

Time Capsule: Eduardo Kac on telepresence in memory, corporeality, and augmentation

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Samantha: Do you guys want to introduce yourselves?

Rachel: Rachel: Hi, I'm Rachel. I'm currently in Berlin. I'm from the Netherlands. I'm also an artist and, in addition I study media history together with these, and a few other study colleagues that are not here right now — that's me in a nutshell.

Herbert: Yes, I am Herbert, and I'm currently in Vienna, Austria. I'm not a scientist. Maybe in a couple of months or years, or somehow I don't know. I come from the finance sector, and for me, it's a new experience. And I'm honored to be here in that team and meet you and ask you some questions about your work, specifically this artwork and in general.

Samantha: And I'm Samantha. I'm an American living over in Stuttgart, Germany. I've been here for a couple of years, and I'm in the new media art history program. I am originally from Washington D.C.

Samantha: We invited you here in our quest to analyze the antithetic and synthetic dynamics of memory. Centering on your 1997 artwork, *Time Capsule*, as an early cultural and scientific experiment with the materialization and digitization of memory, we are tracing connections between the body and technology through a set of consequences that evolved from their relationship over time. Consequences in an omnipresent invisible web in which body and memory become issues of corporeality, bodies and technology highlight enslavement, and technology and memory evolve through augmentation. Here, *Time Capsule* initiated an extended conversation on the evolution of biologically stored information. One which continues today as we depend on physical social distancing and virtuality in the face of covid-19. Again, the relationships between body and technology are reformed as technology becomes the anecdote to biological limitation. Bioethics in the form of wet hosts, external implants, and Cyborg theory displays the augmentation, corporeality, and potential enslavement in yet another shifting role of human survival and evolution. While we make connections, we are honored to hear how you view the changes that have occurred since 1997 and how you think your work continues to frame these ideas.

Samantha: Given the physical changes of technology since 1997, do you think *Time Capsule's* implantation signified a transition to a more transhuman integration of technology?

Eduardo: I, personally, am not a subscriber to the transhuman agenda per se. *Time Capsule* springs from my preceding body of work, and, in retrospect, we can clearly see that it opened up a new phase in my practice. In a sense, it could be understood as a transitioning piece because it's the artwork in the context of which I created the term bioart to signal a transition from a purely digital framing to an embodied, biologically driven approach. In a sense, it was not quite yet the type of work that I really wanted to focus on within the field I was opening. For me, 1998 was a more introspective year when I tried to formulate more clearly what it was exactly that I wanted to do within that new field. And at the end of the year, I published the *Transgenic Art* manifesto, and I was already working on *Genesis* because, you know, these projects take a while. They are not made in the month that you show them, right? It takes a long time to assemble all the tools and the people, processes, resources, and venues; it takes time to bring it all together. In 1999, I was able to exhibit *Genesis* at Ars Electronica. There is a very interesting relationship between *Time Capsule* and *Genesis* because they both use the living organism as the substrate in which information is stored, with the exception that *Genesis* takes it further by enabling the transformation of that stored information and the retrieval of the transformed information. Because in *Time Capsule* you could store and retrieve, but you couldn't edit or change it. In *Genesis*, you can store, change, and retrieve. So, in a sense, it's another development within that approach that has implications in its own right. But the point is that *Time Capsule* involves an element of telepresence, which I have been developing, in the sense that I attribute to it, since 1986. Our videoconference, right here, right now, via Google Meet, is not telepresence; this is telecommunications. This is like talking on the phone, but with images. To me, telepresence is the addition of a physical dimension to telecommunications, which telecommunications before 1986 could not do. I did it — in the context of art. So, to me, telepresence is the coupling of telecommunications with the physical element. So, for example, if you have a mug or a pen in front of you, through telepresence, I could move it. I could move it a centimeter to the left where you are, from here, right now. So, it's going through the screen and exerting a sense of physicality that the transmission of sound, text, and image on a screen cannot do.

Samantha: That's a really great answer. Thank you so much.

Eduardo: So that situates for me how I see *Time Capsule* in a larger context.

Samantha: I'm not sure if you answered this question, but speaking of *Genesis*, do you think the link between the two artworks is centered on reproduction or maybe more the reduction of basic information? Is there something in that tension between reproduction and reduction in that transitional period for you?

