

Review of *AI in the Wild: Sustainability in the Age of Artificial Intelligence* (Peter Dauvergne, MIT Press, 2020)

AI in the Wild: Sustainability in the Age of Artificial Intelligence, by Peter Dauvergne, provides a thoroughly researched and comprehensive tour of the intersection of artificial intelligence (AI) and sustainability. From robots saving coral reefs, to machine learning (ML) systems trained on TensorFlow fighting deforestation, Dauvergne offers chapter after chapter of bold examples of the saving power of AI. The promise, however, is sharply contrasted with the peril – and it seems that the peril is far more alarming than the promise is inspiring.

The book consists of ten chapters in addition to an introduction and conclusion. The first part of the book introduces “The Global Political Economy of AI” — namely the technological, political, and economic underpinnings of the big data and machine learning revolution. The next several chapters highlight the potential of AI-enabled sustainability efforts, ranging over topics such as wildlife conservation, energy efficiency, agriculture, and “smart” cities. The second half of the book highlights the potential perils. Corporate profits and state power are not sitting on the sideline while the tree-huggers deploy their deep neural networks to save the elephants. As Dauvergne details, the primary drivers behind research and development in AI are inherent threats to global sustainability. AI enables more efficient resource extraction than ever before. It facilitates authoritarian surveillance efforts, accelerates consumption through targeted advertising, and powers new autonomous weapons systems.

The book approaches these issues through what Dauvergne calls a “critical political economy lens” (p. 8). This means that technology is not understood as “benign or neutral, but as a reflection of capitalism and an instrument of power” (p. 7). The primary upshot of this approach is the important insight that “AI is never going to produce a sustainability revolution within the contemporary global order” (p. 8). In other words, all of the fancy big data and ML techniques that can be applied to sustainability efforts only treat the symptoms and do nothing to address the root cause: the global capitalist order.

So what should we do? What *can* we do? On this front, the book disappoints. As stated above, the book is certainly valuable as a comprehensive overview. There is much to learn about the current state of the technology, business initiatives, and policy efforts surrounding AI. But it does not offer any kind of argument or fresh perspective on the normative questions raised by AI. Each chapter takes the form of a well-researched list. Here is what this nonprofit is doing with recycled cellphones in the rainforest. Here is what Amazon and Google are doing to reach net-zero emissions. Here is what McKinsey and PricewaterhouseCoopers say about AI and risk. And so on.

Dauvergne’s “critical political economy lens” does not turn out to be all that critical. The concluding chapter offers an overview of regulatory efforts aimed to address all of the threats. These efforts, however, are deemed inadequate:

Strategic state plans and corporate self-governance alone will never be able to prevent this technology from reinforcing the destructive forces of capitalism and militarism. The

financial and political stakes are too high. And those deploying AI in pursuit of profits and power are too strong and are surfacing from too many different jurisdictions. (p. 196) Agreed on all fronts, now what? All that Dauvergne offers is that “This is going to require a far bigger uprising of global civil society” (p. 196). Are any of the aforementioned regulatory efforts more promising than the others? Are there concrete steps we can take to give these regulatory bodies real teeth? Are there historical analogues that proved successful and that might guide our efforts in this new domain? All we are told is that “sweeping political and economic reforms” are required, and that we cannot count on technological innovations alone to save us (p. 196).

This brings me to a unresolved tension that pervades the text. At the outset, the author asserts that technology is never just a neutral tool. This is a well-established idea in science and technology studies and 20th Century philosophy of technology. Let’s call the idea that technology is merely a neutral tool the “instrumental view” of technology. Dauvergne claims to reject the instrumental view, but either does not go far enough, or actually tacitly embraces it. He seems to think that rejecting the instrumental view amounts to asserting that AI is “a reflection of capitalism and an instrument of power” (p. 7). But rejecting the instrumental view requires more than this. It requires attention to how the technology itself can have a structuring effect on society – that is, how the technology invites or affords certain power structures. Dauvergne does not do this. His critical lens remains focused on the motives, intentions, and interests of powerful state and corporate actors:

Figuring out ways to enhance the sustainability benefits and limit the harm of artificial intelligence is going to require a deep understanding of the *motives and plans of the most powerful actors* now shaping this technology. (p. 36, my emphasis; see also the block quote above from p. 196)

This may be true, but despite it’s critical tone, it amounts to an uncritical adoption of the instrumental view. If it is the principal actors of the capitalist order that are at fault, then nothing about AI is really problematic except that it is being abused by these powerful actors. In other words, this amounts to the view that AI is merely a tool, like a gun.

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