Book Review

Ethics of Socially Disruptive Technologies: An Introduction

Ibo van de Poel, Lily Frank, Julia Hermann, Jeroen Hopster, Dominic Lenzi, Sven Nyholm, Behnam Taebi, and Elena Ziliotti (Open Book Publishers, 2023).

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Abstract: This review essay critically engages with Ethics of Socially Disruptive Technologies: An Introduction (Ibo van de Poel et al., 2023), a volume that explores how emerging technologies generate not only practical and social upheavals but also conceptual disruptions that destabilize categories such as democracy, responsibility, personhood, and nature. By advancing a framework of conceptual gaps, overlaps, and misalignments, the book highlights how technological change compels conceptual engineering and technomoral reflection. While its strengths lie in methodological clarity, intercultural ambition, and theoretical provocation, its limitations include Eurocentric scope and uneven empirical grounding. Overall, the volume is a significant contribution that redefines the ethics of technology and offers vital implications for future research, pedagogy, and anticipatory policy design.

Keywords: Socially Disruptive Technologies; Ethics; Conceptual Disruption; Democracy; Responsibility; Personhood.

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Ethics of Socially Disruptive Technologies: An Introduction, edited by Ibo van de Poel, Lily Frank, Julia Hermann, Jeroen Hopster, Dominic Lenzi, Sven Nyholm, Behnam Taebi, and Elena Ziliotti (Open Book Publishers, 2023), represents one of the most ambitious attempts in recent years to reframe the philosophy and ethics of technology around the notion of disruption. This volume, emerging from the Dutch Ethics of Socially Disruptive Technologies (ESDiT) research program, asks us to go beyond seeing technologies as merely impactful and to recognize that they can destabilize and even reconfigure foundational concepts by which we interpret human life, society, and nature. The central claim is that new technologies such as social media, social robots, ectogestative devices, and climate engineering not only create practical challenges but force us to rethink concepts like democracy, personhood, responsibility, and nature itself. In this sense, the book is not simply about ethics *of* technology but about ethics *through* conceptual disruption, positioning itself at the intersection of philosophy of technology, political theory, and intercultural ethics.

The introduction provides a rich set of illustrations of how technologies destabilize established concepts. The invention of the ventilator, for instance, required redefining "death" by introducing the contested concept of "brain death" (p. 13). Similarly, geoengineering unsettles the natural/artificial binary, making it unclear where "nature" ends and "technology" begins (pp. 20–21). These examples demonstrate the book's core argument: technological developments not only have material impacts but generate conceptual crises, requiring what the authors call "conceptual engineering" (p. 27). By

emphasizing this, the book aligns itself with contemporary philosophical debates (Haslanger, 2020) on the dynamic and normative role of concepts. Yet what distinguishes it is its empirical grounding in actual technological cases, demonstrating that conceptual change is not a speculative philosophical exercise but a lived necessity in navigating twenty-first-century innovations.

One of the book's most compelling contributions is the articulation of different kinds of conceptual disruption. Hopster identifies conceptual gaps (new phenomena for which no adequate concepts exist), overlaps (where conflicting concepts apply simultaneously), and misalignments (where concepts no longer align with values or practices) (pp. 19–22). This taxonomy offers a productive way to classify disruptions, moving beyond vague invocations of "crisis" or "instability." For example, humanoid robots generate gaps, as our current concepts of personhood and agency are inadequate to capture entities that evoke empathy but lack intentionality (pp. 19–20). Climate engineering generates overlaps, as interventions like solar radiation management blur distinctions between "natural" and "artificial" (p. 21). Social media produces misalignments, as the concept of "democracy" no longer maps neatly onto algorithmically mediated public spheres (pp. 22–23). By organizing disruption into these categories, the book equips scholars and policymakers with analytical tools for diagnosing the kinds of challenges technologies create, and for considering what conceptual revisions might be needed.

