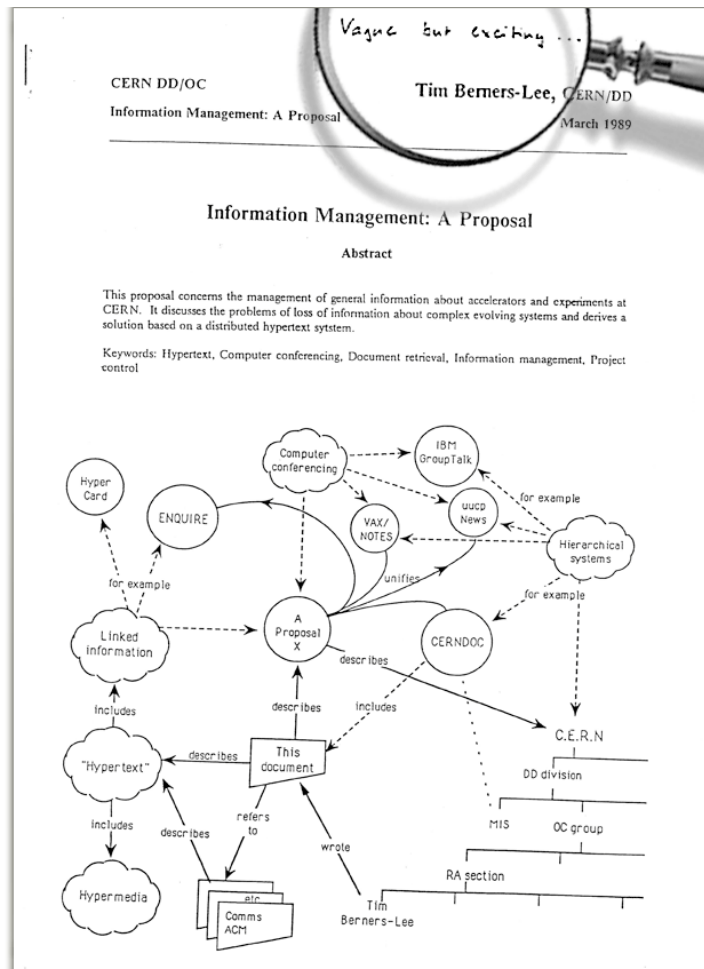# IS THE INTERNET OVER?! (AGAIN?)[1]

JAMES BOYLE[†]

About 30 years ago, in March of 1989, a British man wrote a memo to his boss. The memo had the remarkably boring title, *Information Management: A Proposal.* It looked like this[2]:

[†] William Neal Reynolds Professor of Law, Duke Law School.
[2] Tim Berners-Lee, *Information Management: A Proposal*, CERN (Mar. 1989), http://info.cern.ch/Proposal.html.

The memo came back with his boss's annotation on it. "Vague but exciting…"

Both adjectives were well-chosen. The man was Tim Berners-Lee. Now *Sir* Tim Berners-Lee. The proposal? Oh, nothing big. Just the World Wide Web. Berners-Lee's memo was something that started as a proposal for information management inside of CERN, the European Nuclear Research organization, and became the framework for the World Wide Web. You know, those three little letters in your browser bar? WWW?

Dispensing with the cumbersome protocols of the time, Berners-Lee envisioned a web of information, linked together by a *language* called html (hypertext markup language), a precise *geography* provided by Uniform Resource Identifiers (think the URL's of web addresses) and finally a *method of transfer*, http (the hypertext transfer protocol that you can still see in the address of the sites in your web browser). By 1990 he had written each of these protocols.

I teach at a law school that has world-class faculty and brilliant students. Their breadth of learning humbles me on a daily basis. But many of them do not understand the network architecture that is so central to their lives. Of course, it is not their specialty. Yet they understand the basic explanation of anthropogenic climate-change, the idea of externalities in economics, the broad strokes of the history of civil rights in the United States, the debate about whether minimum wages are good for poor workers and the issues raised by the use of drones in armed conflict. They fluently invoke the concept of *noir* cinema and make jokes about magical realist fiction when a faculty meeting turns bizarre. They are, in short, profoundly well-rounded, educated people, knowledgeable beyond their own specialties. But they do not really understand the internet or the world wide web. That is a shame.

It is a shame because understanding the most important communications network of our time, the network for our culture and news and search and flirting and shopping and politics, is central to knowing how—or whether—to regulate it. To build on it. To use it. As I will try to explain, some of the features of the internet that its critics view as its main problems—anonymity, the fact that anyone can connect to the internet and say anything, the difficulty of filtering it or managing it, its decentralized anarchic governance—are also among its transformative and engaging features. It is a shame for us not to understand all this because the network that shapes our cognitive world, defines our markets, and runs our infrastructure is as important as the rest of the things a "well-rounded person" knows about. But it is also a shame

because Berners-Lee's idea was *beautiful*. It was an idea that a scholar would come up with and that a scholar would love. Now it is central to our world. Yet somehow it progressed from bizarre novelty to essential utility without ever passing through the intermediate stage of public comprehension.

