soon as the user accepts certain terms & conditions and privacy policies. While the main goal is to try to make the users question themselves about the quantity and quality of information that they disclose online, there are also questions that can be formulated in this experience about consciousness and moral values related to Virtual Immortality. Nevertheless, these questions and critical reflection are mostly dependent on the users and their own opinion on the matter.

Keywords: Interaction Design, Data Surveillance, Virtual Immortality, Artificial Intelligence (AI), Hypervigilance, Digital Footprint, Critical Thinking, UI Design, UX Design, Ethics.

1. THEORETICAL BACKGROUND

The term surveillance is usually applied when we talk about specific targets, such as suspicious and/ or wanted people. Yet nowadays, massive quantities of information about people and their activity are collected through Big Data Surveillance, even if this information does not seem to have

any kind of use or value. However, that Data does have various applications and both companies and governments are already capitalizing it. Big Data is already used to feed algorithms that collect, organize and process information generated by users, and these algorithms have predictive power, as they can build patterns based on the user activity. Patterns like these are extremely valuable in marketing,

since they expose the users preferences, hobbies and their propensity to access determined advertisements, for example. Therefore, companies that are able to collect any type of Data that is valuable in this sense are usually most interested in selling this Data to other companies (especially ones that are trying to sell some sort of product). In this project, however, this specific application of Data Surveillance was not explored in depth, since it was mostly focused on the related subject of Virtual Immortality.

1.1 Virtual Immortality

'Virtual immortality is the theory that the fullness of our mental selves can be uploaded with first-person perfection to non-biological media, so that when our mortal bodies die our mental selves will live on.' (Kuhn, 2016).

The 'digital footprint' of a person comprises all the digital information that exists concerning that person, and it can be constructed by three principal sources: 'directed, automated and volunteered'. In the first, a human operator gathers data in a direct and purposeful way. In the second, data is obtained automatically and without the intervention of a human operator, through smartphones, for instance, that record communicates the history of their own use, transactions and interactions across digital networks'. In the last, data is disclosed voluntarily by people that use social media, websites and platforms of this kind (Kitchin, 2014). Knowing the sources of digital footprints, it is easily understood why they are one of the main catalysts of Virtual Immortality: they are the vehicle that assembles enough information about an individual that enables the creation of a persona from that information.

This digital footprint or legacy exists even after users die, and it includes social media, emails, online accounts, audiovisual records, digital property and much other content that becomes static once the user dies. This means that 'the growth of machine learning techniques to mine large data sets such as these' have an 'impact on society when the original subjects are living, as well as when the subjects are deceased' (Savin-Baden e Burden, 2019).

Our digital legacy can be divided in two formats: the passive and active. In the first, the receptor can read about a deceased person through some sort of digital memorial,

that can be intentional (biographies and informative websites about deceased people) or unintentional (social media profiles, for example). The second format, that was explored in this project, consists of Virtual Immortality. It presents users the possibility of interacting with the digital footprint of a deceased person, through a chatbot or virtual human (avatar/persona). This interaction can be established in text, voice, or even video conversations and there are some companies already trying to create platforms that will be able to offer virtual immortality in the form of avatars /personas. Some of these companies are Eter9 (2017), Lifonaut (2017) e Eternime (2017) and they will be further discussed in the topic 'Related Work' (2.1).

Various studies reveal that this is a very realistic scenario and that it becomes more achievable each day, since the last big step is considered by many to be the attribution of consciousness to these personas. The question of consciousness is very important in the discussion of Virtual Immortality because it can determine whether virtual avatars can actually think, evolve and be conscious like a human being or not, being just an artificial intelligence.

