

**Simone Osthoff**

**Invisible in plain sight, and as alive as you and I**

**An Interview with Eduardo Kac**

The internationally renowned artist Eduardo Kac has received critical acclaim for his net and bio works including *Genesis* (1999), *GFP Bunny* (2000), and *Move 36* (2004). His latest transgenic work titled “Natural History of the Enigma” (2009) was just awarded the *Golden Nica*, the most prestigious “Oscar” for cyber-arts in the field of media arts and the most prestigious prize at Ars Electronica. Kac’s “Natural History of the Enigma” is a plantimal, a new life form he created, called “Edunia.” This genetically-engineered flower is a hybrid of the artist’s DNA and a Petunia. The flower expresses Kac’s DNA exclusively in its red veins.

Kac’s visionary oeuvre shares with Vilém Flusser an exploration of language and communication without regard for usual disciplinary boundaries. Their ability to theorize current cultural practices in light of future technological developments can be seen, for instance, in *Signs of Life: Bio Art and Beyond* (edited by Kac, MIT Press 2006), in which Kac included Flusser’s essay “On Science” (please see the book reviews also in this issue of Flusser Studies).

Over the course of two decades Eduardo Kac’s hybrid networks connected in real time disparate and distant elements. They have also offered new insights into art while leading the artist in 1999 to the literal creation of new hybrid life forms. By changing habitual ways of seeing and communicating, Kac’s networks and transgenic creations continuously challenge our understanding of the “natural” environment as well as of the environment of art. They explore what the French philosopher Jacques Rancière termed the “distribution of the visible, the sayable, and the possible.”

By converging art, science and technology with communication theory, philosophy and poetry, the artist produces unusual connections such as those among language, light and life. Insightful and experimental, Kac’s work suggests alternative ecologies neither by denouncing climate change and environmental disasters nor by calling attention to monstrous threats produced by manipulation of DNA information. The dimensionalities and temporalities explored by Kac’s networks—both human and non-human—examine the wider ecological questions, which include the cultural modes that produce our subjectivity.

While prompting a continuum between nature and culture, between species, and among the senses, Kac’s work questions the structures, mediations, and, ultimately, the supremacy of vision in art, while promoting synesthetic experiences that rearticulate individual consciousness within social,

cultural, and, finally, environmental realms. In addition, his work addresses issues of spectatorship by emphasizing participatory action and two-way communication. Kac's hybrid networks of physical and virtual spaces dislocate audiences within environments that examine how vision, touch, hearing and voice are facilitated and constrained by the structures and mediation of technology. Within his networked environments, dialogical communication among humans, animals, plants, microorganisms and machines is never given, but instead must be construed by participants word-by-word, frame-by-frame.

Besides being an accomplished researcher and writer, Kac is among the few artists who can lucidly speak about aesthetic concepts in relation to other disciplines such as science, technology and poetry. His voice contributes to debunk the fantasy that studio work does not involve either theory or research, thus grounding his creations both in experiment and debate.

I first interviewed Kac in Chicago in 1995 for my article "Object Lessons," published in *World Art* in 1996. In that initial conversation we talked about the development of his multimedia works up to his Telepresence events with the telerobot *Ornitorrinco*. Between then and now, many other conversations have taken place, and I have published a few more essays about his original and often controversial artworks, which continuously exceed expectations. In 2007, on the occasion of Eduardo Kac's mid-career survey at the Instituto Valenciano de Arte Moderno (IVAM), Valencia, Spain, I sat down with the artist to talk about his work.

Simone Osthoff: I would like to begin by asking you about Alba, your famous and controversial transgenic bunny.

Eduardo Kac: Alba was born like you and I were born, with an intrinsic justification that is irreducible to external factors, in other words, with nothing but her life to justify itself, except that she was the first mammal created by an artist and born in the context of art. This means that her very existence, while free of external utility or function, is pregnant with semantic meaning: she embodies the passage of the chimera from legend to life, from reverie to reality. It's this poetic condition—real and alive like you and I, while at the same time rich in semantic resonance, which makes "GFP Bunny" a unique work of art. It is her firm grounding in the realm of culture and the absence of an external utility (as in disease research or the food industry) or function (as in pet breeding or the ornamental industry) that opens the way for the poetic evocations that make it art. In poetic terms, because of the physical transgenic work represented by the letters C, T, G, A, which emphasizes itself and not primarily elements external to itself, you could, for example, consider "transgenic

bunny” a living metaplasmic figure, that is, a figure which moves the letters or syllables of a word (in this case, the genes) from their typical places to generate new meanings.