Berners-Lee imagined a republic of ideas built on a vision of language. The whole thing had a whiff of Harry Potter magic. To click on the hyperlink was to summon its referent. The name was the magical command for the presence of the resource, as though every footnote animated itself, went to the library and brought you back the relevant book. To write a web page was to build a transporter of the mind. The link was a *reference* to the resource, a *map* to the place where the resource was held and a *vehicle* to take you there. Each new document wove the network a little wider and tighter. That's why they called it the world wide web. And its architecture was "distributed." *Anyone* could build the web—as if we could all wander outside our houses and build the Eisenhower freeways of the mind ourselves, draw the maps that chronicled those freeways, assemble the cars that traveled along them and then construct the libraries, bookstores, shops, coffee houses and red light districts to which they journeyed. All done through a decentralized process that required neither governmental permission, nor authentication of your content—for better or worse. Better *and* worse.

The network had no central controller, no authority that must authenticate or vet, no central node through which all connections passed. Writing back in 1997, I tried to summarize the attraction of this architecture to libertarians, starting with the famous quotation "The Net interprets censorship as damage and routes around it."

> This quote from John Gilmore, one of the founders of the Electronic Frontier Foundation, has the twin advantages of being pithy and technologically accurate. The Internet['s] . . . distributed architecture and its technique of packet switching were designed to get messages delivered despite blockages, holes, and malfunctions. Imagine the poor censor faced with such a system. There is no central exchange to seize and hold; messages actively "seek out" alternative routes so that even if one path is blocked another may open up. Here was the civil libertarian's dream: a technology with a comparatively low cost of entry to speakers and listeners alike, technologically resistant to censorship, yet politically and economically important enough that it cannot easily be ignored. The Internet offers obvious advantages to the countries, research communities, cultures, and companies that use it, but it is extremely hard to control the amount and type of information available; access is like a tap that only has two settings–"off" and "full." For governments, this has been seen as one of the biggest problems

posed by the Internet. To the Internet's devotees, most of whom embrace some variety of libertarianism, the Internet's structural resistance to censorship, or any externally imposed filtration, is "not a bug but a feature."[3]

It was not merely the network's distributed nature or its resistance to censorship that attracted attention. It was the degree of freedom it gave its users. The network imposed no barriers to what could pass over its fibers, so long as that content could be broken down into packets. It was based on an "end-to-end architecture." It imposed no judgment about what would be done at either end of its connections. This was not just a network of *terminals*, like many of its earlier digital antecedents such as Ceefax or Minitel. It did not limit connection to devices hardwired to perform only a few defined functions, such as an ATM or an airline check-in kiosk. The ATM will not give you the weather and the check-in kiosk cannot produce pictures of your grandchildren.[4] Terminal design = control of user. This is the genius of Larry Lessig's focus on architecture as regulation. But this was not a network of terminals. If you plugged in a general purpose computer at either end of this network, you could do whatever software on a general purpose computer could do. Chat? Music? Video remix? Flirting? Arranging calendars? Generating knitting patterns? Doing facial recognition or portfolio analysis? Making a tribute to a departed loved one? Looking in on your babysitter while you are on a date? Managing just-in-time inventory through the same system that handled your customer orders? Generating encrypted communications that your despotic government could not read? Creating a message board on which you discovered that you were not in fact the only gay teenager in the world, it just seemed that way? So long as the software could be written

---

[3] James Boyle, *Foucault in Cyberspace: Surveillance, Sovereignty and Hardwired Censors*, 66 U. Cin. L. Rev. 177, 178–79 (1997) (footnotes omitted). To be fair, all of this was in the context of *criticizing* the naivete of hardcore digital libertarianism. Even back then academic commentators, including me, stressed that such claims relied on a form of technological essentialism— assuming that the current form of the network was in some sense canonical— and stressed the possibility of "hard wired censors" which could in fact tame the supposedly unregulable internet. The best example of those hard wired censors was to be the Great Firewall of China. *Id.*; More importantly, see Lawrence Lessig, Code and Other Laws of Cyberspace (1999). Since we were among naïve libertarianism's principal critics, it is mildly annoying to have the views we criticized attributed to us.

[4] Just to clarify: "The grandchildren are in the Facebook. The Facebook lives in the Google." The advanced class deals with how one gets to the Google by rebooting the router.

and the information broken into packets, those packets could be sent and received anywhere in the world.

It was a world-changing technology, a world-changing idea. Yes, *of course*, we immediately used it for porn, copyright infringement, spam and videos of cats. We are human. We build glorious cathedrals and then scribble illiterate graffiti on their walls. But it could do so much more, and it did. And thirty years ago, it did not exist. In 1991, people outside of CERN were invited to use this new network. Think about that for a moment. For all intents and purposes, the web that is so central to every aspect of your lives today did not exist at all until 1991. Maybe 1994, if you talk about mediumly-widespread public use. It is as if I told you that no one had thought of roads, or wheels, or *air*, until 25 years ago.

There had been "an internet," true. There had been packet-switched network precursors or ancestors, depending on how one does one's digital zoological classification. The first message was sent over ARPANET in 1969. TCP/IP—the protocols that collectively allow data to be broken into packets, addressed, transmitted and reassembled—had been written for ARPANET under the auspices of DARPA in the 70's. Berners-Lee's genius was to come up with the idea—and it was as much an idea or a language as it was a technology—that made all of the (brilliant, visionary) earlier development something that now everyone was going to want to use, dispute, monetize, subvert, romanticize and demonize.

There was one more vital thing about the web that the *digerati* found noteworthy. It was built on a commons. Actually, it was built on a series of layers, each a commons or semi-commons, in which key aspects of the layer were free from the kind of control that proprietary ownership would have conveyed.

