COMMENTARY

Imagining sustainable futures: a response to Buhr

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Abstract
In this response, I express sympathy for Buhr's proposal to expand our typology into an ethical framework of eco-normative profiling of (sustainable) technologies. I reflect on crucial issues that this framework should include, offering some words of caution against taking concepts such as Anthropocene and sustainability too lightly. I end with an invitation to include multiple and diverse perspectives about what sustainable futures could look like.

Keywords Biomimetic design · Technology and nature · Ecological sustainability · Sustainable futures · Technology assessment

With the looming ecological crisis and the consequent threats of climate instability, biodiversity loss, and soil degradation, addressing the ecological dimension of human life becomes one of the most crucial tasks of our times. In the knowledge- and resource-intensive lifestyle of modern societies, technology has become, de facto, the standard reply to most of our empirical problems. So called "green", "sustainable", or "nature-based" innovations such as renewable energy, electric vehicles, carbon capture technology, vertical farming, artificial photosynthesis, but also agroecology, bio-design, eco-design, and of course biomimicry are framed as the heralds of a societal transition to more sustainable modes of production and consumption.

Technologies come in turn with often implicit embedded values, norms, and expectations. These "normative and ideological dimensions", as Buhr highlights, are involved "in the planning, development and administrative incorporation of products, technologies and infrastructures" (Buhr, 2023, p. 3). Technologies are political artifacts, they imply trade-offs between different particular values, such as sustainability and personal freedom, and fit different societal visions of the future (Popa et al., 2023; Winner, 1980). Biomimicry and other bio-inspired technologies are often aligned with a techno-optimistic narrative that frames innovation as the key factor in sustainable development (Gerola et al., 2023). Navigating

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between the techno-solutionism implicit in many green technology projects and technophobic reactions against any technological intervention is a central challenge for the ethics of sustainable technologies (Sætra, 2023).

In order to evaluate the potential and limits of such allegedly sustainable innovations, we need a normative framework that incorporates not only the ethical dimension of technology but also societal and ecological ones. Buhr's proposal for an eco-normative profiling of technology based on our framework is an interesting and promising step in this direction. It is essential to pair the normative evaluation of technologies, including the societal narratives they may support or challenge, with the empirical assessment and discussion of their environmental impacts. The thin line dividing sustainability from green washing is often hidden in the numbers that quantify resource usage and pollution and in their interpretation. Narrative alone does not predict impact, as biomimetic technologies in robotics and the military may exemplify (Broeckhoven & Winters, 2023).

The expansion of moral profiles into broader normative profiles that also account for societal and ideological dimensions is a welcome addition, that can contribute to balance the need for ethics of technology to serve both ethical governance and social critique. It is prudent to embrace some concept of ecological sustainability as a fundamental normative principle for the framework; however we should not adopt it uncritically. Framing sustainability "in light of the Anthropocene" (Buhr, 2023, p. 3) without questioning the problematic aspects of either concept may have the unwanted consequence that what ends up being sustained is just business as usual (Lorimer, 2017). The theoretical lens with which we construct the normative categories of the framework are themselves not neutral, and their implications must be carefully examined.

The attempt to account for a broader social and cultural dimension raises other, fundamental questions: Who makes the future? Whose visions, hopes, and ideas contribute to imagine it? And how do those imaginaries drive research funding, industry, policy, and society? These are just some initial questions that an eco-critical turn in philosophy of technology might start asking. Pluralizing who we do philosophy for and where we do it from is a form of recognition of the global but heterogeneous stage of modern society, whose dreams of sustainable transitions are still powered by an unjust distribution of social and ecological burdens.

Declarations

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Consent to participate Not applicable.

Consent to publish Granted.

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