

Imagining Life

Amy Karle's Artistic
Research Practice

imaging



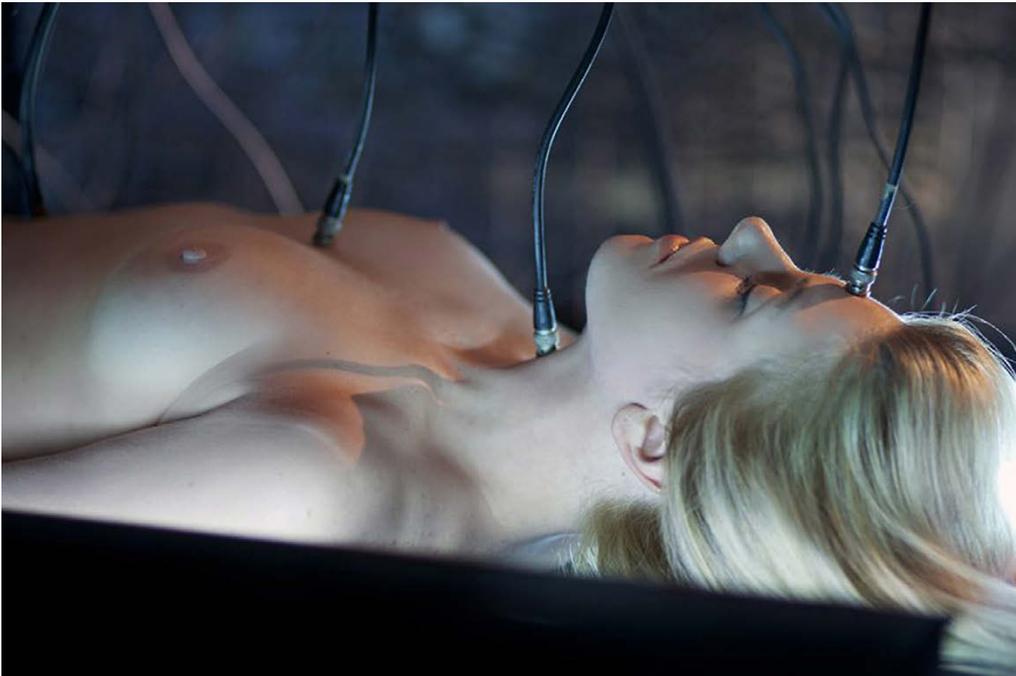
The text 'Imaging Life' is based on a conversation with Amy Karle.
The authors want to express their gratitude for the deeply
inspiring encounter and for Karle's support of the Atlas of Databodies.

Artworks and descriptions: Amy Karle
Text: Marlene Bart, Alex Leo Freier

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› Biofeedback Artwork ‹



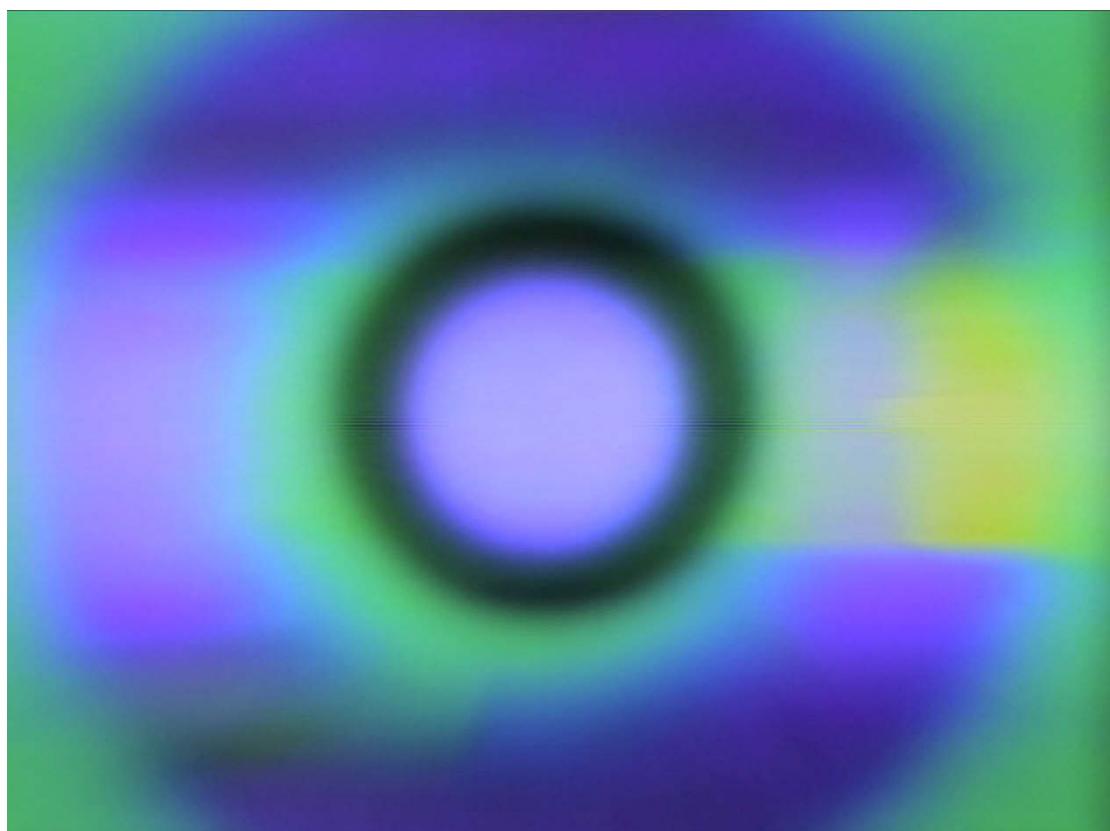
Amy Karle connects her body and consciousness to technology to create art, repurposing a Sandin Image Processor as an electro-physiological visualization device. While meditating, Amy Karle inputs her biofeedback into the historically significant Sandin IP analog computer to generate the output of image and sound in real-time. The artwork is both the long-duration performance as well as the experimental video art that is created in the process.