Eduardo: Those were not the concerns that I was necessarily addressing. In terms of my own motivation, *Time Capsule*, in a sense, is a crossroads for me because it brought together all of my previous interests for biological interaction, telecommunications, telepresence, but then it opened up into the living. It did so by setting up a context in which, culturally, we had to confront the changing ontological condition of memory as we transitioned into the 21st century. In a sense, we were seeing the inflation of the truth-value of memory, which ended up being dramatically shoved down our throats by the last four years in an unprecedented attack on the notion of truth. But of course, I wasn't foreseeing that particular event; who could foresee that? My question is larger, it

is philosophical. The point being that the photograph, as the ground zero of memory, with its attached truth value — for example, the fact that photos were used in the court of law as evidence, for a long time — has been eroding due to the rise of digital technologies, the same way that Deep Fakes are eroding the truth value of video. When photography had this inflation of its truth value, video remained the new frontier. And now, with Deep Fake, video is losing that as well, because it's really impossible to tell. There's no trace of the referent. It's impossible to know; perhaps some kind of data forensics will emerge to trace that back. It's really difficult to distinguish one pixel from another when it's properly done. Visual memory, or more precisely, visual memory that combines iconicity and indexicality, has informed culture for so long, at least since 1839. With the rise of digital imaging, this process of externalization of memory predicated on the photograph's material base started to lose its ground. And the process of construction of personal and social memory based on the photograph was one in which the image was externalized onto a physical substrate (the negative, the print). Then, once it circulated in an economy of images, through magazines, newspapers, et cetera, and eventually electronic media, once it circulated that way, we started to internalize them — to the point that we internalize them not only in terms of personal narratives. You see a photograph of your great, great, great uncle from Albania, that you never met, from a century ago. You then build a personal narrative of where you came from. But also, collectively, you would see, for example, a photograph of the moon or the surface of Venus or Mars, and you absorb that image. You can dream of being there, even though these are not optical images that you acquired directly. You internalize these reproduced images and incorporate them into your personal memory. You then process these images, in your dreams, as part of your personal narrative, as central to your worldview, as integral to your pictorial repertoire.

Eduardo: Your imagery is no longer predicated on optical images that you acquire directly by being in a location. Now, your mental states are populated by these images that have been externalized in countless substrates. So, you form, in a sense, your own iconosphere, based on what you have sampled. You have internalized, and you can then exercise your imagination with pictures that you never acquired optically. So, this condition of externalization and internalization was changing.

Eduardo: And I demonstrated that with *Time Capsule*. In this work, memory was already externalized in my hand (the chip), and then it was physically internalized by traversing the physical boundary of the skin, entering the body and staying there. So, there's this process of internalization and externalization. In the previous case (traditional photography), the images are formed externally, you internalize them, and then you form personal narratives. In this other case (digital microchip), the digital information enters the body and can be externalized, i.e., retrieved from within the physical body without any sensation. You don't feel anything when that happens.

Eduardo: What that means, materially, literally, but also symbolically, is that something that is deep inside you, that is very private, that is synchronous with your embodiment in the world, is being taken away from you without any protection, without any means of preventing that from happening. *Time Capsule* was sounding the alarm about the danger that this process posed for privacy. In fact, we all now know that privacy is pretty much gone. We now have to go to great lengths to protect the very little that is left.

Eduardo: There is another side to this because, in a way, it's a little bit different now in the 21st century with mobile media, which has created a whole set of problems of their own. But in the late 20th century, to compute was essentially to sit right in front of this box (desktop computer). The effect on the body of remaining in that position for an extended period of time is very damaging. So, I also speculated that, if you are able to embody data and do computing freely — that you want to do while you dance, while you skateboard, while you bike, while you're moving — perhaps our engagement with data would not have this damaging effect on our backs, shoulders or our bodies as a whole. So, *Time Capsule* is not just an apocalyptic work. It tries to negotiate and understand that you can skew it in a direction that searches for freedom with every step. Or you can also understand the dangers that this new situation could generate.

Samantha: Herbert, you had a question.

Herbert: You mentioned photos, the human body, and also the aspect of privacy. Please correct me if I remember incorrectly, but in *Time Capsule*, you have also included photos from 1939 Poland, right? That was especially interesting because my mother is from Poland. She's eighty-five years old. I was born in Austria. I have that very, very old photo in a print version at home of my grandmother. Unfortunately, there was no chance so far to ask my mother, "who is that in that photo?" But somehow, she's a relative to me. To see the empowerment and all the feelings from somehow on one point of view at the border and the connection you have to your relatives, I was wondering when I first read a couple of months ago about your piece of artwork that you wanted to show somehow something in you. That means because your grandmother is also from Poland, you wanted to express yourself, your feelings, and the connection you have to Poland. Is that a correct interpretation, or am I totally wrong?