First, the network. With a proprietary network like AOL (America OnLine) or CompuServe, the owner controls what and who can become part of the network. There is a right to exclude. With the web and the internet, the reverse was true. So long as you had the money to purchase a domain name, so long as you could create or rent a presence on a server connected to the internet, you were online, with control over your own site and your own content. In that sense, access was a commons—regulated, if at all, by the strictures and guidelines of the Internet Corporation for Assigned Names and Numbers (ICANN)[5] or the World Wide Web Consortium (W3C). But those strictures were largely technical in nature, setting up the federated set of internet domain name registrars, and a process for resolving trademark disputes over domain

---

[5] *See generally* James Boyle, *A Nondelegation Doctrine for the Digital Age?*, 50 DUKE L.J. 5 (2000).

names, or specifying the common metadata language through which web pages were to express themselves. True, you had to pay a minimal fee to get a domain name and if you coded your webpage in non-standard html then it would not display properly. In that sense, there was control. But there was no proprietary network owner to grant or deny access.

Second, the protocols by which the network operated were also a commons. For example, TCP/IP tries to make sure that the packets you are sending end up at the right place, in the right order. If packets are missed or dropped, it retransmits. But no one owns or controls TCP/IP. It achieved dominance precisely because it was not a proprietary system subject to intellectual property rights, but rather a commons that was open to all. And Berners-Lee's protocols—the suite that included html, http and URLs—were left open as well, by explicit choice. Partly that was because he believed he was building on the work of those who went before him. Partly it was because he wanted this to be a resource held in common-like language. And that openness enabled others to standardize around its protocols without fear of holdup or control at a later stage.

> After describing how Berners-Lee worked at CERN in Switzerland back in the 1980s, Doan moved on to the web. When Berners-Lee invented the web, did he apply for a patent on it, Doan asked.
>
> "No," said Berners-Lee.
>
> "Why not?" asked Doan.
>
> "The internet was already around. I was taking hypertext, and it was around a long time too. I was taking stuff we knew how to do…. All I was doing was putting together bits that had been around for years in a particular combination to meet the needs that I have."
>
> Doan: "And who owns the web?"
>
> Berners-Lee: "We do."
>
> . . . .
>
> ". . . The reason the Web took off is not because it was a magic idea, but because I persuaded everyone to use HTML and HTTP."[6]

Finally, by custom, nudge and occasional resort to administrative fiat, it was assumed that the network was and should be 'neutral.' Operators of one layer, for example your internet service provider, should be forbidden from discriminating between different sources of content of the same digital type. Video and audio streams can be treated differently than text, of course, because simultaneity, synching and speed

---

[6] Joe Mullin, *Tim Berners-Lee Takes the Stand to Keep the Web Free*, WIRED (Feb. 8, 2012), https://www.wired.com/2012/02/tim-berners-lee-patent/.

are more important there. But my ISP should not be able to prioritize different sources of content, sending me Youtube videos twice as fast as to its competitors for example, or streaming Amazon Prime videos at a higher rate than Netflix. The fear here was that network effects could be used to create dominant positions and thus to solidify incumbents, or to give priority to the content provided by large, vertically integrated communications companies with extensive portfolios of content. Imagine the process of Facebook trying to unseat Myspace as the dominant social network, for example, if Myspace could pay all service-providers to throttle Facebook's content or boost its own. Imagine if only Time-Warner's videos played on the cable networks their parent company owned. The idea here was profoundly anti-incumbent, against barriers to entry.

The effects were cumulative. Together, the end-to-end principle of network design, the censorship-resistant architecture of a packet-switched system, the open access provided by its layers of commons, and the traffic-equality mandate of net-neutrality[7] seemed to offer an opening for both anti-authoritarian politics and disruptive commerce: If one could "think as one wished, and speak as one thought," to quote our colleague David Lange, and if a disruptive business idea could instantly reach world-wide without being squashed by the incumbent dinosaurs, then both economic and political liberty would have gained a powerful ally.

The cheering was not only from the civil libertarian or the Ayn Rand sectors of the arena. By lowering the barriers to collaboration, the web promised to allow new forms of creativity—from Wikipedia to open source software. Many of these new forms of creativity were themselves built on a network composed of layers of commons and yielded a resource that itself was a commons; think of Linux or Wikipedia, articles or software created by strangers and released under a license that permitted copying and remix. And these forms of creation could take place outside or beside the dominant forms of commodified creativity, perhaps challenging our ideas about where intellectual property rights were necessary to incentivize innovation, perhaps sometimes adding a *tertium quid* between work and play, between *homo economicus* and *homo ludens*. The central reference here is Yochai Benkler's work on the way in which the network should change our economic assumptions, and particularly our assumptions about the possibility of commons-based creativity.[8]

---

[7] Hat tip, Tim Wu, the inventor of the phrase.