1.1.1 The Debate of Consciousness

According to Robert Kuhn (2016), 'consciousness is the elephant in the room'. This author suggests that there is a great division in this matter, between being conscious and seeming conscious. Most authors, like Kuhn, defend that perceiving the difference between the two will be a challenge, considering that artificial intelligences, even if not conscious, will have the intellectual support to argue that they are, thus becoming, in fact, part of this debate. Most likely, it will be possible to attribute consciousness to an AI, but only if we first understand how human consciousness works. Just as we know exactly how a heart works and, for that reason, are able to replicate it, if we know how the brain causes consciousness, we'll be able to replicate it. Robert Kuhn proposes nine possible causes for the formation of consciousness, that he explores individually, determining if they are (or not) a possible door to achieve virtual immortality. To learn more about these theories and consciousness in AI, we highly recommend reading his 2016's work 'Virtual Immortality: Why the Mind-Body Problem is Still a Problem'.

Assuming that it will be possible to attribute human consciousness to a computer, as well as the digital footprint of a person, a question arises: from the moment the ‘new person’ (virtual and now able to evolve autonomously) is created, how long does it take for this new person to diverge from the original human? Will their personality, originally the same, start to differ? These questions cannot be answered yet.

1.2 Ethical Questions

Regarding the management of digital footprints, it lays in the hands of technology designers a lot of power and responsibility, concerning moral decisions. However, with almost no ethical rules or laws originated for the matter, the preoccupations seem to be left forgotten. Something as serious as immortality, virtual or not, raises numerous questions in complex fields such as religion and privacy, as well as implications resulting from the subsistence of an autonomous entity that supplants a person that no longer exists biologically and thus has no control over anything, anymore. Who will be in charge of these new virtual human beings? Will they be, in fact, conscious and autonomous to the extent of managing themselves? Only time will tell, but this project aims to trigger these questions on users and, hopefully, raise awareness to this matter.

2. DESIGN RESEARCH

In the thematic choice for this project lies a primordial idea that stimulated the rest of the conceptualization. First, when confronted with the topic of Data Surveillance (which we were immediately fond of), there was another thematic field that aroused interest: Intersectional Feminism. When brainstorming about those, we discussed the idea of a futuristic and hypothetical technology, with which was possible to design our babies before the human pregnancy, through a satirical approach, leading to the conclusion that it was still preferable to choose a male child in this society. From that, during our research on the Data Surveillance, we kept the desire to develop a company that requires the creation of an avatar, and posteriorly the concept of virtual immortality came to reify that.

After deciding to work on the issue of “virtual immortality”, the first step to consolidate the concept was to create appropriate personas to sustain and legitimize our idea. To achieve this, four different personas were designed, to support different perceptions and approaches to the company (fig. 1).



Fig. 1 – Persona Rosa Martin

As we thought of different interests to justify our personas (for example, being the leader of a big company, having interest in high technology, seeking popularity and even family/emotional matters) we concluded that some would not get to the point of activating the product, since they would give up on it before their death. Later, as we started to work on the user journeys, regarding our personas, this was, once again, verified: we realized that this product requires a much larger quantity of interest than we initially expected, since it is a perpetual compromise (fig. 2).

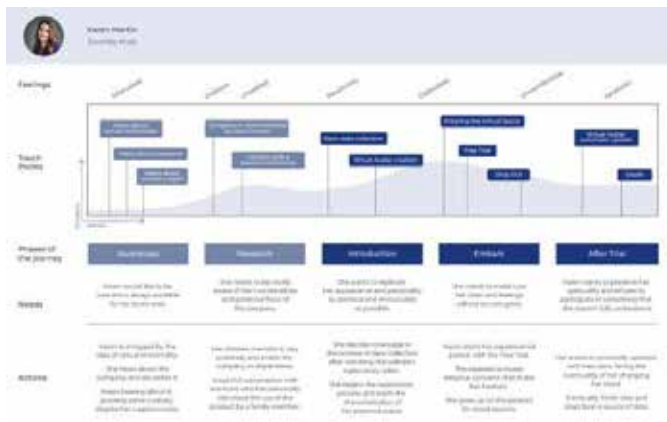


Fig. 2 – Rosa Martin's User Journey

When the first prototype was finished, the research moved on to user testing and this phase of the process was ultimately significant and crucial for the growth and solidification of the concept. Beyond testing specific functionalities of the website and the overall user experience in a very productive way, it manifested its greatest importance as the subjects asked questions regarding virtual immortality and the concept in general. All their concerns and anxieties about the topic served us as a guide to rethink and build up the concept to its full potential.

