

Vincent Mosco: To the Cloud - Big Data in a Turbulent World.

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Reviewed by

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Vincent Mosco begins and ends *To The Cloud: Big Data in a Turbulent World* by exploring metaphors about clouds and applying them to cloud computing. These metaphors offer a way into understanding the history of cloud computing: where it came from, why it began, how its evolved, and the ways it works in our everyday lives. He draws on literature, including a book entitled *The Cloud of Unknowing* by a medieval English monk (pg. 13). As I write this, I switch over to my streaming music service momentarily and discover it playing a song of the same name, this time by a contemporary artist, James Blackshaw. Given that I'd heard of neither the song nor artist until this very moment, this makes me a bit suspicious about how closely I'm being watched by my music player. Was it reading my email? Did it discover my notes, uploaded to the cloud on Evernote? Does it know this book was shipped to me? It's almost difficult to believe it is complete coincidence. And yet this is one of the promises of the cloud and big data - a world where what we want (even when we didn't know we wanted it) is at our finger tips exactly when we want it.

However, Mosco is not willing to accept this world as it is presented to us by the cloud computing industry (and the industry's major players: Amazon, Google, Microsoft, Apple, and Facebook). He manages to be both intensely critical and deeply engaging, never getting lost in abstract political arguments and keeping all but the most ideological cloud supporters engaged, while simultaneously keeping the economic, social, and power implications of the cloud always close at hand. Evgeny Morozov's recent essay [The Taming of Tech Criticism](#) argues that Mosco is one of the few tech critics to surface and explore seriously the political economy of technology - and I couldn't agree more. Mosco is never afraid to call out things as they are, using clear language that makes no attempt to obscure his political orientations. As he writes, "The cloud and big data are engines that power informational capitalism even as they enable an increasingly dominant way of knowing" (pg. 2); "the cloud" as it stands is effectively synonymous with the small number of corporations that

control it, and by proxy, increasingly dominate our ways of making sense of our individual and social lives.

To the Cloud is diagnostic. In the chapter *From the Computer Utility to Cloud Computing*, Mosco takes up arguments about whether the cloud should be regulated as a utility. He makes a fairly convincing argument that, in fact, it could be - except that cloud companies are actively resisting such a move via every means available to them. He worries that, though some early images of cloud computing, especially the Cybersyn project of Allende's Chile, were focused on promoting political and economic democracy, the vast majority of resources in cloud computing are building wealth and power for a small number of people while further disenfranchising the rest.

The book never strays far from material realities, as Mosco makes a great effort to re-contextualize the "cloud" by revealing its physicality, even as the cloud's worldwide marketing team attempts to reinforce an image of the cloud as immaterial. In a chapter entitled *Dark Clouds*, Mosco takes up environmental sustainability, labor issues, and security / privacy, discussing the economic, social, political, and environmental effects of massive data centers being built to support cloud computing. He worries about the massive labor shifts that follow in the wake of cloud computing adoption by corporations and governments. While the cloud's promoters have done everything possible to make the cloud the "right choice" environmentally, financially, and so on, Mosco points out the frightening fissures between this propaganda and the groundtruth reality.

In the chapter *Big Data and Cloud Culture*, Mosco discusses the ways that big data, and the rhetoric of its promoters, is attempting to replace traditional models of social science. Why operate based on theories when massive data sets can simply tell us what happens, when, and in which contexts? Mosco is rightfully concerned that one very narrow epistemology is seeking to replace many possibilities available. He also worries that this kind of data, rather than being used to make people's lives better, is often being used against them - sharing and analyzing data to promote the wealth of a few, while further controlling and repressing the rest.

Despite this lineup of concerns, the reader should never understand Mosco as a pessimist. Indeed, when he returns to the metaphors with which he began the book, he does so in search of alternative framings that would situate the cloud in service of everyday people. *The Cloud of Unknowing*, to return to this example, poses a fundamental challenge to the rhetoric of cloud computing's promoters: will vast quantities of information ever lead us to wisdom? Throughout the book, Mosco surfaces questions like these, as well as serious concerns about the direction of cloud computing. However, he also highlights the powerful resistances to these "dark clouds" taking place around the world. From community mesh networks to data center protestors to global digital labor organizing, people around the world are fighting battles—and even sometimes winning—against the corporate cloud and the "data-intelligence complex" (p. 184). Mosco's detailed and nuanced analysis of the political, financial, promotional, and cultural elements of cloud computing provide those interested in community-based models of ICT with both a model with which to critique dominant paradigms and a series of questions we might ask ourselves about our work. For example,

- What do participatory, community-based models of the cloud look like, and how do we continue to make them increasingly accessible to people and communities?
- How do we surface and highlight the material—and often disturbing—nature of seemingly ephemeral bodies like the cloud? Have other similar campaigns been successful, and what can we learn from them?

- How do we prop up and support alternative and community-based research and ways of knowing in a world where algorithms, big data, and research sans theory seem increasingly dominant?
- What alliances can we build, across which boundaries, to build alternatives to the corporate cloud that serve everyday people rather than the powers that be?

I've been working on the last question for several years with social workers, exploring the implications of the cloud and big data on their everyday practice. Building these bridging conversations is challenging, as helping professionals and technologists share little professional language in common. However, its in these alliances - like the alliances of the global workers movements against cloud computing on which Mosco reports - that resistance against these powerful and increasingly hegemonic forces can be mounted and sustained. Books like Mosco's offer an important "way in" for those outside the field to understand the languages in use, as well as the issues at hand, in cloud computing.

For critics of ICT, this book offers a model from which to begin working. For activists, it is a clarion call. For readers who pick up the book without much background, it may be a well-needed awakening. For Community Informaticists, the book is all of these things, and a must-read at that.

References

Morozov, E. (2015). The Taming of Tech Criticism. *The Baffler*, 27. Retrieved from <http://www.thebaffler.com/salvos/taming-tech-criticism>