I use the word “figure” here as in “figure of speech,” that is, a form of creation based on the intentional departure from straightforward, literal use of verbal or visual form to produce new and imaginative associations. Or, more generally, you could think of “transgenic bunny” as a trope (figure which changes the typical meaning of a word or words), except that in this case it is a biotrope, a figure which changes the biological meaning of life into an extra biological meaning, that is, poetic or cultural meaning. Finally, to many people “transgenic bunny” has the semantic tension of a living trope that I describe with my own neologism: “teratofilon,” the juxtaposition of living contrasts (in this case, the friendly and the monstrous) that produces a feeling of balance. What distinguishes “teratofila” from other living contrasts is that they are created intentionally, for art, and the contrast is only apparent, as the intermixing of disparate elements produces a new congruity and provides a novel expression of ideas and/or emotions. The poetic analogies above help us understand certain aspects of the work, but do not exhaust its meanings. We should also consider other aspects, namely the relation between ethics and aesthetics and the role of reception in the evolution of the work.

SO: Originally, Alba was going to meet the public while living with you in an art gallery for the period of a week or so. Only after the gallery exhibition was the rabbit to become your family pet, something that, despite “Free Alba!” campaigns, never happened. Was Alba a success anyway? What happened to Alba?

EK: The social aspect of the work is very important, but it is not the only one. If we consider “GFP Bunny” from a purely aesthetic point of view, we realize that it presents a new role for the artist: not the creation of objects, but the creation of subjects. It draws attention to an ethics within aesthetics. It is without precedent and opens a new field for art, one with real evolutionary implications. This will become more clear in the next twenty or thirty years, when future artists create bio artworks that further develop this basic premise.

Alba never left the lab where she was born due to the censorship imposed by the lab's director, possibly out of fear that her coming home to me would cause him problems of some sort (what kind of problems is unclear). It is senseless. The only thing that would have happened if she came home is that the lab would have kept its agreement and Alba would have had a nurturing environment in which to grow.

SO: Since 1998 you have been creating bio-art, transgenic works or other living pieces. How did you start to work with living organisms?

EK: My first work involving non-human living organisms is from 1994 — *Essay Concerning Human Understanding*. In this work a bird and plant, in two distant cities, interact with one another by the remote exchange of sounds in a feedback loop. The plant produces sounds through its own electric fluctuation in response to the singing of the bird. The piece creates the experience of interspecies communication through the network.

But to better understand my trajectory we need to go back to 1986, when I created the first in a long series of works of what I call “Telepresence art.” This is a new art form predicated on the creation by the artist of new telerobotic bodies that a remote participant inhabits in order to experience new, invented forms of presence. In the course of time I created new electronic beings, enabling new kinds of experience for each work. In 1997 I created *Time Capsule* and it was a turning point in my work, when I coined the term “bio art.” *Time Capsule* is a piece in which I implanted in myself a digital microchip containing a series of numbers. I did the implant live on TV and on the web, in front of a series of photographs my grandmother brought with her from Warsaw in 1939, and that represent those who perished in the war. In the last segment of the television broadcast, the information in the chip was read through the web. With that number I registered myself in an online database as both a dog and its owner. The trajectory I just summarized took place in the course of 17 years. This trajectory is well documented in detail in my book *Telepresence and Bio Art: Networking Humans, Rabbits and Robots* (University of Michigan Press, 2005). It seems to me that the dichotomy between local and remote, human and non-human, living and machine, are starting to erode. Transgenic art is the aesthetic manifestation of this contemporary condition.

SO: It seems that among the reasons behind your work with transgenic art is the exposure of the cultural influence of science, and the possibilities for manipulation and transformation of life.

EK: It is not possible to reduce art to “an intention,” because art emerges from many sources and is naturally open ended, without “one” specific function or meaning. Even when it is in connection with other disciplines or fields, art creates its own realm of experience. Please allow me to clarify that Transgenic art is not here to “comment” on science or any other field. Commentary is best carried out by pedagogy or academic exegesis. Transgenic Art exists, first and foremost, as a new creative realm in itself. Like all contemporary art, it is in dialogue with several fields, such as philosophy and

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literature, but not uniquely or specifically with science. The emphasis is on the art — its experiences, sensations, emotions, and ideas — not on factors external to it. Transgenic Art uses a new medium that was not used before: the processes of life. It is inadmissible to consider the processes of life as belonging exclusively to a single discipline. I do not create new life in order to comment on other disciplines. That would have no interest whatsoever to me. I create new life in the context of my artworks, and each work has its own poetic and experiential reality, its own multiple meanings.

SO: Scientists created bioluminescent mice, fish, plants, rabbits, and even succeeded in creating a primate with the GFP gene: what makes your transgenic artworks different?