2011

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Photographs by Andre LaRoche, Stage 3

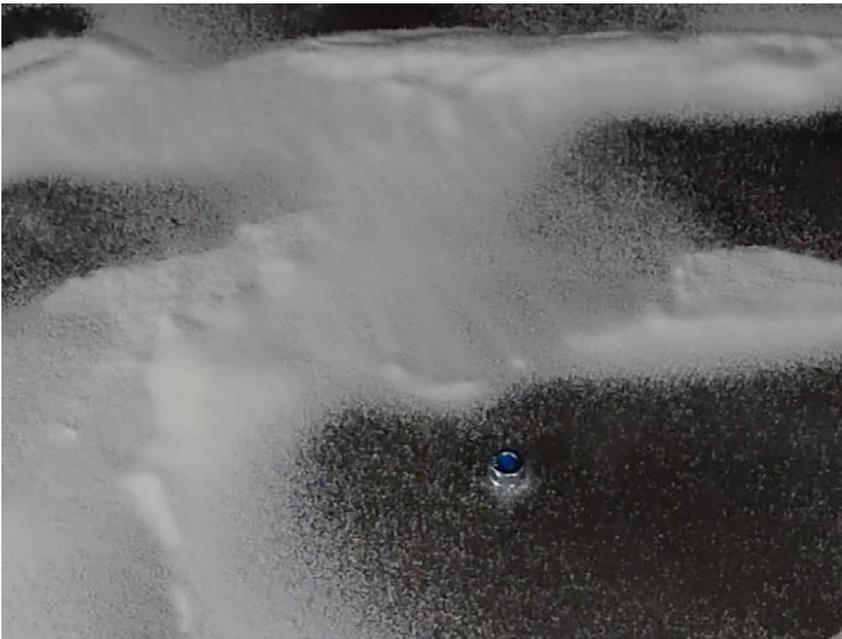


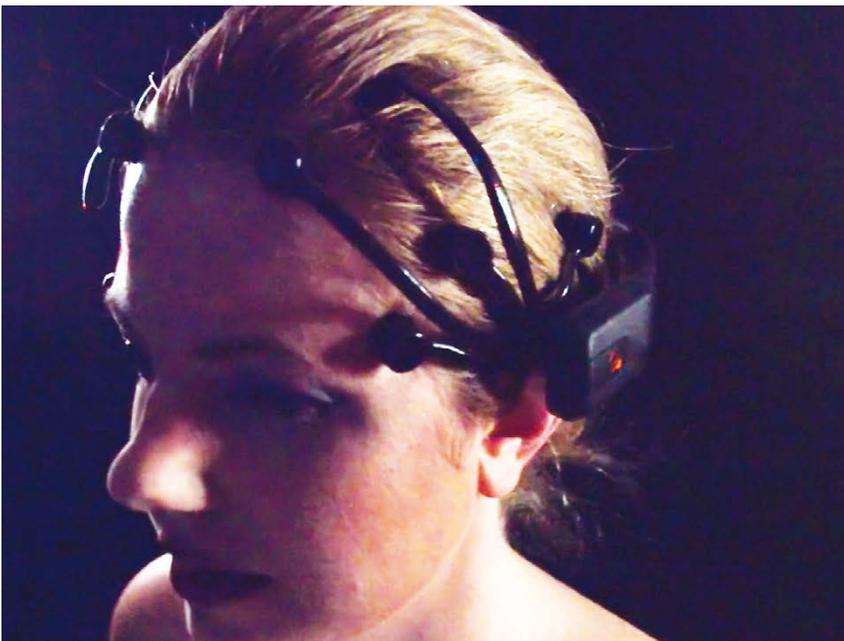
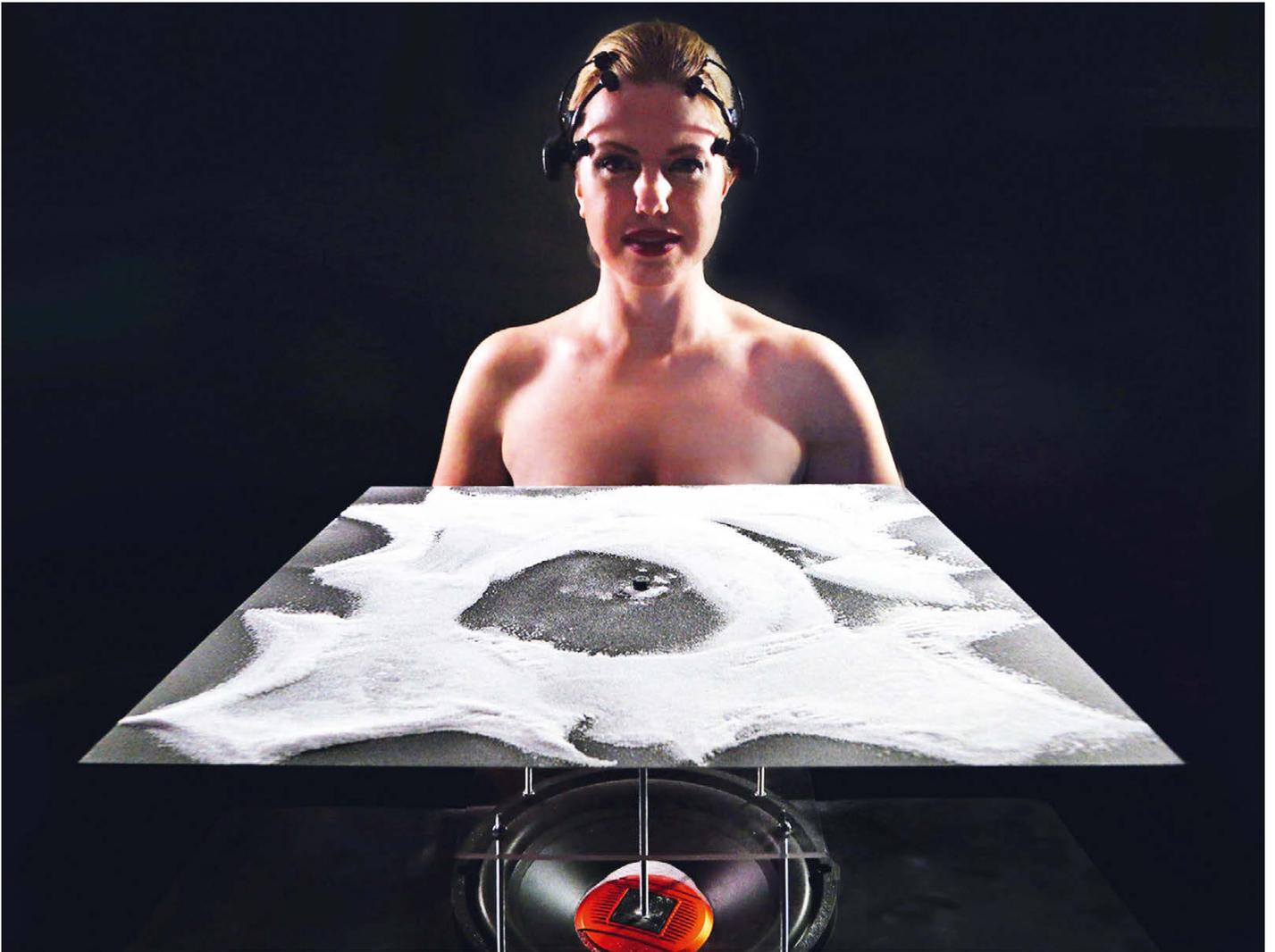
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› Resonation ‹

Connecting her body and brain to a subwoofer and Chladni plate, Amy Karle turns bioinformatics into cymatics, generating bio-signals into visuals and sounds. Frequency adjusts with changing brainwaves, the sound is heard in Hertz though a subwoofer which vibrates a metal plate above it depicting the communication of vibrations and the symmetry of sound.