Chapter 2, authored by Ziliotti and colleagues, focuses on social media and democracy, arguing that platforms have radically transformed democratic processes at three levels: interpersonal relations among citizens, national politics, and global discourse (pp. 33–34). The central claim is that social media challenges the relationship between demos and the public sphere by giving non-citizens substantive influence over political debates, thereby destabilizing the boundaries of democratic community (p. 34). The chapter is persuasive in showing how digital platforms disrupt long-standing ideals of deliberative democracy. At the same time, it highlights the political responsibility of engineers and designers, underscoring the normative stakes of algorithmic design (pp. 36–37). A strength of this analysis is its recognition of "differential disruption" (p. 17): marginalized groups often suffer disproportionate harms from disinformation and online manipulation, revealing that technologies exacerbate preexisting inequalities. However, while the chapter gestures toward African contexts to show how disruptions manifest differently outside the West (p. 25), it largely remains within a Euro-American framework. This underscores a tension that recurs throughout the book: the aspiration toward intercultural perspectives is genuine but often remains underdeveloped.

Nyholm's chapter on social robots (ch. 3) provides perhaps the clearest case of conceptual disruption. The affective reactions people exhibit toward humanoid robots—anger when a robot is harmed, empathy when it appears to suffer—challenge the traditional boundary between persons and artifacts (p. 19). The chapter skillfully shows how such technologies force reconsiderations of personhood and agency. It also connects to the problem of "responsibility gaps" (Matthias, 2004), especially as semi-autonomous robots make decisions independent of human operators. For instance, if a care robot fails in a nursing home, should the blame rest with the manufacturer, the programmer, or the institution? Nyholm's discussion ties these dilemmas to broader questions about control and accountability in artificial intelligence (pp. 21–22). A strength of this chapter is its balance of philosophical rigor and real-world relevance. However, it could have been enriched by engaging more directly with empirical research in human-robot interaction, which could test whether the normative intuitions it analyzes are borne out in actual practices. Without this, the analysis risks remaining largely conceptual.

Taebi and Lenzi's chapter on climate engineering (ch. 4) foregrounds questions of intergenerational justice and planetary ethics. They argue that geoengineering interventions such as solar aerosol injection (SAI) or marine cloud brightening (MCB) profoundly destabilize our concepts of nature and responsibility (pp. 14–15). If humans can deliberately manipulate atmospheric systems, what does it mean to allow "natural" processes to occur? The authors emphasize that climate engineering introduces novel risks and uncertainties, raising questions of how to ensure fair representation for non-human beings and future generations in democratic deliberation (p. 22). This analysis resonates with Gardiner's (2011) argument that climate change constitutes a "perfect moral storm" because it exacerbates temporal, spatial, and interspecies injustices. Yet, while the chapter is conceptually rich, it is somewhat thin on geopolitical analysis, particularly regarding how Global North–South inequalities shape access to and control over such technologies. Given the reality that climate engineering proposals are likely to be developed by powerful states or corporations, the absence of a deeper engagement with global justice is a notable gap.

Perhaps the most provocative chapter is Frank and Hermann's analysis of ectogestative technology (artificial wombs) (ch. 5). By separating gestation from women's bodies, such technologies disrupt entrenched notions of reproduction, kinship, and motherhood (pp. 113–115). The authors argue that artificial wombs raise profound questions about the moral status of embryos, parental responsibilities, and gender equality. They note that ectogestation could reduce health risks for pregnant women, yet also risk reinforcing inequalities if accessible only to elites. More fundamentally, the technology challenges the concept of "the beginning of life," forcing reconsiderations of moral and legal definitions. This chapter is especially valuable for its engagement with feminist philosophy, showing how technologies reconfigure gendered experiences. Still, as with other chapters, it would have benefited from more sustained attention to intersectionality, considering how race, class, and culture might mediate the disruptive impacts of reproductive technologies.