Eduardo: I've been working as an artist for over 40 years, and I think if you look back, you will see that I don't use art to teach anything to anybody, or to moralize, or to communicate specific statements. To me, art is too valuable, too important to be subjugated and transformed into an instrument of pedagogy or propaganda. Along the same lines, while I respect those who choose to make autobiographical art, personally I have no interest in making it. So, I see a difference between autobiographical art and complex art that draws from multiple sources, including personal experience. My project is poetic-philosophical, so even when I draw from personal experience, I seek to abstract it and frame it as larger human concern. However, there is a space that is adequate for discussion, there is a context in which one can get into details and discuss motivations. This conversation is an example of this space for discussion and analysis. It could also be a lecture or another situation, as long as it is not the artwork. So, this, right here, is not the artwork. So, for me, it is perfectly fine to talk about the things that you're asking, which I would not do in the work itself.

Eduardo: So, when you see the work in the museum or gallery — the work is now in an institutional collection in Spain, called BEEP; it was acquired at ARCO 2006; When you see the work, the actual vintage sepia photographs are there. They're part of the work. But there is no explanation and no information about when they were taken, where they were taken, or who those people are. There's no information about that because I want these images to trigger the memories of the gallery-goers, not to tell the gallery-goers about my experience.

Eduardo: Because we all have images like these, not necessarily sepia-toned images, but old images anyway, everybody has them, right? Moving forward, “old images” for the new generations will look lowres, pixelated. The definition of what constitutes the “vintage look” will expand, but the notion of “old photographs” will remain.

Eduardo: So, these sepia-toned photographs are intriguing because there is no information about them. You don't know when they were taken. You don't know where they come from. There's no clear reference. So, you look at them. And it brings back memories of things you've seen before, and you're most likely to have seen those in your own family. And this is what I wanted to do. In other words, in *Time Capsule*, more than represent, the photographs have a function, they *do work*, the function as mnemonic triggers. But, here, in this conversation, we can actually talk about them in more detail. In fact, yes, those are images that I grew up with because I was raised by my grandparents who came from Lodz and Warsaw. The sepia photos in *Time Capsule* are from the side of the family that lived in Warsaw.

Eduardo: Growing up and looking at these mysterious images, I asked: who are these people? What's going on here? To me, it was like a movie or comic book or something like this. Each image stored a potential narrative, waiting to unfold. It was intriguing. It was like an adventure; through them, my five-year-old self travelled to another space, another time. It seemed incredible to grow up in Copacabana, going to the beach, skateboarding, body surfing and, at the same time, be connected to this other world across the ocean. So, I understood the role that these types of images played for everyone. And unfortunately, my grandmother's side of the family didn't make it out of Poland. They were murdered at Treblinka. That absence gained importance. So, you have the sign without the reference, the absence of the individuals in the images was also relevant to the work. All you have are the signs that float freely because they can't be attached to the individuals anymore. On a personal level, there is that. But that's something that the viewer of the artwork will never encounter.

Herbert: One of the most important attributes of the artwork is the RFID chip. How do you see the development of the technology? Because nowadays, I'm quite sure you're familiar with that. Nowadays, you have the possibility that you go like, let's say to a doctor, to a shop or somehow and implant such a chip to enter the airport or whatsoever the various possibilities. Could you imagine that 30 or 40 years ago the development nowadays is like this one?

Eduardo: I did. I stated at the time that implants would be a big part of the future. This is so for many reasons. The microchip itself is a transponder. There is no battery in the microchip. And it charges from the same scanning impulse that it receives. And then it sends the data back. Transponders are also used in satellite technology, and this was very intriguing to me, but the fact that it's encapsulated in biocompatible glass meant that it would actually bond with the subcutaneous tissue of my body, with the actual cellular substrate and become part of the body. They accept each other. And I've had it since 1997, and I haven't had any problems. Every ten years, I do a public event to commemorate *Time Capsule*. I did in 2007 in Spain when I had a retrospective at the Museum of Modern Art in Valencia. I did it in 2017 in London at the October Gallery. Perhaps in 2027 we can do it in Krems, Vienna or Berlin. But every ten years, I do a public event, and people can scan it, and different things happen.

Eduardo: So, this biological dimension of the chip was important to me at the time, but another thing that I felt was relevant is the fact that it's not visible. You can sense it, scan it, but you can't touch it, you can't get to it because it's inside my body, just as you cannot get to my heart. You can't put your hand in my heart, but you can sense it. You can hear it. So, being real, having consequence, interacting with the world, but firmly remaining away from visibility.