2.1 Purpose and goals

While developing this project, we gave special importance to the atmosphere we wanted this experience to achieve. That Immersive feeling, increased by the delicate thesis of the company, is the best way of leading the user to a deep reflection on the unconscious, reckless and trivial way we share our data, both voluntarily or through cookies. Furthermore, the concept itself and the simplicity of its resolution invite the user to think about the exorbitant capacity that contemporary databases reach, to the point where human beings cannot possibly understand them.

Additionally, our most evident goal is to introduce the user to the recent theme of virtual immortality, as well as provide another reflection on the dilemmas and ethical issues that surround it, originating an unsettling experience, which will, hopefully, concern the user about the way we approach this reality at vertiginous speed.

Finally, one of our deepest intentions is to criticize the ethical putrefaction intrinsic to capitalism, emphasizing indiscriminately the economic intentions of this company, that not even a dramatic content, like virtual immortality, can affect.

2.2 Concept

To achieve these purposes and goals, we developed, conceptually, a futuristic and dystopian scenario that explores the possibility of living forever through a digital reconstruction of all the data that we disclose online. It consists of a profitable entity whose product is virtual immortality and which works by creating a digital avatar. It feeds on our data to evolve into an exact reproduction of our personality and ourselves in general (physically and psychologically), which transcends space and physical limitations and can remain active (alive) after our death, in a virtual space designed by the company.

2.3 Target Audience

In order to enable the consolidation of this concept, it was necessary to predict an upcoming reality, in which the generality of the population would already have enough digital footprint to justify the existence of a company like Aeon, including the older strata of society. Considering this, Aeon's target audience splits into two major groups, characterized by two distinct factors.

First, the age: people up to their adolescence are not to consider, since this age range already has an intrinsic sense that they will live forever. Following up, adulthood is the starting point of Aeon's target spectrum, because, normally, that is the phase where people have already started to work towards their objectives and, therefore, started their biggest projects in life. Lastly, the elderly are also an important part of the target, as death is undoubtedly closer for them and our product offers a solution for that.

Moreover, the other factor is the financial status: as this fictional company serves the purpose of criticizing the capitalism, and sells something whose price is inconceivable, it is obvious that, in order to benefit from it, the client needs to pay the products of their lifetime work and so it is logical to target the fortunate ones that are able to afford it.

2.4 Related Work / Benchmarking

There are companies that are already actively trying to create computer applications which are predicated on the creation of avatar-level digital immortalisation.

ETER9 (<https://www.eter9.com/>)

Eter9 describes itself as 'a social network that relies on Artificial Intelligence as a central element' and that 'Even in your absence, the virtual beings will publish, comment and interact with you intelligently.' In this case Counterparts are the virtual avatars: 'your Virtual Self that will stay in the system and interact with the world just like you would if you were present. Your Counterpart will learn more with each action you take. The more you interact in the new social network, the more your Counterpart will learn!'

Such a Counterpart can continue to post and interact with others on the network, even after you are dead. However, this company fails to explain some parts of their functioning, since 'there is no obvious way in which you can access your own or other's Counterparts to see how well they are developing, if at all' (Savin-Baden e Burden, 2019). This lack of credible proof was also a goal of the present project, since we want users to think, precisely, about the legitimacy of this offered service of virtual immortality.

LifeNaut (<https://www.lifenaut.com/>)

LifeNaut.com is a web-based research project that allows anyone to create a digital backup of their mind and genetic code. The ultimate goal of their research project is to explore the transfer of human consciousness to computers/robots and beyond. It works through MindFiles, which are databases of personal reflections captured in video, image, audio and documents about yourself, that can be saved, searched, downloaded and shared with friends. Each account comes with an interactive Avatar that becomes more like the user, the more the user teaches and trains it to think like. Lifenaut is ruled by the Terasem Hypotheses which states that: '(1) A conscious analog of a person may be created by combining sufficiently detailed data about the person (a "mindfile") using future consciousness software ("mindware"), and (2) that such a conscious analog can be downloaded into a biological or nanotechnological body to

provide life experiences comparable to those of a typically birthed human'.