[8] *See generally* YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM (2006); Yochai Benkler,

It was in the context of all of this, that John Perry Barlow wrote the essays that are the subject of this symposium. How should we grade his prognostications today? *Selling Wine Without Bottles* probably stands up best to the test of time. Barlow was right that the internet would pose a challenge to the current forms of distribution of copyrighted content. He was right that encryption would eventually provide the "bottles" around the content we receive; every Pandora stream or Netflix video comes to you wrapped in walls made of code. He was right that the network would bring a focus on timeliness, on personal and uncommodifiable perspective, on relationships other than those of buyer and seller. This is an insight that affects every influencer on social media, every columnist who draws you to the New York Times rather than the Huffington Post, every band that builds a *cadre* of loyal fans who come to its concerts and buy its merchandise and vinyl releases. He was right to say that the availability of perfect digital copies on demand would actually make the original live experience seem *more* valuable, not less.[9] One can see this both from the growing proportion of musical revenues generated by live performances and by the increasing number of those performances over time. He was at least partially right that ethics and law were becoming increasingly out of joint.

Widespread file-sharing of copyrighted works without authorization is illegal in the United States and breaking the law is a bad thing. Yet to the Napster generation it did not seem as if that were true. In our law school parking lot it is equally illegal to park in the fire lanes and, if one is not entitled to do so, in the handicapped spaces. My law-abiding, law professor colleagues freely park in the first when the lot is full. I've never seen them park in the second. For a while, file-sharing was seen like parking illegally to run a quick errand[10]—running some risk of sanction but carrying no negative moral force. If illicit downloading were an exercise in bold civil disobedience that would be one thing, but this was—for the most part—just wanting to get away with getting the music without paying. That seems like a bad thing both for the legitimacy of law and for the backlash it would reliably generate: massive overreactions in attempting to regulate the network to make it

---

Coase's Penguin: or Linux and The Nature of the Firm, 112 YALE L.J. 369 (2002).

[9] *Cf.* WALTER BENJAMIN, *The Work of Art in the Age of Mechanical Reproduction*, *in* ILLUMINATIONS 217 (1968). This is a much-cited essay which is deep, insightful and completely wrong on this specific point.

[10] To defend my colleagues, the fire-lanes are large enough for the Starship *Enterprise* to land on them. Still, the disparity is remarkable.

more tractable, running the risk of destroying many of its most attractive attributes in the process.[11]

Barlow was also right about one cure for lawlessness. People will pay for convenient, cheap, legal access. Ten years ago, file sharing was a principal source of music for the student demographic. Today almost all of my students got their music from legal streaming services. He was also right that it would take a long time for the music industry to accept that the old model was dead and that the intellectual property law would actually make it quite hard to create a multijurisdictional, legal, music streaming service. "Legal efforts to keep the old boat floating are taking three forms: a frenzy of deck chair rearrangement, stern warnings to the passengers that if she goes down, they will face harsh criminal penalties, and serene, glassy-eyed denial."[12] The long delay in the rollout of reasonably priced legal sources of digital music can indeed be attributed both to industry denial, and to the barriers that 100 years of copyright law, built up technology by technology and licensing stream by licensing stream, put in the way of the one-stop-shop service.

Barlow was not right everywhere. He underestimated the ability of law to adapt, and to incentivize private actors to make compliance more profitable than illegality. His vision of property law lacks some of the Hohfeldian, bundle-of-rights, complexity the legal system actually has. He overestimated the idea that the web would be a community with its own ethics—something that might be true for a small group of first adopters, but is harder to sustain when the network contains most of the population of the world.

What about *A Declaration of the Independence of Cyberspace*? This document—a deliberate provocation of the global elite at Davos[13]— invites pushback. The full-throated claim that "cyberspace" could and should be a self-governing entity, free from state power, organized only by the dictates of custom and the Golden Rule is an easy, and appropriate, target for critique. When linked to the techno-libertarian slogans I quoted earlier such as "the Net interprets censorship as damage and routes around it," it seems to substantiate the idea that these were a group of people who thought that the technology would *automatically* provide freedom, which would thereafter self-regulate.

---

[11] This is a theme that Pam Samuelson and Kathryn Hashimoto explore at length in their contribution to this volume, *The Enigma of Digitized Property: A Tribute to John Perry Barlow,* 18 DUKE L. & TECH. REV. 103 (2019).

[12] John Perry Barlow, *Selling Wine Without Bottles*, 18 DUKE L. & TECH. REV. 8 (2019).

[13] Written while tipsy, according to the backstory provided by Cindy Cohn, *Inventing the Future: Barlow and Beyond*, 18 DUKE L. & TECH. REV. 69 (2019).

In the first essay in this volume, though, a moving, personal reflection on Barlow's ideas, Cory Doctorow argues for a different interpretation.

> [C]ontext is everything: "The Net interprets censorship as damage and routes around it" was a prescription as much as an observation. It was uttered in the context of a nascent internet whose technical caretakers disagreed on many ethical and technical points, but were united in a sense of civic duty to keep the technology open and universal and "free as in freedom." Gilmore didn't mean, "Stand down everyone, we've built a censorship-proof internet that will automatically maintain its integrity." He meant, "To you, my comrades-in-arms who toil endlessly to make our balky, wonderful invention run, I say: the same measures that we take to re-knit our network when a technical failure tears holes in its fabric can be repurposed to resist censorship, to route around the nodes that have fallen under a censor's thrall. Our shared civic mission, heretofore dedicated primarily to the technical task of preserving a forum for discourse, can and should be expanded to the political task of preserving that forum, and what's more, the tactics that we have mastered so thoroughly for the former will serve us in the latter."[14]

The notion here is that people like Barlow and Gilmore and Brand were writing in the context of something greater than a mere technology—a community of technologists and activists who wanted to preserve the aspects of the technology that promoted human flourishing and were working to minimize those that subverted that goal.