Eduardo: That condition to me seemed extremely relevant because that's also the condition of DNA. As we discuss biotechnology, we are fully aware of the importance of our DNA. You know, your hair, your face, everything, right? Your body, your metabolism, et cetera, et cetera. But DNA remains firmly away from systems of direct visibility. It can be sensed, but it's too small to be photographed directly, for example. A strand of human DNA is about 2.5 nanometers in diameter. And just for comparison, if you take a wavelength of light, you're talking about six hundred nanometers. So, DNA is very, very small. You can use electron microscopes and other ways of sensing it, but you can't see it directly. Currently, if you tried to use an electron microscope to photograph an isolated double helix, or a single strand from a double helix, you would destroy it (because of the energy of the electrons would be too strong); however, either with electron microscopes or atomic-force microscopes, or other tools, it is perfectly conceivable that in the future we'll have images of isolated double helices. In any case, my point remains the same: we're dealing with this condition of something that is very real, not conceptual — very real, very important, impactful, but not directly visible. This is the shift. It's a fundamental material substrate of the world, that you're fully aware of, but you cannot see it yourself. And the fact that this gains cultural relevance, all of this for me was part of a *Time Capsule* at the time, and I felt that this would take on an important role in the culture of the future. And now you can go to Ibiza, and instead of carrying a wallet to the beach, you can just have a microchip and pay for beer by raising your arm. Alzheimer patients also receive chip implants. It's a different world.

Samantha: Rachel, do you want to go into your questions on corporality?

Rachel: Hi. Yeah, sure, I think you almost answered one of my questions, which is, does the chip still work? It obviously did in 2017. So, I assume it still works, right?

Eduardo: I have the scanner here. We can see that. This is the scanner. Can you see it? Can you read it? I'm going to scan another part of my body so you can see that nothing happens.

Rachel: So, like a thing where you can sometimes in food products, you can scan those things.

Eduardo: Well, this is designed to work directly with a specific sensor.

Eduardo: So, I'm going to scan my hand so that you see nothing happens.

Eduardo: So now I'll scan my ankle, where the chip is. So, this is now the chip. This is the number. Can you read the number?

Rachel: So, is that an I.P. address? How does it work?

Eduardo: The number is: 026109532. The number is random because I actually had a pack of chips (RFID), and I picked one randomly and use that one. It's been in my body since 97, and it's a transponder, it works just fine, as you can see.

Eduardo: So, there is no specific meaning to the number; what is relevant is that it functions as an I.D. And of course, there is a relationship between that fact and the images on the wall.

Rachel: Yeah, the Holocaust, yes. We also talked about in our discussions.

Eduardo: But this is not rendered explicit for the museum-goer. This is something that either they conclude on their own or read about it later because I don't want to restrict the readings of the artwork. So that context is certainly alluded to, it's there, it can be discussed, but not in the act of the experience, unless viewers make that connection on their own.

Rachel: Just thank you for that.

Rachel: That was really wonderful. And that also leads to another question of mine, which is in the same realm. On the chip itself inside your ankle, there is no other information stored other than this number?

Eduardo: That is correct.

Rachel: OK. And with this number, we can go to the registration website and still retrieve the information which you registered in 1997?

Eduardo: If that company is still in business, that's something I haven't checked. These companies come and go. Now, you're making me curious. But I did take a screenshot of the registration.

Rachel: Yes, I saw that.

Eduardo: We should be able to because I paid for it, and I registered myself live on T.V. So, if that company is still in business, yes, one should be able to do that.

Rachel: OK, because I haven't checked, actually, if the website still works at all, but I will do it, I will research that.

Eduardo: Let me know what you find out.

Rachel: But the number that you just showed me is linked to that website.

Eduardo: That is the number with which I registered myself both as the owner and the dog. I chose 'dog' because I'm allergic to cats, even though Kac (katz) is my last name. That's ironic. I know.

Rachel: Yeah, and the images are displayed in the gallery. The images are also on the registration website, or it is just you as a person.

Eduardo: The database was a database for the registration of animals. So, it had no relation to art whatsoever. So, it just registered myself as the owner and the dog.

Eduardo: So, that registration was just that, registering in the database. But in the gallery, the work gets experienced in a lot of different ways. So, first, there was the live event on TV and on the Internet. When people came to the gallery, they saw the hospital bed. They saw the sepia-toned photographs on the wall. And then I did the event and registered myself on the database. Live on TV and on the Internet. The next day I had an X-ray made. So, on the wall opposite to the sepia-toned photographs I placed the enlarged database and the x-ray. So, you had everything. You had the hospital bed in the middle, you had the sepia-toned photographs on one wall, and then you had the database and the x-ray showing the implant on the opposite wall. Later, in order to exhibit the work, I consolidated everything on a single wall. So, you have two sepia-toned photographs, and then you have a flat-screen with a two-minute loop running. Then you have the syringe that I used to inject the microchip mounted on the glass pane in front of the flat screen. Then you have more sepia-tone photographs, and then you have the x-ray and two more sepia photographs. There's one above, making an overall form that is possibly evocative of a triangular pediment. The database registration ended up not being included in the final composition because the presence of one more visual element would disrupt the nice rhythm I had otherwise achieved. You have two small, one large, too small, one large, two small, and one small at the top. It makes a really nice composition on the wall. So, I chose not to include the database in the final piece also because, as is, everything is photographic. On the left you have two photos and the video; in the center, two photos (with a photo above), and, finally, the x-ray and two photos on the right. Everything remains in the realm of the photographic image.