Hopster's concluding chapter (ch. 6) synthesizes the themes by arguing for a "conceptual turn" in the ethics of technology, emphasizing that philosophers must actively engage in conceptual engineering (p. 27). He notes that concepts are not static but historically contingent, shaped by technologies, institutions, and intercultural encounters. Conceptual disruption, therefore, is not a pathology to be corrected but an opportunity for ethical innovation. Yet, as Hopster acknowledges, this raises difficult questions about authority: who has the legitimacy to decide which concepts should be revised, and how? The editors gesture toward intercultural ethics as a corrective, citing Ubuntu and Māori traditions as resources for reconceptualizing personhood and ecological responsibility (pp. 24–25). These gestures are welcome, yet the integration of non-Western frameworks remains relatively superficial, often appearing as illustrative rather than foundational. This is perhaps inevitable given the book's origins in a European research consortium, but it highlights an area for further development.

Beyond the individual chapters, the book's broader contribution lies in reframing the ethics of technology. Traditional approaches often focus on assessing risks and benefits, applying existing ethical theories to new contexts. By contrast, this volume insists that technologies transform the very conceptual landscape in which ethical reflection occurs. As Swierstra (2013) has argued in his account of "technomoral change," technologies not only generate new moral problems but alter the values and norms by which societies evaluate those problems. Similarly, Brey (2012) has advocated "anticipatory ethics," emphasizing the need to reflect upstream in technological development. *Ethics of Socially Disruptive Technologies* advances these discussions by insisting that conceptual disruption itself must be a central object of study, and that ethics must be proactive in revising and engineering concepts in line with human values.

The book is not without its limitations. The most obvious is its Eurocentrism. Despite acknowledging the need for intercultural perspectives, the majority of contributors are based in Dutch universities, and the frameworks employed are largely Western. The brief references to Ubuntu, Māori, or Buddhist perspectives (pp. 24–26) feel more like supplements than integrated methodologies. This raises the risk of tokenism, where non-Western frameworks are cited without sustained engagement. Moreover, while the book aspires to bridge philosophy and practice, the path from conceptual analysis to policy recommendations remains underdeveloped. Policymakers may find the discussions intellectually stimulating but struggle to translate them into concrete governance mechanisms. Finally, while the volume is rich in case studies, it could have benefited from a stronger methodological framework for how to study conceptual disruption empirically, perhaps through interdisciplinary collaborations with social science.

Despite these limitations, the book's achievements are significant. It provides a coherent framework for understanding the conceptual upheavals technologies bring, organizes these disruptions into analytically useful categories, and demonstrates their stakes through well-chosen case studies. It also advances the philosophical agenda by insisting that ethics must not only respond to technological change but actively participate in reshaping the concepts through which societies interpret that change. For scholars, the book is a valuable resource for teaching and research, offering concrete examples of how technologies destabilize concepts. For educators, it provides case studies that illustrate the lived stakes of conceptual disruption, making it highly suitable for classroom use. For policymakers, it signals the importance of reflexive governance that is not only attentive to risks and benefits but also to the evolving moral vocabulary by which technologies are understood.

In conclusion, *Ethics of Socially Disruptive Technologies: An Introduction* is a landmark volume that successfully reframes the ethics of technology around the notion of conceptual disruption. Its central insight—that technologies do not merely affect practices or institutions but destabilize foundational concepts—offers a powerful lens for future research. While the book remains anchored in Euro-American frameworks and could benefit from deeper intercultural and empirical engagement, it nonetheless sets a high standard for philosophical inquiry into technology. Its significance lies not only in its analysis of specific technologies but in its methodological call for a conceptual turn in ethics. As technologies continue to reshape the boundaries of human life, society, and nature, the challenge will be to develop ethical and conceptual frameworks that are as dynamic and transformative as the phenomena they seek to govern. This book provides a crucial foundation for that task, inviting philosophers, policymakers, and educators alike to embrace conceptual disruption as both a challenge and an opportunity in navigating the technological futures ahead.

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