> When Barlow advocated for a free internet—"free" in all the usefully overlapping and ambiguous senses of that word—he wasn't doing so because he lacked an appreciation of the risks of a monopolized internet, or an internet that was under the thumb of a repressive state. Rather, he did so precisely because he feared that a globe-spanning network of ubiquitous, sensor-studded, actuating devices that were designed and governed without some kind of ethical commitment, without the pioneering spirit of the early internet and its yeoman smallholders who defended it from those who sought to dominate or pervert it, that we would arrive at a dystopian future where the entertainment industry's Huxleyism was the means for realizing the nightmares of Orwell.[15]

In Doctorow's view, Barlow's repeated invocation of hope was, in the end, a response to "peak indifference"—the moment when problems seem so overwhelming that it is easy to give up. But he then adds a point often missed by those who think Barlow was a naïve utopian. "*You don't*

---

[14] Cory Doctorow, *Barlow's Legacy*, 18 DUKE L. & TECH. REV. 61, 62 (2019).
[15] *Id.*

found an organization like the Electronic Frontier Foundation because you are sanguine about the future of the internet: you do so because your hope for an amazing, open future is haunted by terror of a network suborned for the purposes of spying and control."[16] Those among us, like me, who are *not* one of the founders of the nation's premier digital civil liberties organization, please raise your hands. Collectively, we may need to work on our definition of "naïve."

That theme is picked up by Cindy Cohn, the Executive Director of that very organization.

Since Barlow's death, I've spent a lot of time trying to ensure that the straw men who have Barlow's face taped to them don't overshadow the actual man . . . .

To be fair, the real Barlow definitely was an optimist and he loved all attention, positive or negative. You could argue that he sometimes pasted his own face on that straw man. Especially in the *Declaration*, his language was expansive and visionary. You don't start a legal or policy argument with: "you weary giants of flesh and steel." You don't seek nuance with: "I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose on us." In talking about the *Declaration* at Electronic Frontier Foundation (EFF) many years later, Barlow admitted that when he stepped out of a party at Davos to write it, he was both a little drunk and trying desperately to channel Thomas Jefferson. So maybe some of the sweeping rebukes are just trying to match his original bravado.[17]

But Cohn believes that this misses Barlow's true project. She quotes a 2015 letter of his to the Washington Post.

I [] knew that we were building the most penetrating and total surveillance system that could be imagined, and I was no more comfortable with the Googles (which didn't exist but predictably would) who would peer out through those All-Seeing Eyes than I was with an equally enhanced NSA, Chinese Government, or United States Cyber Command. However, just as Alan Kay said, "The best way to predict the future is to invent it," I knew it's also true that a good way to invent the future is to predict it. So I predicted Utopia, hoping to give Liberty a running start before the laws of Moore and Metcalfe delivered up what Ed Snowden now correctly calls "turn-key totalitarianism." Which is now available to

---

[16] *Id*. at 63 (emphasis added).
[17] Cohn, *supra* note 13, at 69–70 (footnotes omitted).

a number of secretive institutions, public and private (not that there's a useful distinction).[18]

We should have two Barlow's. One useful for viewpoint-taxonomies, the naïve libertarian set of claims that is reasonably attributed to his own most famous essays. He did say those things, after all, and those essays were the assigned starting point for the symposium. The second Barlow would reflect his less famous, though more numerous, statements that he was as afraid of private power as public, that he was as skeptical of corporations as he was of the state.

As for his tone, Cohn describes Barlow's utopianism as the counterpart to EFF's own careful, analogy-packed, legal reasoning.

> I would then proceed, like a good American litigator, to tie the liberties of the future Internet to the precedents in the founding of the country. I would tie anonymous online speakers to Publius of the Federalist Papers. I would tie the need for digital encryption to the physical encryption systems used by Madison and Jefferson. Later I would tie the fight against mass surveillance to John Otis' fight against general warrants. Since Barlow's assertions were factually wrong—of course people could be held accountable for what they did online as long as their feet touched down in the jurisdiction of some government somewhere—I worried that he risked us losing the civil liberties and human rights online that so many had worked so hard to win offline.

> In retrospect, we both had useful strategies for convincing different audiences to protect freedom online. It's just that I aimed for the Supreme Court while Barlow aimed for the sky . . . .[19]

Cohn takes seriously the invitation of the symposium to look forward 20 years as well as backwards. After brainstorming with her colleagues at EFF she tries to answer the question, 'what do we need to do or say today to invent the future we want?' "[A] short answer could be that we want to win our current fights: rein in government surveillance, protect coders, privacy and freedom of expression, ensure neither copyright nor overbroad criminal laws cannot squelch freedom of expression, freedom to tinker or innovation online, and more . . . . But Barlow would want us to go further."[20] Her answer, presented "with a light touch of Barlow-style rhetoric," focuses both on the dangers of state power and corporate power, and resonates much more with the ideals of "human flourishing."

---

[18] Letter to the Editor from John P. Barlow to the Wash. Post (sent in response to J. Silverman, *The Internet's First Anarchist*, WASH. POST, Mar. 22, 2015 (evening edition)).

[19] Cohn, *supra* note 13, at 70–71 (footnotes omitted).

[20] *Id.* at 75.

