

# Bioethics

## A Coursebook

Compost Collective





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## 9. Bioethics and (Bio)Art

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### What is BioArt?

BioArt is an art form dealing with biological material and the relation between human and other-than-human life forms and the environment. BioArtists occupy unique positions, merging the worlds of artistic expression and scientific inquiry and bridging the gap between artist studios and scientific laboratories. They engage with diverse cultural materials, biology, the environment, and other natural sciences. Their work is experimental, co-creating topographies of knowledge and inquiry and addressing controversial topics in science and technology. This provocative approach differs from traditional art's focus on aesthetics.

BioArt's practice consists of working with live tissue, bacteria, living organisms, and life processes to create artworks, where the process itself is often considered art as well. Using scientific processes and practices such as biology, microscopy, or biotechnology (including genetic engineering, tissue culture, and cloning), BioArtists produce their works in laboratories, galleries, or studios and incorporate living, growing, and sometimes unpredictable 'materials' like bacteria, tissues, and even genetically modified organisms.

BioArt extends beyond just working with animals, plants, or microorganisms and encompasses a wide range of artistic practices that engage with the living world. Artists work with animal husbandry, the consequences of climate change, or the notion of empathy towards other-than-human life forms. They might also engage in developing new biomaterials derived from living organisms like fungi, bacteria, algae, and plants to create sculptures, textiles, and other artworks. Another important strand is 'speculative BioArt', which uses speculative designs to imagine future biological technologies and their societal implications through conceptual artworks.

By working with subjects like synthetic biology, tissue culture, and cloning, BioArtists raise questions about the ethical, social, and philosophical implications of these advancements. From its origin in the late twentieth and early twenty-first centuries, BioArt is often intended to highlight themes connected with biological subjects that address or question philosophical notions or trends in science, and can be shocking or humorous at times. Notable bioartists include Eduardo Kac—who created the fluorescent 'GFP bunny', Alba—and Stelarc, who is known for his body-altering

projects. Symbiotica,<sup>1</sup> founded by Oron Catts and Ionat Zurr, is a former laboratory for BioArt at the University of Western Australia that helped to institutionalize and ground the work of BioArtists in academia. The scope of BioArt is debated, with some arguing it must involve biological manipulation, while others include work that addresses the social and ethical considerations of the biological sciences. This flexibility in definition pushes the boundaries of what can be considered art.

In sum, by utilizing scientific processes, tools, and even living organisms as mediums, BioArt merges the worlds of artistic expression and scientific inquiry and, therefore, blurs the boundaries between art and science. BioArtistic practice encompasses critical interventions in biotech practices, techno-utopian proposals, and cross-disciplinary exploration. In that sense, BioArt is intrinsically connected with bioethics. These artists grapple with bioethical questions both in their own art and in scientific practice, implicitly addressing our interconnectedness with the more-than-human world.

## The ethics of BioArt

The use of living organisms and biological ‘materials’ as art media raises questions about the moral status of these entities and what kind of ethical considerations should be applied to them. This is generally attributed to a post-humanist view where the argument that ‘species is not important’ prevails. Post-humanism challenges the anthropocentric view that humans are superior to and separate from other species. Instead, it promotes a more egalitarian and interconnected perspective on relationships between humans and other-than-humans.

Following this ethos, BioArtists take responsibility for various life forms: humans, other-than-human animals, organs, cells, and bacteria. They challenge traditional humanist ethics by recreating, pushing, and remoulding life. The protection of life’s unfolding is central to this ethics, along with critical reflection on emergent life forms. Some ethical questions may be unprecedented, deepening our understanding of ethical issues in BioArt. Discussions about these ethical issues often fall within the framework of bioethics. An integrated approach here inspires novel ways of thinking about ethics in art and technology. If we explore some implications of using live organisms as art material, we can distinguish between:

1. **BioArt and modification:** BioArt involves working with bacteria, live tissues, or other organisms by modifying life processes to create art. The ethical dilemma here is that artists must consider the impact of altering living beings for artistic expression. Is it ethical to manipulate life in this way?
2. **Dominion over life:** Encoding human dominion over life challenges our role as creators and stewards.