2015

Performed at Signal Culture
in New York.

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Bioart and the body

Amy Karle's exploration of the human body breaks with conventional conceptions of corporeality. She confronts us with hidden rhizomorphic connections beneath our skin, aspects of spirituality, and the ever-advancing technical progress in human medicine and our environment. She questions our personal relationship to our bodies and lets us wonder if the way we connect to our own physicality has changed in the 21st century. The human body is Karle's investigative starting. From there, numerous parallels can be drawn to the basic concept of the Atlas of Databodies and this volume's fundamental thoughts.

What fascinates Karle, especially with regards to the human body, is the contradictory potential of technology. For a long time, technology has sparked hopes in a better future. Automation promises prosperity and it has increased the living standards in industrial societies in the last centuries. But at the same time, technology has opened possibilities of danger and perdition. In art, it is possible to negotiate inescapable questions as well as utopian and dystopian future scenarios. But how does the convergence, mixing and reconfiguration of organic and artificial bodies affect our definition of what it means to be human?

In relation to the significance of illness, healing, and technology within her biography, Karle exposes philosophical lines and nodes around the human body and its fragility. Her works are hybrids that embrace artistic as well as scientific methodologies. As such, she can be described as one of the most relevant representatives of Bioart. According to Gerhard Gramm, Bioart as a genre takes on a hybrid form. One characteristic of it is the dissolution of boundaries (»Entgrenzung«) and intermingling (»Vermischung«) of biotechnological and artistic practices, reminding us of the interconnectedness of science and society while considering their mutual acts of infiltration (Gramm 2007: 42–43). This conception of Bioart could be seen as part of a larger discourse about the boundaries-crossing process that defines contemporary art practices (Rebentisch 2013: 25). By taking artistic initiative into technically dominated environments like laboratories, Karle fosters that process of interpenetration. It contributes to the vast impact of Karle's works, which are not only technically fascinating, but also emotionally touching.

Science: A formula for imagination

Looking at the historical dimensions of science and technology, both can be conceived as taking part in a history of imagination. In the early ages of humanity, the explanations for natural phenomena that we have today did not exist. We needed to use our imagination to describe what we were seeing in the world around us. At one point in history, as Karle elegantly states, we constructed »formulas for imagination« resulting in the scientific method. Parallels can be drawn to Karl Popper's principle of falsification, which intends to test the empirical limits of science. According to Popper, a hypothesis can never be proven, but it can be disproved if necessary. Believing in the principals of the scientific method is important. But the best scientists do not just rely on methodology – they possess an open mind. There is a dynamic relationship between objectivity and imagination. The very idea of a scientific experiment already encompasses that. An experiment, in theory, has an open outcome. One might say this notion is analogous to the ideal of the freedom of art. This freedom is what makes science, too, so progressive and what has led to many of the most impactful scientific innovations and discoveries. Far from delegitimising science, this means to support and enrich it by embedding it into a broader history of imagination.

This context is relevant to Karle's artwork as it is often defined as »science fiction«¹. The artist points out that, like herself, a lot of science fiction authors drew their knowledge from real science. In some of her pieces, Karle works with state-of-the-art stem cell research. She says that she likes to listen to museum visitors react to her artworks while they are unaware that it is the artist herself standing next to them. Peoples' judgments on her artworks range from »scary« to »beautiful«. Karle agrees that this is precisely the range that she is drawn to. In other words, the realm that she investigates is not simply the beautiful, but the sublime. She displays phenomena that put us in awe of natural creation, which in itself cannot be grasped in simple terms, but is beautiful and scary at the same time.

As for »science fiction«, her works should not be seen as mere materialisations of utopic or dystopic visions. The dangers that she points to are just as real as the science she works with. Be it the climate crisis or instigation through social media – it is important to carefully watch the negative side effects of technological innovation. We need to gain a realistic stance

¹ A term used by Donna Haraway (2016: 2) with the intention of describing a new epistemological mode given the rising interconnection between technology and nature.

