

The Technology of Collective Decision-Making

by Ken Liu

Of the 22 million comments submitted to the FCC regarding 2017's controversial rollback of net neutrality, some 18 million were fake, an investigation by the New York Attorney General's office has found. The broadband industry funded the fraudulent creation of about 8.5 million of those, while a 19-year-old college student submitted 7.7 million, and the remainder came from unknown but spurious sources.

— Devin Coldewey, writing for *TechCrunch*

(<https://techcrunch.com/2021/05/06/80-of-the-22-million-comments-on-net-neutrality-rollback-were-fake-investigation-finds/>)

My work is often classified as science fiction, but I've never been satisfied with various definitions proposed for the genre. Not all my stories are about 'science,' however broadly defined, and neither is a knowable universe a core assumption in all of them. Many of my stories aren't even set in the future, though I still think of them as belonging to the genre. Over time, I've decided that a precise definition is not nearly as interesting as telling stories that excite me, which always turn out to be centered around *technology*.

The word 'technology' is derived from *tekhne* (art, skill, craft, as opposed to *episteme*, or knowledge) + '-logia' (a speaking or discourse). *Tekhne*, in turn, comes from *teks*, the Indo-European root for 'to weave,' while *logia* comes from *leg*, which means 'to gather' and is the root for words like 'collect' and 'college.' In other words, 'technology' is a discourse about craft—or a story about making, exactly the sort of thing I prefer.

Our traditional view of technology is much too narrow. It isn't just computers and rockets, lasers and bits. Any kind of craft, of making the human mind tangible, weaving and gathering into being a reality that springs forth from our heads like Athena leaping out of Zeus, *is* technology. And the most important form of technology that any vision of the future must account for is the technology for collective decision-making.

What do I mean by that? I include in that term all crafted solutions for collectives to come together and decide what to do, how to do those things, and why do anything at all. That means kings, parliaments, courts, yamen, juries, councils, elections, town meetings, bureaucracies, tyrants, mobs. That means systems of precedent and compiled codes, constitutions, national mythologies. That means polls, propaganda, political parties, protests. That means trading clans, guilds, corporations, unions, boards of directors, nonprofit entities. As products of the human mind, these are also technologies, just like the C programming language or CRISPR. Moreover, these technologies have impacted human history as much as the invention of the calculus or the development of the double-acting piston bellows, and are as much a legacy of our species as the Great Pyramids or the Apollo Missions.

Despite its importance, the technology of collective decision-making tends not to be a focus of science fiction. In the same way that writers become trapped by the social mores and unexamined dominant ideologies of their time, such that their portrayals of gender roles and race and class relations tend to feel dated far faster than their speculation on machines and rockets, science fictional portrayals of future politics can be cringeworthy and feel oddly conservative. Just as Victorian writers seemed to think that there could be no better alternative to empires and wars of colonial conquest, today's writers seem to think the extant version of representative democracy is the pinnacle of human achievement. Indeed, speculative fiction that focuses on the technology of collective decision-making are usually either dystopian (think *Brave New World*) or not classified as science fiction at all (think Plato's *The Republic*).

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But we live in a time when our technologies for collective decision-making are under more threat and strain than ever, and the need for bold, thoughtful speculation and innovation in this arena has never been more urgent. How can our system of soliciting and assessing popular opinion—the very foundation of responsive government—be trusted when, as the quote at the beginning shows, they've been co-opted by automation-enabled astroturfing? Moreover, these are low-tech methods, easily detected and dismissed. Once AI neural networks such as GPT-3 are brought to the realm, the linguistic equivalent of deepfakes, robots 'participating' in democracy, will be virtually impossible to distinguish from real citizens.

But even that doesn't get at the real threat. The trouble with the proliferation of bots isn't that they'll be mistaken for people, but that *people* will be mistaken for bots. Our politics is already plagued by bad-faith actors who dismiss all their critics as 'Russian trolls' or 'CIA bots,' regardless of evidence. As these tactics multiply, soon everyone will be able to dismiss everyone else who disagrees with them as a mere bit of

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disinformation. We will all be convinced of our own righteousness, that we serve the silent majority, that our opponents consist of trolls, foreigners, bots, sock puppets. Instead of gathering together to make a collective story, we have decided to retreat into fractured, solipsistic, conspiratorial narratives of rationalization masquerading as rationality.

We're already living in a science fictional dystopia. No speculation needed.

The most important piece of technology for collective decision-making—the ultimate constitution for how we march into the future, if you will—is our shared narrative. All the technologies that we prize so much—the rule of law, 'self-evident' human rights, government by the consent of the governed, fair elections, meaningful civic participation, and as-yet-unknown technologies that will enable us to correct our flaws and build fairer institutions in the future—are ultimately nothing but manifestations of shared narratives, stories about how a gathering of individuals becomes a collective, a making of 'we the people.' The worse the reality is, the more critical that our stories of the future lead with hope and dream into being the technologies that will make us whole.

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About the Author

[Ken Liu](#) is an American author of speculative fiction. He has won the Nebula, Hugo, and World Fantasy awards, as well as top genre honors in Japan, Spain, and France, among other countries.

Liu's debut novel, *The Grace of Kings*, is the first volume in a silkpunk epic fantasy series, *The Dandelion Dynasty*, in which engineers play the role of wizards. His debut collection, *The Paper Menagerie and Other Stories*, has been published in more than a dozen languages. A second collection, *The Hidden Girl and Other Stories*, followed. He also wrote the Star Wars novel, *The Legends of Luke Skywalker*.

He has been involved in multiple media adaptations of his work. Recent projects include "The Message," under development by 21 Laps and FilmNation Entertainment; "Good Hunting," adapted as an episode in season one of Netflix's breakout adult animated series *Love, Death + Robots*; and AMC's *Pantheon*, with Craig Silverstein as executive producer, adapted from an interconnected series of short stories by Liu.

Prior to becoming a full-time writer, Liu worked as a software engineer, corporate lawyer, and litigation consultant. He frequently speaks at conferences and universities on a variety of topics, including futurism, cryptocurrency, history of technology, bookmaking, narrative futures, and the mathematics of origami.

Liu lives with his family near Boston, Massachusetts.