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1 <https://www.symbiotica.uwa.edu.au>

3. Nature's pushback: Dominion does not always persist despite human intervention. Bacteria can exchange genetic information, resisting our control. How do we balance artistic expression with respect for the autonomy of living organisms?

This use of living organisms in BioArt can be misinterpreted or sensationalized, leading to censorship and controversy. However, artists argue that they are simply making visible what is already happening as biological research behind closed doors in laboratories. For example, disposing of living tissue at the end of BioArt exhibitions is an ethical challenge. Artists often have a 'killing ritual' to expose the tissue to the environment and contaminate it, engaging the audience in ethical decision-making.

## BioArt and bioethics

Beyond ethical questions raised by the practice of BioArt itself, BioArtists can and often do inspire more thorough engagement with conceptual and ethical questions in contemporary sciences. Integrating longstanding frameworks in bioethics with existing discourses on art and morality can create new approaches tailored to the subject matter. Several aspects of BioArt's practice directly inspire novel ways of engaging with longstanding issues in the (life) sciences and bridging the gap between armchair ethics and society.

### Involvement of the audience

BioArt aims to engage the audience in a multidimensional way, making the audience participate in the artwork itself. By combining striking sonic, visual, olfactory, tactile, and thought-provoking works and concepts, BioArtists seek to stimulate both the intellect and the senses. Debates around issues such as the use of animals, genetic modification, and the creation of new life forms are leading directly to discussions of bioethics. The affective and visceral qualities of BioArt may spur audiences to adjust, revise, or develop their personal ethical frameworks. In this way, BioArt can provide novel impulses for the evolution of bioethical thinking and practices and may provide feedback on or influence bioethical frameworks.

BioArt projects can explore and assess the societal and ethical impacts of emerging biotechnologies. By engaging the public and provoking discussion, BioArt can function as a form of 'material technology assessment' and reflection on the implications of possible future developments.

### BioArt as artistic research

Many BioArtist practices are situated in the broader field of artistic research—a swiftly evolving niche in the arts that de Assis (2020) argues that Artistic Research merges the

contrasting activities of the artist and the researcher. Whereas the artist is concerned with making, imagination, experience, sensation, and the ‘subjective production of new relationships’, the researcher focus is on analyzing, measuring and giving meaning towards objectively articulating new knowledge. Artistic Research, therefore, lies at the intersection between making and analyzing, bringing together two distinct modes of operation. BioArt particularly blurs the boundaries between art, science, and ethics in epistemically fruitful ways, prompting us to reflect on our responsibilities as creators and inspiring us to take up novel perspectives.

### Bioethics, Biology, BioArt

More common, fertile ground can be found in each field’s entanglement with biology. For bioethics, this intimate connection with all life should permeate all levels of scientific practice from the design phase of research. Kristien Hens (2022) describes bioethics as a proper ethics of life, a discipline in times of super wicked problems that includes thinking about the lives and health of humans and other-than-human beings, the macrocosm and the entanglements of all these entities. BioArtists often collaborate with scientists and ethicists to navigate the ethical complexities of their work. This interdisciplinary approach can lead to new understandings and approaches at the intersection of art, science, and ethics, providing methods to make these issues tangible. BioArtists, like bioethicists, use concepts of life to guide their practices, and many share the same view of life. Many work to some extent in an institutional scientific setting, and many share critiques on science that align to some extent with the main points of the slow science movement (see, for example, Isabelle Stengers below). Both bioethicists and BioArtists inquire about the environment, new technologies, and health in the broad sense of the term, and both might become embedded in a scientific research setting. Bioethics, science, and BioArt are part of a dynamic dialogue that navigates the boundaries of life, creativity, and responsibility. Let us now turn to some methodologies from the art world that can help us think in terms of bioethics.