Rachel: O.

Ana: Can you send us the documentation of that setting if you have a photo of it?

Eduardo: It's on my website: <http://www.ekac.org/timecap_release.html>

Wendy: Yeah. And actually, this might be a very good time to be able to jump in and ask a question, but also make a comment.

Wendy: I also would like to say very warm, warm greetings from Oliver Grau. He was really excited for the chance to have some real-time with you. I am here as a representative from the Media Arts History Program and also from the Archive of Digital Art. And I have noticed that we have included you at some point. I'm not sure when it was that we were able to get you into the archive, but *Time Capsule* is in there. It's always really difficult with the documentation and the archiving of artwork that the artists themselves have many really fantastic resources. But artists need to be creating work. They don't need to be archiving and taking care of websites and all of that kind of stuff. And what's great about this group is they're putting a lot of effort and thought into looking at works, putting them into context, doing the writing, doing the analysis, checking with you to make sure that their analysis is correct.

Wendy: And so, it would be a really great opportunity to be able to have a better presence of you in the Archive of Digital Art. Maybe we can begin a conversation about that, including the written

works of other people, to be able to describe your work. So obviously, you're able to describe your artwork yourself, but then an analysis that is being done within a media art criticism context is also something that the archive of digital art is really interested in, as long as it's not conflicting with what the artists want to be able to be representing their work and also being able to make sure that things are available to a public that is doing research. There's a lot of pressure and responsibility put on the artists to document their works, archive their works, and keep the website up. So, it would be wonderful to continue the conversation about getting your works more heavily into ADA and the work our group is producing with *Time Capsule*—especially situating it with the rest of your works and the other works that were going on in the late 1990s as well.

Eduardo: Sure, I'd be happy to do that. It really is a tremendous effort, and, you know, I made a conscious decision to not go into social networking because just the website alone is an endless effort.

Eduardo: You know, I've been an artist since 1980. I work in a lot of different media. Another part of my practice is in the realm of poetry, experimental poetry with holography and digital and other media. These two overlap as well, occasionally. There's also writing and publishing and artist's books. I mean, there is a lot of material.

Wendy: There's a lot of stuff going on

Eduardo: And in a lot of different languages.

Eduardo: I also publish in different languages. There is also the fact that these systems die; take Flash, for example. So, as you may know, I've been creating digital work since 1982 and since 1985 online with the Minitel. Just the Minitel restoration alone, took 15 years of my life to complete. It was worth it because now it's there, it's done. It was a lot of effort. But I'm just reinforcing what you're saying. It's daunting to continue to produce and create, and at the same time migrate and document. It's a lot.

Wendy: One thing that we would probably do as well is reach out to some of the institutions who have been collecting your work to be able to make these crosswalks between them so that when an institution has information about the work or it's on display, it would be really great to be able to observe the events of 2007 and 2017 together. And think about why they were showing the work for this ten-year anniversary of *Time Capsule*. All of this kind of storytelling that you have, that's part of the work, including that in its documentation as well, would be really wonderful.

Eduardo: On the *Time Capsule* website there are links to both anniversaries. You can see the documentation there. I think it's nice to have an exhibition history for each work. There's a link to the *Time Capsule* exhibition history. It's hard to keep it updated. *Time Capsule* is more or less accurate, from 1997 to 2013, but I can see that it has been shown after that, and it's not included.

Wendy: So now I'll give it back to the others. If you have any other kind of questions that you want to continue with.

Samantha: I do have one question, and I think it's central to the thesis, so I would like to ask it and forgive me if you've already answered the question. Going back to transhumanism and posthumanism. So, given your perspective on transhumanism, does that affect your perspective on posthumanism? And do you apply the same kind of perspective towards posthumanism with *Time Capsule*?

Eduardo: I don't really subscribe to the transhumanism agenda. But posthumanism is different. Because, to me, posthumanism seeks to offer a non-anthropocentric perspective; what we used to understand by 'human' is displaced. It's not that in posthumanism there is no human anymore; we simply move past the previous understanding of the human in which the human exerted a central role or was understood as a discrete entity. Before, there was a perceived hierarchy, and somehow, we were at the top of that hierarchy. To me, the posthuman represents a decentering, a surpassing of the centrality of the human.

