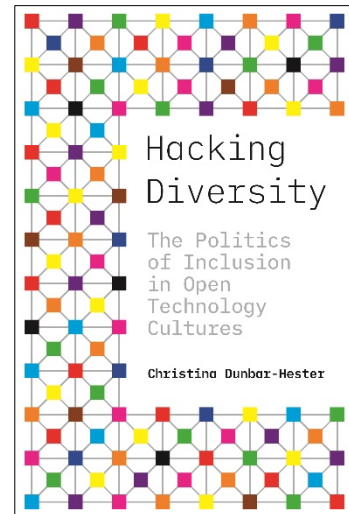Christina Dunbar-Hester, **Hacking Diversity: The Politics of Inclusion in Open Technology Cultures**, Princeton, NJ: Princeton University Press, 2019, 288 pp., $27.95 (paperback).

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In the finale for the first season of *Silicon Valley*, the fictional team of programmers at the center of the series enter the pitch competition "TechCrunch Disrupt." The episode features a nearly two-minute montage of satirical product pitches, each promising a new and revolutionary technology. "We are making the world a better place," one team claims, "through canonical models that communicate between endpoints." Another says, "We're making the world a better place through scalable, fault tolerant, distributed databases." They are absurd in their hyperbole and repetition, but the deeper humor is in their "interventions." Each is purely technical. It is pretty clear that a new database is several steps removed from the way that most people (except maybe programmers) experience daily life. Yet, critical technology scholarship reminds us that databases can and do change the world, often not for the better. When communication scholars turn their attention to these technological projects, we often center the social worlds that produce them. We ask questions about representation in technology design; we ask whose values and perspectives are built into software and whose are left out of the process. While software and hardware remain the site of intervention, we hope that changing technological participation will change the world.

Christina Dunbar-Hester's *Hacking Diversity: The Politics of Inclusion in Open Technology Cultures* explores the potentials and limits of diversity advocacy for transforming technological culture. At the center of her inquiry is the open technology community. The open technology community is organized around projects, tools, and activities that are driven by the open sharing of knowledge. It extends outward from the Free/Libre and Open Source Software movement to broadly include hackers, makers, and other dedicated participants who voluntarily contribute to solving technical problems. As a field site, the open technology community represents a "laboratory" for studying how a culture held together by shared interests and volunteered time addresses social inequality (p. 3). Their diversity advocacy is part of a larger conversation in American culture—and technology cultures, more specifically—about issues of gender discrimination and other forms of exclusion. Yet, Dunbar-Hester argues that the ethos and artifacts at the center of open technology cultures have specific baring on how they address these problems.

Much of the activity in open technology cultures is driven by a hands-on approach to problem solving, and diversity work is no exception. The hacker mentality is driven by a belief in the power of human action. In the introduction, for example, a diversity advocate describes the way that "making things work" drew her to programming. She states, "If there's a problem with a computer, it's because you told it to do something wrong" (p. 10). By Dunbar-Hester's analysis, this statement not only on reveals a perspective on computational systems but a perspective on social systems. The lack of diversity in the open technology

community is treated like an error or a bug, something that is caused by participants in the community and can be solved through a combination of individual tinkering and collective initiative.

Each of the five empirical chapters that make up *Hacking Diversity* focus on one set of strategies used by open technologists to address disparity in their community. Some of these strategies are material, such as running explicitly feminist servers or securing space for feminist hacker meet-ups (chapter 4). Other strategies are discursive. In chapter 3, for example, Dunbar-Hester discusses community controversies over "codes of conduct." Codes of conduct are written to discourage overtly discriminatory behavior by concretizing a set of guiding principles for various sites of technology production ranging from in-person tech conferences to online platforms like GitHub. The conflicting responses expressed by the community become especially illustrative for Dunbar-Hester's overarching argument. On the one hand, open technology cultures are founded on ideals of agency and autonomy that come into direct conflict with rules of any sort. But, on the other hand, codes of conduct are "a form of hacking that is congruent with how geeks solve technical problems" (p. 95). They are instructions for processes that leverage multiple contributions and layers of discussion to get to a solution. In both cases, the legacies of open technology culture give shape to diversity advocacy work.

Diversity advocacy strategies can also be figurative, as participants negotiate the relationship of their activities to spheres such as the technology industry (chapter 5) and radical politics (chapter 6). Yet, Dunbar-Hester observes that all of these strategies are connected through a foundational belief that technology is a source of social empowerment. This belief emerges, in part, because of a tendency for programmers to generalize from their own experiences. Diversity advocates flip the exclusionary logic of "agency for me but not for thee" (p. 13) into what empowers me empowers thee. However, Dunbar-Hester argues that this vision of inclusion reinforces existing hierarchies of technical expertise. Inclusion almost always refers to the intellectual and creative sphere of writing code, predominantly in the Global North. It draws specific boundaries around what counts as participation that exclude work such as tech support and hardware manufacturing, jobs that are performed by women the world over. These boundaries make it difficult for diversity advocates to recognize the way that gendered and racialized notions of value will perpetuate inequality, even if representation changes.

As Dunbar-Hester observes, the meaning of diversity is difficult to pin down. In some ways, it is used by open technologists as a catch-all term. Throughout the book, diversity advocates discuss issues of representation for multiple, intersecting aspects of identity, including race, nationality, disability, sexual orientation, and gender performance. Yet, more often diversity is pretty singular: "the *who* of diversity usually means women" (p. 19). By definition, diversity implies multiplicity but it ends up being used as a type of synecdoche—where the whole stands in for only a part. Dunbar-Hester's analysis reveals that this ambiguity both enables and constrains the work of diversity advocates. Because increasing the number of "Women in STEM" has been widely accepted as an opportunity to improve product design and profitability, gesturing toward this understanding of diversity can conceal more radical political agendas. However, in appealing to the goals of grant funders and industry partners, diversity is limited in its ability to leverage critiques that account for a lack of technological participation as a product of larger, structural issues. Dunbar-Hester's attention to terms—to the ideology imbedded in "technology" and the slipperiness of "diversity"—puts communication at the center of her project.

The conceptual core of *Hacking Diversity* shines when it is read in the light of Dunbar-Hester's (2014) previous book, *Low Power to the People: Pirates, Protest, and Politics in FM Radio Activism.* Here, Dunbar-Hester explores how technologies become entwined with political ideals like empowerment or freedom. Playing on the foundational essay by Langdon Winner, she asks how politics come to have artifacts (p. xvi). *Hacking Diversity* extends this project aiming to "assess engagement with technology as a site of purposive political action" (p. 5). Dunbar-Hester ultimately concludes that, while diversity advocacy can be both personally transformative and transformative of the social interactions among community members, the transformations cannot really scale.

In *Hacking Diversity*, Dunbar-Hester seeks to disentangle technological participation from the enormous significance bestowed on technology by American culture. Dunbar-Hester calls for the open technology community—and indeed all who celebrate technology design as a method of political empowerment—to develop a "clearer understanding of what various concerns and interventions around diversity can and cannot accomplish" (p. 17). By clearly defining our terms and stakes, we will not find immediate solutions but rather the conflicts and contradictions that remain buried by initiatives for inclusion. Dunbar-Hester urges us to open space for the concrete conversations that are needed to make real change possible.

Reference

Dunbar-Hester, C. (2014). *Low power to the people: Pirates, protest, and politics in FM radio activism*.
        Cambridge, MA: MIT Press.