### How BioArt can contribute to ethical considerations towards the ‘unknown’

BioArt can rephrase questions to help us reconsider what is outside of our moral view, and can also suggest scientific methodologies that do not rely on dualisms, objectification, species hierarchies, and extractivism.

The methodologies used in BioArt might give tools that can help us further. BioArt attempts to acknowledge ‘otherness’ on its own terms. In practice, this often implies ways to deeply sense and (cor)respond—or *attune* and explore principles of attuning as a possible tool for furthering critical thinking on post-anthropocentric futures and ‘staying with the trouble’. Attunement cannot make the unknown completely knowable, but it may offer opportunities to establish relationships with what is unknown and appreciate the unknown for what it is.

Dominant ethical theories and principles are not always well equipped for working with abstract or unknown parts of our environment. An example is the ethics of the alien deep sea that we can only access indirectly. This invisibility and alienness of the sea and its inhabitants can provide new insights into ethical methodologies. Rather than tightening our grip on what is already directly known, considering what is outside our usual moral view may be just as valuable. This means reflecting on how to make ethical judgements in light of what is still speculative. To help us do so, art may stimulate interest in these unknown and invisible parts of the ecosystem and, thus, pave the way towards including the unknown in ethical reflection.

## Time

As Isabelle Stengers points out in her *Slow Science Manifesto* (2018): it is a matter of unlearning an attitude of more or less cynical ('realist') resignation and becoming sensitive once again to what we perhaps know, but only as in a dream. It is here that the word 'slow' is apt. Speed demands and creates an insensitivity to everything that might slow things down: the frictions, the rubbing, the hesitations that make us feel we are not alone in the world. Slowing down means becoming capable of learning again, becoming acquainted with things again, and reweaving the bounds of interdependency. It means thinking and imagining and, in the process, creating relationships with others that do not try to capture them but rather leave them be. It means, therefore, creating among us and with others the kind of relation that defines a life worth living and the knowledge worth being cultivated.

## Ephemeral art

BioArt is often ephemeral, embracing impermanence and creating fleeting, fragile pieces that might invite contemplation about our impermanent existence. Artists intentionally use materials with limited durability—such as ice, light, leaves, water, steam, electricity, and radiation—which change over time and challenge traditional notions of permanence. Temporary installations and performance (Bio)Art are unique to the time and place of their existence, emphasizing the transient essence of life itself. Audiences are invited to witness the ongoing processes of growth, transformation, and decay, as well as the themes of nature, mortality, and the passage of time. As such, BioArt can yield new insights for debates about the ethics of environmental restoration or end-of-life care.

## Documenting

Ephemeral art, marked by its temporary and transitory nature, presents a captivating challenge for artists seeking to preserve and document their work. Archival methods like photography and video, for example, can record the actual event. This is a subjective option to reflect the artist's viewpoint. Alternative archival methods might include

written accounts, publications, posters, and even manifestos associated with the artwork. Here, both the event and its documentation are subject to the vagaries of time and memory. This can inspire new ways of thinking in bioethics, particularly in contexts like medical storytelling, lived experience, and end-of-life care, where ephemeral and subjective narratives play a crucial role in shaping ethical understanding and practice.

## Conclusion

We examined the intersection of BioArt and bioethics, showing how artistic practices that engage with living materials and biotechnologies can open up new ethical perspectives. BioArt challenges traditional boundaries between science and art by working with organisms, tissues, and biological processes, often raising provocative questions about the moral status of life forms and our responsibilities toward them. Rooted in post-humanist thought, it questions human exceptionalism and fosters reflection on our entanglements with other-than-human life. By involving audiences emotionally and intellectually, BioArt can influence personal ethical frameworks and contribute to public dialogue on emerging biotechnologies.

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