We are building a civilization that empowers humans as the users, builders and beneficiaries of technologies. Governments, businesses, religions, cultures, communities and robots all matter, but they all work under, and are transparent to, the bright light of the humans they serve. We're building a society that gives power back to people, especially those who have been robbed of it for too long. We unflinchingly recognize the bias and prejudices that have forestalled equity and caused our visions of a just society to fall short, and we use the power of technology and law to ensure those wrongs cannot invade further into our digital societies.

We are building a world where the users have primary control over their tools, devices and networks. Technology serves us, not the other way around, and it treats efforts to surveil, track or profile us as hostile measures that should be blocked. Where it cannot, we have protected pathways—legal, technological, policy and cultural—so that we can leave those walled gardens, panopticons and crystal prisons to build our own new worlds.[21]

In his essay for this volume, *A Political Economy of Utopia?*,[22] Yochai Benkler notes something that most commentators miss; that Barlow's work was not just skeptical of the state, but also of a world of creativity defined around the commodity form.

John Perry Barlow's two essays capture a yearning to escape the oppressive clutches of the two most important institutional forms in modernity: the state and market society. *A Declaration of the Independence of Cyberspace* is explicitly against the modern state. One might say, "All right, but apart from the sanitation, the medicine, education, wine, public order, irrigation, roads, a fresh water system, and public health, *what have the Romans ever done for us*?" The *Declaration* reflected not only a libertarian utopia that assumed that if only the state were to back off markets will take care of it all, but also a left-anchored critique of the state as a critical site of protecting the power and privilege of elites, insistence that individual self-actualization demanded a state contained within narrow boundaries, and a deep skepticism of all forms of authority, as Fred Turner showed in *From Counterculture to Cyberculture*. *Selling Wine Without Bottles* is not against markets or payment as such, but rather a resistance to the totalizing vision of commodity exchange as all there is . . . .[23]

---

[21] *Id.* at 76.

[22] Yochai Benkler, *A Political Economy of Utopia*, 18 DUKE L. & TECH. REV. 78 (2019).

[23] *Id.* at 78 (footnotes omitted).

Benkler points out that Barlow was at least as excited about what the network might mean for non-commodified forms of human flourishing, quoting these lines from *Selling Wine*:

> And then there are the inexplicable pleasures of information itself, the joys of learning, knowing, and teaching. The strange good feeling of information coming into and out of oneself. Playing with ideas is a recreation which people must be willing to pay a lot for, given the market for books and elective seminars. We'd likely spend even more money for such pleasures if there weren't so many opportunities to pay for ideas with other ideas.

> This explains much of the collective "volunteer" work which fills the archives, newsgroups, and databases of the Internet. Its denizens are not working for "nothing," as is widely believed. Rather they are getting paid in something besides money. It is an economy which consists almost entirely of information.[24]

Adding this dimension to Barlow's ideas shows that they cannot be reduced to simple libertarianism. Ayn Rand was not a noted skeptic of the commodity form. Benkler's own magisterial body of scholarship, which defined and tried to systematize the potential, limitations and political economy of "commons-based peer production" has followed exactly this line. Yet he uses this symposium to muse about the humility-inducing lessons the last twenty years have taught us. Earlier, I pointed out that one of the most fascinating characteristics of the network was that it was built on multiple layers and that each layer depended, in part, on a commons. Benkler adds a note of caution, however, about assuming that the status of something as a commons is in any way determinative of how that resource ends up being used.

> [T]he kind of optimism that typified Barlow's writing, as well as at least some of my own, is much harder to sustain now that we've seen how the successes of the first generation of battles over the commons have turned out.

> Facebook runs over TCP/IP and WiFi. The fact that the underlying carrier technology and the Internet Protocol are open access commons turned out not to have been enough to preserve people's freedom from the power of a small number of corporations. Both on the consumer end, like Roku, and on the cloud services side, Linux is everywhere. The Internet of Things could not run on anything other than FOSS and spectrum commons. And yet, these devices are all centrally controlled, and many function as the sensors for pervasive surveillance systems. Just as industrial manufacturers cheerfully emitted pollutants and efflutents

---

[24] Barlow, *supra* note 12, at 24.

into the commons of the air and water to externalize some of their costs, so too are Facebook, Google, Amazon, and Apple finding ways of constructing new bottlenecks above and below the open layers, creating new toll booths and points of observation, and using the "free" nature of the open parts of the infrastructure as low cost input from which to then mine our "biopolitical public domain," as Julie Cohen puts it. [25]

Benkler also notes that current events seem to call for a much larger role for the state and do so in a way that calls into doubt the contemporary equivalent of Barlow's ideas, the breathless, chiliastic wittering about the transformative power of the blockchain.[26]

A resurgent progressive movement is fighting hard to change the basic narrative on how important it is to harness the state, accountably and democratically, to play its core roles.

So this, to me, is the great challenge facing those of us who still want to think of technological change in terms of its effects on social relations. We need a clearer, and more fully articulated political economy of technology. We need a better understanding of what the state and the market are for, in the context of a genuine three-way interaction between state, market, and commons-based production specifically or social, nonmarket production more generally. And we to internalize the limits of anarchism, whether of the right or left spin. I see present debates over blockchain, cryptocurrencies, and re-decentralizing the net, and I see in them a rededication to the ideals that Barlow expressed so poetically. The words are still there, but the music seems out of sync with the beat of the times.[27]

In *Internet Utopianism and the Practical Inevitability of Law* Julie Cohen, who Benkler quoted earlier, echoes these themes but takes aim at cyberlaw scholarship that she believes has suffered from drinking too deep of ideas like Barlow's.