(<https://terasemmovementfoundation.com/>).

Eternime (<http://eterni.me/>)

At the moment, Eternime takes the form of an app which collects data about its users. It does this in two ways: automatically harvesting heaps of smartphone data, and by asking questions to the users through a chatbot. The goal is to collect enough data about a person so that, when the technology catches up, it will be able to create a chatbot 'avatar' after the person dies, that the person's loved ones can then interact with. Ursache, the founder of Eternime, told Business Insider 'We collect geolocation, motion, activity, health app data, sleep data, photos, messages that users put in the app. We also collect Facebook data from external sources. The concept of Eternime is very similar to the narrative of the present project, but it is exaggerated in the project in order to, hopefully, make the user feel uncomfortable or at least suspicious.

3. THE PROJECT

3.1 Aeon

In order to make the experience realistic, a fictional company was created to fill the place of the entity mentioned before. It was named Aeon, meaning 'a power existing from eternity' or 'an indefinite and very long period of time' (in Oxford Languages). Aeon was designed to be a trustworthy company and yet not reveal too much to the users, since one of the goals of this project was to make the users realize they are very quick to accept terms and conditions, without fully understanding what they are about to disclose or undertake. Aeon presents itself as a big company with many users already enjoying the (paid) virtual space and, just like most big companies, it is here to sell.

3.1.1 Avatars

Virtual Avatars are created through collecting a person's digital footprint, which means that all the existing data concerning the interested user is extracted and attributed to

the user's Avatar. The person's appearance is also reflected in the Avatar, as it looks exactly like the person (even though Aeon offers the possibility to change some of the Avatar's physical characteristics, like the hairstyle, that is also changeable in real life). Avatars are constantly updated until the moment of their activation. The Avatars used in this project were retrieved from Replika, a project that allows the creation of a personal AI that helps users express and witness themselves by offering a helpful conversation. (<https://replika.ai/>)

3.3.2 Virtual Space

Aeon presents a Virtual Space where all the Avatars exist (in their digital form) and where they can interact with each other. The Virtual Space runs online and gives the Avatars access to all the information that also exists online. The users stay in the Virtual Space depending on the plan they choose.

Since building this virtual space was not a part of the project, we used recordings of an already existing project that had an aesthetic we found very adequate to represent our virtual space. This project consists of Data Visualization concerning 2016's USA presidential elections. (<https://neovand.github.io/>)

3.3.2 Chatbot App

Aeon also offers its users the possibility to communicate with their loved ones once they are gone in the physical realm and their Avatar is activated. Avatars are able to exchange written and voice messages with the people they want to talk to and their loved ones are also able to reach them whenever they want, anywhere, and this takes place in a Chatbot App, created by Aeon. Just like the Virtual Space, building this application was not part of the project, and it only exists conceptually to serve the narrative implicit on the service offered by Aeon, that not only allows someone to live forever but also to communicate with living people once they die.

3.2 Website and narrative

Nowadays, most consumers look for information about services and companies before making any major decisions related to them, especially when large amounts of money are involved. Establishing a company with a certain credibility and good, clean branding was the main preoccupation during the creation of the website. To guarantee that users enjoy the experience, we chose to create a simple, usable and easy to navigate website, instead of sticking to a prototype that's not dynamic.

Aeon is designed not only to provide a realistic representation of a company model website, but also to engage the user in an immersive experience related to one of the most controversial and tenebrous topics of humanity. To achieve this, it was necessary to experiment and to organize the platform cautiously, in order to find an ideal balance between the liberated and the closed courses of the website. In other words, the rhythm of the experience determines its efficiency, it could not be too permissive, but not too constraining as well.