Eduardo: Therefore, the "post" is a new condition, and it's one in which, yes, technology plays a role. But so does our relationship with nonhumans. And we begin to evolve a model that is not binary, which is something that I've been talking about for decades, not just when, you know, these issues came to light more recently. I have been talking about overcoming this polarity, this way of thinking that is predicated on oppositions for a very long time. And, at least the Western world has operated, not only intellectually, but also materially, predicated on oppositions with grave consequences. We have defined the human in opposition to technology. We have defined the human in opposition to animality. We have ascribed humanity to certain humans and not to others. So, these modes of approaching the world predicated on oppositions have enabled the construction of these hierarchies. The idea I have always defended and worked towards is that we would develop a model predicated on the principle of networking. Network is a noun and a verb. We understand the human as part of an ecology, as part of a continuum. And we also understand that the human is now rethought in light of a lot of what we have learned in the recent decades. We used to understand the human as an entity in its own right. Not anymore.

Eduardo: Now we understand, for example, that we have ten times more bacterial cells in the human body than we do human cells. We have 100 trillion bacterial cells and 10 trillion human cells. So even from a purely quantitative perspective, we are more bacteria than human. And this is just touching the tip of the iceberg, so in reality, what we used to describe as the human is a hub of a lot of different life forms, and also technology. Consider that living symbiotically in the human body we have mostly bacteria, but also protozoa, archaea, eukaryotes, and viruses.

Eduardo: In our gut we have almost two thousand different bacterial species and our health is predicated on their interaction. When they cease to interact in a stable way or interact differently, we get sick and bad things happen to us. So, in reality, we are a mesh of different networks that are constantly communicating and regenerating themselves. Our skin cells are dying and being reborn continuously. So, we have learned a lot of different things about the human and fundamentally, we have learned that the human is not an entity in itself. It is a network that is caught in broader networks of the living. So, to me, that's what I understand by the posthuman, not some fantasy of indefinite life extension and augmentation for "improvement", which I associate with transhumanism.

Eduardo: Let's not forget that these transhumanist aspirations also change according to the shifting baseline of historical periods. Descartes already believed that if you followed his philosophy, you'd live longer (because people died very young in his time). His understanding of metabolism and things biological was fairly limited. But he did believe that if you follow and pay attention to his philosophy, you live longer. So, the desire to live longer is something that we have had for a long time. It's also in Kant, for example. And that's not going to necessarily diminish, right? People now live up until 90, more or less healthy, and more or less active. And when you think about ancient Rome, to give an example, you realize that medicine has in fact extended our life span. Even then, there's a material limit. No human being has ever lived more than 122 years. The question would be: could we remain sufficiently healthy to enjoy such a long life?

Samantha: Thank you so much that helped us out a lot with the thesis. Basically, because now I can see a little bit more of a comparison between like delineating between transhumanism and posthumanism and then comparing the network of those organisms that make us and the networks that you may use in your artwork, right? And the connection of the body to that digital realm.

Eduardo: *Time Capsule*, for example, becomes a hub because you have digital information inside this body that is moving around and can be scanned at any location. This digital information was already mobile, was already moving around. And so, the digital and the biological are literally enmeshed because the transponder is encapsulated into biocompatible glass and the fact that this is a technology that was originally developed to record and retrieve lost nonhumans, but is now also used in hospitals. More recently, patients that have lost the faculty of reason — for example, if they have Alzheimer's and you can't ask them, "what's your name"? — may be chipped because, if they wander the hallways of the hospital and can't answer for themselves, there has to be a way to identify them.

Eduardo: As I have written and said numerous times, my art erases the boundaries between the local and the remote, the living and the nonliving, the biological and the technological, not just as speculation or an idea, but on a fundamental, very material level. In my work these oppositions cease to be operational.

Samantha: Thank you so much. Rachel, you had a question?

Rachel: I have another question that just actually came to my mind, and that is more about the performative aspect of the work or the activation aspect. So, do you believe that the artwork can only be activated when you interact? You who has the chip interact with the world? By scanning, or do you think it is already activated through the work's story?

Eduardo: The direct experience of the work in a gallery or museum is different from a conversation. Art does not exist in order to generate discourse. Art exists to be experienced. Not everyone can go see *Guernica* in person or *Les Femmes d'Alger* or some other artwork. So, you experience it through other means, vicariously, right? You can see art in a book, you see a picture on a website. A friend has been to MoMA and tells you the story of seeing one work or another. So that's something that happens inevitably. Let's remember here Malraux and his imaginary museum. Traditionally, as we know, a visual artwork demanded that you stand in front