---

[25] Benkler, *supra* note 22, at 81–82 (footnotes omitted). To be fairer to Benkler than perhaps he is to himself, to me it seemed that his own work never presented commons status as a *sufficient* condition for the range of benign outcomes he discusses, merely as a necessary one which allowed a hitherto unlikely and counter-hegemonic set of ideas the possibility of success.

[26] One of the true architects of the internet, Vint Cerf, has a slide deck about blockchain with one slide in it. It takes the form of a flowchart. The flowchart box asks the question "Do I need a blockchain?" The arrow goes to a single answer. "No." Vinton G. Cerf, (@vgcerf), TWITTER, (Jul. 19, 2018, 9:49 AM) https://twitter.com/vgcerf/status/1019987651301081089?lang=en. True, this is an overstatement. But it is a nice corrective and one which, given its source, probably deserves our attention.

[27] Benkler, *supra* note 22, at 84.

> Cyberlaw scholarship in the Barlowian mold isn't to blame for the worldwide erosion of protections for fundamental rights, but it also hasn't helped as much as it might have. In this essay . . . I identify and briefly examine three intersecting flavors of internet utopianism in cyberlegal thought that are worth reexamining: utopianism about platforms for distributed cultural and political production (and concomitant failure to reckon with the transformative force of informational capitalism); utopianism about anonymity as a force for institutional disruption (and concomitant failure to acknowledge the essential role of institutions in cabining the human capacity for malice and mayhem); and utopianism about the relationship between information and communication networks and human freedom (and concomitant failure to contend with the powerful and inherently informational mechanisms by which existing protections for human rights are increasingly outflanked and coopted). It has become increasingly apparent that functioning legal institutions have indispensable roles to play in protecting and advancing human freedom. It has also become increasingly apparent, however, that the legal institutions we need are different than the ones we have.[28]

Cohen's solutions attempt to respond to each of those failings in turn. She addresses the nightmare of network enthusiasts: that the very characteristics they lauded—openness, commons-based production, distributed architecture—might not only fail to produce positive outcomes but (under some circumstances and on some platforms) be a problem rather than a solution.

> The results of distributed cultural and political production also are not inevitably democracy-promoting, and predictions to the contrary have, in retrospect, come to seem extraordinarily naïve. The particular quality-control mechanisms that keep open source software robust and secure and Wikipedia reliable and (mostly) objective work far less well (or not at all) within massively-intermediated environments that are optimized to advertiser-driven platform revenue models. In such environments, the vaunted "wisdom of crowds" is a scalar, not a vector. Algorithmic processes optimized to boost click-through rates and prompt social sharing heighten the volatility of online interactions, and surveillant assemblages designed to enhance capabilities for content targeting and behavioral marketing create powerful—and easily weaponized––stimulus-response feedback loops. The result is a sociotechnical

---

[28] Julie E. Cohen, *Internet Utopianism and the Practical Inevitability of Law*, 18 DUKE L. & TECH. REV. 85, 85–86 (2019).

apparatus that is also optimized for stoking outrage and deepening preexisting political, ideological, and cultural divisions.[29]

Or, to put it less elegantly: reality today.

In *Revisiting Barlow's Misplaced Optimism* Ben Edelman also casts a dubious eye on Barlow's predictions.

> Barlow's *A Declaration of the Independence of Cyberspace* calls for a "civilization of the mind in cyberspace," and he says it will be "more humane and fair" than what governments created. Barlow's vision is unapologetically optimistic, easily embraced by anyone who longs for better times to come. Yet twenty years later, it's easy to see some important respects in which reality fell short of his vision. Alongside the Internet's many pluses are clickbait, scams, hacks, and all manner of privacy violations. Ten thousand hours of cat videos may be delightful, but they're no civilization of the mind. With a bit of hindsight, Barlow's techno-utopianism looks as stilted as other utopianism—and equally far removed from reality.[30]

Edelman faults Barlow for failing to envisage the institutions that would bring about a better world. After listing a series of government successes, he also suggests that the state has a much more robust role to play than Barlow envisaged and that Barlow was wrong to lay such stress on the Golden Rule, of "do as you would be done by." "But the moral suasion—and practical effectiveness—of the Golden Rule presupposes participants of roughly equal power and status. It is no small feat to meaningfully consider what Joe User might want from Mega Social Network if the tables were turned and Joe owned the goliath."[31]

On one level Edelman's argument seems like a moral category-error. The common sense moral norm, 'one should treat others as one would like to be treated oneself' does not depend on a capability assessment. The heavyweight champion of the world could certainly beat me up for no reason. Nevertheless, according to that norm, he is still *wrong* to beat me up because he would not like to be brutalized for no reason himself, even if it had to be by someone with a gun or an M1 tank. The same is true of the Golden Rule's more formal instantiation in Kantian moral theory. "Act only in accordance with that maxim through which you can at the same time will that it become a universal law" does not depend on the size of my biceps, bank account or gun collection, nor those of the counterparties with whom I deal. To my knowledge, no one

---

[29] *Id.* at 88 (footnotes omitted).
[30] Benjamin Edelman, *Revisiting Barlow's Misplaced Optimism*, 18 DUKE L. & TECH. REV. 97, 97 (2019) (footnotes omitted).
[31] *Id.*

in the long history of Kantian moral thought has ever suggested otherwise. So I have to disagree on that portion of Edelman's analysis. The Golden Rule does *not* depend morally on participants of roughly equal power and status. Indeed, its principal function as a normative thought-primer is to force the more powerful to restrain themselves by asking the question, "how would *I* like it if I were in the position of powerless supplicant in this situation?" That is the point of the thought exercise. With participants of roughly equal power and status there would be much less need for the Golden Rule in the first place.

