

TORI BUSH<sup>1</sup>  
Erich Berger,  
Kasper Mäki-Reinikka,  
Kira O'Reilly,  
Helena Sederholm (eds.),  
ART AS WE DON'T KNOW IT

Aalto ARTS Books, 2020.

In the essay “Hybrid Ecology – To See the Forest for the Trees” Laura Beloff writes that hybrid ecology is a growing concept within bioarts that braids together aesthetic investigations and processes with environmental or biological questions. This concept is central to the ideas explored in *Art as We Don't Know It* (2020) but could also be read as the organizing system of the book—a network of knowledges built between the interconnected thinkers found within its pages. A mix of hard science, philosophical inquiries into human relationship to nature, and artistic experiments with the biological and chemical world, this volume merges silos of knowledge that have traditionally been separated.

The book was published to commemorate the 10th anniversary of the Bioart Society, an association that supports international artist residencies, programs, and exhibitions that bring together art and science in Finland. It is broken up into four thematic sections: Life as we Don't Know It, Convergences; Learning/Unlearning; and Redraw and Refigure. Within each section, essays, interviews, and art project descriptions mingle together, informing each other as well as pointing to the ideas that slide outward towards other fields. For example, the first section places an essay by scientists Markus Schmidt and Nediljko Budisa on the contemporary xenobiology field alongside an essay by artist Adriana Knouf. Knouf argues that hormone treatments are a vital practice for hybridizing humanity—making gender binaries (the male/female categories

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instead of a selected gender spectrum) less “normal.” By placing these two essays together, the reader can understand the expansive concepts of and potentials for xenobiology and future forms of life.

Essays like Knouf’s, and Rian Hammond’s “osg: Mapping a Hormone Hyperobject,” ground the expansive, abstract ideas of posthumanism and xenobiology in vital, liberatory fights being led by LGBTQ+ people. The excitement of innovative scientific research by scientists such as Schmidt and Budisa is balanced by grounding these discoveries in current scholarly ideas in the humanities which point out “that technoscience has ultimately operated as a tool of hegemonic European and North American power.”<sup>2</sup> Hammond goes on to describe how hormone production technologies led to changes in patent law that now make prescription hormones for trans and inter people mostly controlled by profit-motivated pharmaceutical companies. Further, steroid hormones are FDA-approved only in cases of hormone replacement therapy for post-menopausal women. This leads to hormone shortages that endanger the health and safety of inter and trans people. Open Source Gendercodes, a project developed at the Baltimore Underground Science Space, asks if synthetic biology can be used to democratize the production and distribution of hormones. Hammond’s essay, like many others found in this collection, imagines futures that undermine the capitalist systems. They are questions, experiments, hypotheses for how to move humanity forward in more just ways.

In addition to chronicling the current thinkers and creators of the bioarts movement, the descriptions of contemporary artworks hosted by the Bioarts Society, the School of Arts and the Design and Architecture School at Aalto University provide an overview of the field over the last decade. From the artists who helped originate the movement like Antero Kare to new artistic collaborations such as *Machine Wilderness* by Antti Tenetz, Ian Ingram, and Theun Karelse, which points to ways AI still needs to learn to “see” a forest, these projects define a growing movement in contemporary art. Other notable routes of aesthetic exploration vary from biotech performance interventions such as a color sensing antenna which translates color for the colorblind by Neil Harbisson and Moon Ribas, to Christina Stadlbauer’s project, *Ceramic Scar Tissue*, which uses bacterial processes to create a “scar tissue” over broken ceramics, an homage to wabi-sabi practices.<sup>3</sup>

The most pressing critique regarding both this book, as well as bioarts as a movement, can be found in the essay “Illuminating Multiplicity: Against the Unbearable Whiteness of Bioart” by Heather Davis, Elaine Gan, and Terike Haapoja that asks why the bioarts community is overwhelmingly white. They write: “While [bioart, art, science and posthumanism] are among

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2 Rian Hammond, “osg: Mapping a Hormone Hyperobject,” in *Art as We Don’t Know It* (Espoo, Finland: Aalto ARTS Books, 2020), 139.

3 Wabi-sabi is a Japanese aesthetic that values the imperfections and transience of the world.

the most progressive fields of theory and creative practice in their commitment to exploring timely and ethically charged issues in science, medicine and biotechnology through novel aesthetic forms, they simultaneously seem to be troublingly detached from the equally urgent fronts of decolonialization and intersectionality.”<sup>4</sup> Recently, there has been a scholarly turn towards combining ecocriticism and posthumanism with critical race theory or postcolonial theory. Elizabeth Deloughrey’s recent *Allegories of the Anthropocene* (2019) or Mel Chen’s *Inanimacies* (2012) both blend questions of race, sovereignty, humanity and environment. However, there has been such a long history of separating the human from ecology, rather than investigating how our epistemological and ontological approaches to imagining and living within the environment produce and impact each other, that there is much more work to be done.

The work in this book is important now because of the critical nature of living amidst the global warming crisis and rethinking our world through the lens of the Anthropocene (or Capitalocene, Plantationocene, Chthulucene or other neologisms).<sup>5</sup> This book speaks to a broader project of environmental artists and scholars—the co-creation of work, material or intellectual, is no longer a priori human. As the field continues to grapple with the complexities of that assertion, this book acts as a strong example of how multi-species and posthuman entanglements are fertile ground for design and inspiration. Connecting scholars, visual artists, musicians, and filmmakers with each other as well as with extra-human collaborators is the contribution of *Art as We Don’t Know It* to the field.

I applaud the editors’ choice to make this book free and available in PDF form on the Internet. As many of these essays point out—redefining a relationship between humans and our environment requires rethinking many structures such as global economics. By making this book open access, there is an integrity, vitality, and immediacy to such sharing of knowledge that will encourage readers to return to it again and again.

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4 Heather Davis, Elaine Gan, and Terike Haapoja, “Illuminating Multiplicity: Against the Unbearable Whiteness of Bioart,” in *Art as We Don’t Know It* (Espoo, Finland: Aalto ARTS Books, 2020), 215.

5 The Anthropocene is an unofficial unit of geological time which follows the Holocene and is defined by the human species’ ability to significantly impact the Earth’s climate and ecosystems. The term “Anthropocene” is derived from the Greek word anthropo for “man,” and was coined by Eugene F. Stoermer and Paul Crutzen. Scholars such as Donna Haraway have critiqued this term for continuing to place priority on the human, as a mode of thinking that led to climate change in the first place. Haraway has proposed “Chthulucene” instead, as a monstrous reimagining of how we conceive of kin and our relation to the Earth; Jason Moore coined “Capitalocene,” a geological era defined by the impact of capitalist systems on the planet, and Andreas Malm suggests “Plantationocene,” to refer to a monocultural institution that used forced labor and resource extraction as a model for global development.