of it (or inside of it) and look at it; otherwise, you're not really having the experience of the work. Now, what your question allows me to touch upon is another aspect of *Time Capsule*. I said that that network is a noun and a verb. I've been working digitally since 1982, and I've been working online since 1985. I have created a whole series of works that are themselves networks. Before the web and also after the web. This mode of distributed participation or interaction, in which the work cannot be located in a single place and therefore doesn't call for you to be physically co-present with a particular material configuration, this mode of creation and experience has always interested me. If you look at the different works I've made, you can see it clearly. But in the case of *Time Capsule*, in particular, you have the photographs; you have the material substrate of the artwork. It's unique. It's not in edition. The sepia-toned photographs that are in the BEEP collection are the real photographs that my grandmother brought from Warsaw while her parents and siblings were being killed. The syringe is the actual syringe that I used to implant the chip. It is not a replica. It's the actual syringe. The X-ray is the actual X-ray. If you want to experience the material culture of those artifacts, you have to go and see the work — which you can do, you can contact the Beep collection and ask to see it. One great thing about Beep is that they're very interested in outreach and lending to exhibitions and sharing. It's not a collection that keeps the works hidden. They want to facilitate access to the works, for the collection to circulate. So, you could request to visit and see *Time Capsule*. I'm sure they would arrange it happily. And of course, it can also be displayed in a museum. *Time Capsule* is not only in Spain, but also here in Chicago, right now, in my body. We just experienced it by scanning my ankle — this is no less of an experience than being in the museum or being in 1997 at the original gallery or watching on television. There was a theorist and art critic called Arlindo Machado that came to the opening of the event in '97. And before I started, he was making his way towards the exit and I said: "Are you leaving already? I haven't even started!". He said, "I'm going home to watch it on TV". It made perfect sense. It's another mode of experience that is equally valid. Machado, in particular, was very interested in television as an art medium.

Eduardo: Then, there were the folks that watched or participated online when it was live. So, live on television. Live on the Internet. Our encounter with the actual physical work, the fact that the work exists in this dispersed mode by design, deliberately to undermine the idea that the artwork requires, by definition, the presence of the viewer in front of a self-contained material substrate.

Rachel: Thank you. Is this then a permanent performance since 1997?

Eduardo: No, I don't think so, because that would be undoing exactly what the work is, right? It would be bringing it back to a specific realm. It is in its instability that it fully realizes itself. If we bring it back, it's only in the museum; It's only performative. The challenge, I think, from a critical perspective, is how do you match, critically, work that doesn't really conform to the categories that we are accustomed to. So how do you rise to the occasion, how do you develop the critical instrumentation that matches the level of the artwork. But it's a challenge that the artist also faces because in a sense, materiality conspires against it. The linearity of language also conspires against it. So, one has to look for ways to overcome those limits and match the work, so not to bring it back to a single domain. Because, in reality, it is in its multiplicity and instability, that it's interesting.

Rachel: So, it's a fluid state.

Eduardo: Yeah, it's distributed, and it's unstable and fluid. Fluid, in fact, is a word that I have used to describe a particular category of the sign that I invented in the context of my holographic poetry: *fluid sign*. We are accustomed to a notion of the word that has to manifest itself consistently. Otherwise, you're going to be calling it a 'chair' today, but those signs don't exist anymore tomorrow. You don't have those signs to use again. And then you cannot express to a colleague, you know, here's a 'chair,' because those signs have become undone. So, the consistency of the sign is indispensable for the economy of language that preserves social bonds. But in poetry, I'm free from that. And the same is true for images. If I tell you here's a 'flower' and you look at it and say, no, sorry, it's a 'car,' it's not a 'flower,' then you can't create a social bond predicated on image sharing. But in holopoetry, I don't have to do that. And I can enable you to read words that change according to your perspective, your relative position. When you look at something in the holopoem, and you move your eyes, the object of observation can change. And in the process of change it can acquire a semantic value that cannot be brought back to a single state. So now we're talking about my work in poetry. But I have called this type of sign that I created in holopoetry the *fluid sign*. What's interesting about the fluid sign is its permanent instability.

Samantha: Thank you. And so, given that fluid state in our dichotomies between the material and immaterial, what would you want us to conserve from a conservation perspective?

Samantha: Would it be the conceptual? I mean, I'm sure it's everything, right? But is there any particular part of the materiality that you would that you prize or prefer over others?

Eduardo: 'Conceptual' is not a word that I employ. I'm not interested in the idea that the work will exist only in narrative form. I do want people to have the experience of the work. People take away different things from these experiences. In order to exhibit the work you have to preserve its materiality. This is why I put so much effort into it; 15 years of my life into trying to restore the Minitel pieces. I want them to survive, to continue to be preserved. So, I have work in olfactory art, in holography, there is my early digital work, there is my space artwork, my bioart. They mobilize different repertoires of preservation. Ideally, all of it would be preserved. I do the best I can with my resources, but it's very difficult to produce documentation and keep the information updated, and to migrate media every time. To do the physical preservation of what is there, plus the restoration of what is perishing, plus produce the work, it's a daunting task. I would like for everything to be preserved. This is why museums are important, because once the work enters an institutional collection, then you have a system in place. Take, for example, my holographic poetry. Some holopoems are in private collections. In fact, there is one in Kassel. I think the closest to you all would be a holopoem that is in Kassel, in a private collection. But there are a couple in Spain, and there are a few in Europe. There is one in London, one in Paris. But these are all private. The only institutions that have acquired a holographic poem are a museum in the U.S., in the Midwest, and another in Essex, in the UK. So right now, I have to rely on private individuals' ability to physically preserve these works. But we know that private collections are not necessarily doing museum-quality preservation — unless we're talking about somebody who has a private museum, they would not really have temperature control, et cetera, et cetera, humidity control, et cetera. Hopefully, all, or most of it, will survive.