EK: You use words in your articles. James Joyce used words in his novels. A lawyer uses words in his legal briefs. What is the difference between all three kinds of writing if all use words? Clearly, the question is not the use of words, but how the words are used. In my case, it is the same thing. I use the processes of life in entirely different ways than a gardener or a laboratory professional. In my case, I create life that, in addition to having the same ontological status of all life, also has a semantic charge that is non-biological -- the meanings that are inflected by the artwork. And, as has always been the case in the history of art, each artwork helps the artist build, in the course of a lifetime, his or her own poetic or philosophical visual and experiential universe.

I create artworks in which, first and foremost, I produce visual pieces and experiential circumstances that come from my own, individual, subjective poetic universe, and that seek to resonate emotionally and cognitively with viewers and participants, while asking fundamental questions about what it means to be human in the twenty-first century and beyond. At the same time, the works are more than questions: they are material realizations, embodiments of my vision of what both art and life in the future will be like. This is important because the work is not the representation of an idea; rather, the work is literally alive like you and I. Therefore, it is both an artwork and an intervention in the real, lived world. The artist creates not objects, but subjects. This sparks a new ethical dimension of art. My work creates in the present a new field for art while prompting society to ask how it will prepare itself to welcome new citizens who will be, themselves, clones and transgenics.

While my work has an important material reality, the observation of the material manifestation of the work is not sufficient to understand what the work is. Excessive concentration on the material and formal aspects of the work is an old, anachronistic mode of inquiry that no longer corresponds

to the multi-modal, polyphonic, de-centered, dialogical, relational, distributed, non-anthropocentric, interdisciplinary forms of contemporary creation. Focus on the visible is not enough to see.

SO: Is there a difference in the way you use genetic manipulation in your artwork and the lab methods employed by scientists?

EK: The question is not one of methods, but realizations. Military training and the video game industry may use the same or similar methods, but their goals and realizations are clearly distinct. In 1955, Yves Klein created his well known “blue” through the use of a new synthetic fixative resin called Rhodopas M60A, which was used as a binder without changing the strength of the ultramarine pigment. It goes without saying that Rhodopas M60A was developed through scientific research, but this carries little interest for anyone, experts and public alike, because what matters is the poetic universe Klein created with his works. I mention this as an example, to emphasize that the question is not the method. In art, what matters first and foremost are the artworks themselves, that is, the world generated by the artist. My work naturally reveals my own poetic universe, from the 1980s (when I already invented new robotic beings) to my current bio art, in which the new beings exist on their own and share social space with us. My world is literally populated by real clones, transgenics, interspecies communities, and biological hybrids. It is imperative to look at the artworks themselves, instead of their methods, and engage with them as viewers and participants.

SO: In your installation *Genesis*, which you first presented in 1999 in the Ars Electronica exhibition in Linz, and again at your show at IVAM, you transformed a bible-quote into a genetic code. Also, for your project *The Eighth Day* you picked a name that has a religious context. How important is religion for you?

EK: I am an atheist, but religion is socially present and thus plays a role in shaping cultural experiences. My “Creation Trilogy” is comprised of *Genesis*, *GFP Bunny*, and *The Eighth Day*. In these three works I use the same GFP gene as a visual and social marker. Therefore, *Genesis* critically addresses economic and ideological underpinnings of religion. *The Eighth Day*, on the other hand, reverses the notion of “the other,” by making green-glow the norm within its world. In other words, all creatures in *The Eighth Day* glow green, so to be “different” in this world is not to glow green.

SO: Are you considering the creation of additional new species and artificial habitats?

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EK: The biotopes in my *Specimen of Secrecy about Marvellous Discoveries* are already artificial habitats, and so are the environments created for all my other living works. In layman terms, the “crossing” of a rabbit and a jellyfish, as in my “GFP Bunny,” already gave birth to a new species. Transgenic Art will continuously originate other life forms that did not exist in nature - it is intrinsic to its aesthetic platform. Other methods beyond transgenesis will also be employed.

SO: With your new series *Specimen of Secrecy about Marvelous Discoveries* you seem to be going in a new direction. Is transgenic art outdated already?

EK: Not at all. I'm opening a new direction while at the same time further developing transgenic art. If I make a video this does not mean that photography is outdated. I work in multiple media simultaneously. I make drawings, photographs, sculptures, prints, and many other works. And, of course, I continue to develop transgenic art. Since through transgenic works I create life that did not exist in nature before, they take a long time to develop. In the meantime, I continue to develop my other works. *Specimen of Secrecy about Marvelous Discoveries* is quite unique because each work in the series is a body, an individual with its own identity. Each work is both a single entity, like you and I, and a community of cells and microorganisms, like you and I. Just like they do in us humans, these very large communities of microorganisms interact among themselves and, as a unit, they interact with the environment. It's a work that always changes because it literally is alive. If you live with it, you literally “live with it,” as another life form in your home, as if the artwork on your wall shared some qualities of your plants or fish, such as growth, change, and behavioral unpredictability. The future of bio art involves this level of personal relationship and intimacy.