»From unpaid care work mostly carried out by women to the commercialisation of the female body to the role of slavery – these examples of exploitation are just some of the reasons for her choice to work with her own body.«

the commercialisation of the female body to the role of slavery in building modern American society – these examples of exploitation are just some of the reasons for her choice to work with her own body. When working with cells, she collaborates with living human donors, instead of using animal cells from creatures who cannot consent. Also, when considering body enhancement – or even healing – Karle comes up with ethical issues. Regarding inventions in the medical field, first, intentions are sincere. Transplants should be given to those in need, and those with disabilities are sought to be healed. But sooner or later questions arise such as, »Who should be able to access it next?«

Lastly, there is one ancient religious practice that especially influences Karle's thinking about the body and technology: meditation. It is a way of connecting to the body. Karle has a regular practice of simple breath meditation, she says. Breathing is like the throttle between the conscious and unconscious. Through the rhythm of inhaling and exhaling, and ultimately through the concentrated focus on the pulse, body and mind connect.

Karle regularly uses a float tank, a sensory deprivation chamber. As a salt bath, it takes the weight off the body. Bathing in it is very restful and healing to the body and the treatment can even be found in hospitals. Karle, however, uses the technological device to help her meditate. It allows the brain hemispheres

to synchronise in a way that cannot be achieved in any other environment on earth, so it makes it possible to attain high levels of meditation quickly. If we can visualise something in meditation, we are much more likely to achieve it. As a person who learns more effectively through visual and bodily stimulation than auditory and through reading texts, Karle works with technologies in a way that suits her needs. She questions how we use technology to support us. How we interact with nature is crucial to our experiences. Instead of trying to harness nature and make it do something, Karle tries to say, »What can I learn from you?« and »How can we work together?« So instead of using advanced tools and only focusing on them, Karle provokes the »why« behind it.

In her artistic practice, the use of complex technologies is therefore always connected to emotional and social, but also to spiritual points of reference. Besides *The Heart of Evolution?*, this approach can be found in *Regenerative Reliquary* from 2016. For this work, the phenomenon of implants and transplantation was a crucial starting point, as well as the question of artificial cell growth and what its future development could look like. The work presents itself to us on a pedestal, embedded in a darkened setting that lends an air of mysticism. From this emerges a luminous apparatus composed of conical flasks, tubes, cables, mechanics and, the most striking element, a glass container shining

visualisation device. The duration of this performance was five to eight hours, during which Karle, lying on a table and connected to the apparatus by cables, visualised energetic signals from her body in a meditative state of mind. Due to the resting state of her body and the duration of the performance, the dynamics of the visualisations and thus also of her bodily functions became clear, despite the low level of activity. In this sense, Karle draws a fluid and unquantifiable body image. *Biofeedback* also raises questions about the way we learn, or more specifically, how our body learns. The performance constructs a momentum of implicit learning and implicit knowledge. In this sense, it is not a communication based on written language, nor a memorisation of facts, but a permanent interaction of her body with the connected machine.

Science and technology can sometimes limit imagination, because we think we know, we think we have reached higher knowledge, but we are actually just at the beginning of exploring that knowledge. Michael Polanyi did extensive research on »tacit knowledge«, i.e. knowledge that is not language-based. He described tacit knowledge as the fundamental instrument through which all intellectual and practical knowledge of the world is gained. Only through this intelligence, does our body become a body, an instrument beyond its status as an external thing (Polanyi 2016: 23–24). In this respect, Polanyi understands tools – and therefore new technology – as acquisitions of the body.

Karle's work brings us closer to this understanding of technology and does not treat them as processes cut off from our bodies. Listening to her speak, you immediately feel her passion for her work and her admiration of the phenomena she deals with. Just as her artistic works, Karle's insightful thoughts dissolve common boundaries between the real and the imagined, between science and religion, or between dream and wake.

Flusser, Vilém (1983): Für eine Philosophie der Fotografie. Göttingen: European Photography.

Gramm, Gerhard (2007): Vom Wandel der Wissenschaft(en) und der Kunst. In: Dieter Mersch & Michaela Ott (ed.): Kunst und Wissenschaft. München: Wilhelm Fink, 33-51.

Haraway, Donna J. (2016): Staying with the Trouble. Making Kin in the Chthulucene. Durnham/NC: Duke University Press.

Polanyi, Michael (2016): Implizites Wissen (2nd ed.). Frankfurt am Main: Suhrkamp.

Rebentisch, Juliane (2012): Theorien der Gegenwartskunst zur Einführung. Berlin: Junius.

Amy Karle is an internationally award-winning bioartist working at the nexus of where digital, physical, and biological systems merge. She attended Alfred University and Cornell University, where she received degrees in Art and Design and Philosophy. Karle has shown work in 54 international exhibitions, including at: The Centre Pompidou, France; The Mori Art Museum, Japan; The Smithsonian, USA; Ars Electronica, Austria. She was honored as one of »BBC's 100 Women« and has been named one of the »Most Influential Women in 3D Printing«.

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