Herbert: So do you think because you mentioned the private collections, do you think that somehow the funding might be an issue because, like public museums don't have money, as we all know, to buy some specific artworks?

Eduardo: I don't think that's the problem, because if you compare the market value of my pieces, in relation to other works that are routinely purchased, you see that my work is quite accessible. And the preservation of a hologram is the same as a black and white photograph. So, the standards are already in place. I think it's more a question of understanding the need to preserve experimental art than a question of price of the work. Perhaps it is exactly the kind of work that you guys are doing, of studying it, understanding it, writing about it, that creates the foundation that enables the institutions to understand it. Because it's not really that complicated; biological work has to be activated just as any work that requires protocol. Think of a Sol LeWitt; it has to be repainted according to instructions. Museums are already accustomed to doing this type of preservation and reactivation. Also, very large installations in storage have to be brought back with many crates. Based on photographs and documentation, they have to be placed exactly as the artist originally created them. Museums are already accustomed to storing, bringing back, assembling, putting them back in storage.

Eduardo: But if all of this is routine in museums, it's a question of understanding that this type of work that uses new media, recent media, current media, future-oriented media can be as easily acquired, preserved, restored, and exhibited as everything else as long as you understand it and make an effort. But it's not more money nor more effort. It's just a shift in mentality.

Samantha: I agree because we've had ephemerality since the 60s and 70s. We've had these ideas. We've had these concepts since the 50s, 60s, and so forth. So I don't see why it is hard for the museums to transition that mentality over into new media. I completely agree with you.

Eduardo: You know, when MoMA and Tate came to acquire my Minitel pieces, I learned that these museums have conservators dedicated to technological media. Because that was part of the process, you know, I had interviews with the conservators, they asked a lot of questions about the material constitution of the work and how to preserve it, et cetera. So, museums are beginning to have conservators dedicated to technological media. ZKM certainly does. MoMA and Tate do as well.

Eduardo: The bulk of work created with digital and robotic media, and bioart, et cetera, is increasing. The number of artists creating this way is increasing, so museums will have to pay attention to it, sooner or later. I think there's hope for the future. I think more museums will open up.

Eduardo: And I think it's through this type of dialogue, that we are having here, that you ask the question, OK, so how difficult is it to preserve a hologram? And you learn that on a material level, the hologram is identical to a black and white photo. Well, problem solved. But you have to have the dialogue and the conversation for those issues to come to light.

Samantha: I was just thinking of James Turrell, like, I mean, like all the light space movement. Right? Like, it's not that difficult necessarily to preserve these works. And we've done it. We have a long lineage of doing so.

Eduardo: It's asking the simple question of how do we do this and then implementing it. It's more a question of the museum understanding the value of work created with contemporary technology. This is happening. Many museums staged exhibitions of early computer art from the 60s and 70s, recently, before the pandemic. The Victorian Albert Museum did, the Whitney did, numerous museums did early computer art shows. So, they are doing 60s and 70s now, slowly moving towards the 21st century.

Samantha: And I think we have a good shot here, too, in the future when it comes to academia and altering art history programs. Art history needs to evolve in an academic sense, especially since so many universities invest in technology. Academics need to make the argument for these two fields to be interdisciplinary and overlap. Once we get the art historians on board with this, I think convincing the museums will be a lot easier to do.

Eduardo: Thank you for your interest in *Time Capsule*. I hope this was informative. I enjoyed meeting you all.

Ana: Thank you. It was really nice having you here, especially in these times, which is so depressing, that we can get content and explain your work. I hope that we are going to stay in touch. The guys are going to finish their chapter and try to publish it. I also suppose they might contact you regarding the illustrations and copyrights and so forth. Also, pretty sure that we will contact you soon regarding the Archive of Digital Art because it really needs your presence. And we also need it for this work as well. And I hope for other students, other generations. So, I just think that we are going to stay in contact, and then we might have some suggestions on how to do it with ADA.

Eduardo: Thank you very much for your interest. I look forward to hearing more about your projects, and, hopefully, one day meet in person.