Having this in mind, and to ensure better navigation within the website, we forged its structure into three stages. In the first one (fig. 3), users can consult a more informative page to learn about the company's concept and erase the biggest questions that they might have in mind a priori. Here, we introduce the visual identity, as well as the promotional video and the product itself, reaffirming the concept with two testimonial videos that close the page. This part of the website resembles a traditional business page, which purposely transmits comfort and assurance to the user.



Fig. 3 – A screenshot of the landing page (first section)

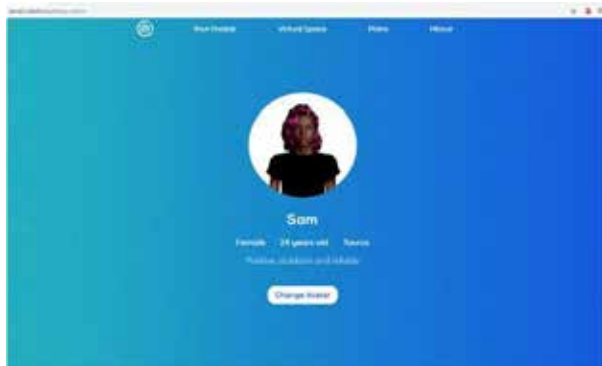


Fig. 4 – A screenshot of the avatar creation page (second section)

The other 2 sections consist of the avatar creation process page (that is a closed course, fig. 4) and the avatar management page, also called “free navigation section” (fig. 5). However, the second stage, the closed course, opposes the initial comfort, providing a claustrophobic and unstable feeling that goes on necessarily until the end of this phase, as the narrative itself emphasises that there is no return. New users are directed to the avatar creation page, in order to make a new account and create their personal avatar. After this process is completed, or in case a person already has an avatar, this user will be directed to the free navigation section.



Fig. 5 – A screenshot of free navigation page (third section)

3.3 Visual Identity / Interface Design

To create Aeon' visual identity, we chose to develop a more minimalist design with only the essential and most necessary elements of the product, getting rid of any excessive and therefore unnecessary components and resources.

One of the most important aspects to represent the company's identity is the colour and sensation it brings to the public. Since it conveys the idea of security, trust, stability and loyalty, we decided that blue would be the perfect choice for our website. The typographic choice and the construction of the logo refer to a clean and minimalist aesthetic (fig. 6).



Fig. 6 – Colour and typography choices evident in Aeon's logo

Finally, with the free navigation page, the experience ends. Nonetheless, it contains exactly the results of the previous stage, preserving that discomfort as the user explores the last details, which includes the FAQ and the “about the project”

In terms of content distribution, we opted to simplify the interface thus removing all unnecessary elements to ensure that users focus all their attention on the information presented.

3.4 Links

Aeon's Website: <https://a1aeon.webflow.io/>

Aeon's promotional video: <https://youtu.be/rDkOk-trY1uo>

Aeon's testimonial 1: <https://youtu.be/P9rY-SXThs8>

Aeon's testimonial 2: https://youtu.be/rZZXxz_VNgw

4. CONCLUSION

While performing user testing, we realised the main goal of this project was achieved: people started asking questions they had never asked before. We observed a very curious audience, that not only was very interested in the project's concept but also quite unsettled by it. People started to raise questions about immortality and the ethical barriers related to the topic, since, for most people, being immortal was not a desire and never would be.

Some people promptly said they would like to live forever, but, when confronted with the implications of this reality, went back on their word. For some users, their main concerns were based on their inability to imagine living forever in a virtual form. However, for most users, their main concerns related to privacy and to what would be done with their data in case this scenario was real. Most people became aware of the quantity of information they disclose to companies and websites just by accepting terms & conditions they were too lazy to read, and every single user tested acknowledged to have experienced this without giving it much (if any) attention. Some users even said they did not care about what information was being collected from them, which only proves how unaware they are about the quantity and quality of data that is constantly being retrieved from them. This also reaffirms the pertinence of this project and we proudly believe to have made a difference in our users perspective concerning Data Surveillance, Virtual Immortality and their own precious privacy.

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