Yet on another level, Edelman has an undeniable point, albeit in a different register. Barlow was addressing himself, as Doctorow puts it, to the yeoman smallholders of a budding network. The moral problem with Barlow's argument is not that Facebook has more power than me, and thus it is allowed—under the Golden Rule—to invade my privacy because I cannot meaningfully threaten to invade its privacy. That just takes us back to the normative category-error of me and the heavyweight champion. The problem is that Facebook is a collection of contracts, not an actual moral being. One can still apply Barlow's framework to the legal entity, the legal fiction, formed out of those contracts—the people who signed them would presumably not like *their* privacy to be violated. We can tell the corporation's managers that they must act as if the norm underlying their actions would become a universal law and there is nothing incoherent in that command. Indeed, the justified outrage that Edelman displays about corporate misdeeds, and his consequent criticism of Barlow for undervaluing the role of the state, depends on exactly those kind of moral intuitions. Still, it is more of a leap, cognitively speaking. The Golden Rule still has moral force and normative coherence as it confronts the corporate personality and the faceless algorithm. But, for different reasons, neither is likely to pay it much mind. The problem is not moral coherence, but enforcement. In the speech communities within which algorithm or corporation are constituted, the Golden Rule either does not exist as an internalized norm, or exists only because of government mandates of the kind Edelman is advocating. I would restate his argument thus: only the state has the power, status and administrative capability to become the Kantian superego of corporations and Barlow is wrong to neglect that fact. It is hard to deny that Edelman wins that argument.

In that regard, Edelman points out some of the digital achievements of the state. He points out the success the state has had in reining in the most clear-cut violations of copyright and the progress it has made on online scams. While Edelman thinks there is much work to be done—whether in competition policy or cyberbullying—he takes a longer time-frame, one that makes him cautiously optimistic.

A century ago, the Pure Food and Drug Act sought to assure accurate labeling, purity, and ultimately safety to products Americans consume every day. By all accounts this seemed difficult at the time. What stops a factory from changing its process or ingredients when the inspector leaves? And who's to say what consequences a drug might entail years later[?] Yet today the FDA achieves substantial success, and the problems of that era are delightfully in the past.

A generation later, the GI Bill of Rights stood for the principle that after defending the nation, a serviceman deserved a quality education and the reliable job it would usually bring. The next generation established Medicare—a safety net to assure that our nation's elderly would get sustenance and medical care befitting the nation's prosperity. For both of these, there were serious questions about cost and sustainability from the outset—but the moral imperative was clear, and the projects went forward. I never discussed these subjects with Barlow, and so far as I know he never wrote about them or spoke publicly about them. But each of these programs faced genuine challenges, arguably at least as fundamental as the technology architecture Barlow considered so important. We should be emboldened by our prior successes and no less willing to take on great challenges as we look ahead.[32]

Another cluster of essays in this volume focuses more centrally on the past and future of digital intellectual property. In their contribution, *The Enigma of Digital Property: A Tribute to John Perry Barlow*,[33] Pam Samuelson and Kathryn Hashimoto carefully assess the legacy of Barlow's ideas, and those of his fellow travelers, about copyright online. Like me, they give his predictions a good grade, but think that he underestimated the possibility that copyright law could be changed to deal with the digital world, sometimes in ways that threatened the freedoms Barlow cared so much about. They use as an example, the recent lobbying over Articles 11 and 13 of the EU's Directive on Copyright in the Digital Single Market. Article 13, which makes online platforms liable if copyright infringing material is uploaded to them, has been roundly condemned.

Critics have argued that Article 13 would effectively mandate monitoring and filtering across all platforms, violating user privacy and free speech interests as automated systems would be obliged to scan all content and block even legitimate, noninfringing uses of copyrighted work such as quotations and parodies. Article 13 also

---

[32] *Id.* at 102 (footnotes omitted).

[33] Pamela Samuelson and Kathryn Hashimoto, *The Enigma of Digital Property: A Tribute to John Perry Barlow*, 18 DUKE L. & TECH. REV. 103 (2019).

raises competition concerns, as it would likely favor and entrench major existing platforms, which already have or can afford to implement the necessary surveillance and filtering technologies, while disadvantaging smaller and newer entrants to the market.

Dozens of European intellectual property (IP) scholars have written articles criticizing the Article 13 filtering mandate on various grounds, including the threat it poses for freedom of expression on the Internet . . . In addition, Tim Berners-Lee, Vint Cerf, and numerous other Internet pioneers signed an open letter urging the EU Parliament to drop Article 13:

> By requiring Internet platforms to perform automatic filtering [on] all of the content that their users upload, Article 13 takes an unprecedented step towards the transformation of the Internet from an open platform for sharing and innovation, into a tool for the automated surveillance and control of its users.

More than 145 civil society organizations have expressed opposition to adoption of Article 13, as have more than 5 million people who signed a petition against it.[34]

Despite all of this, Article 13 passed. Samuelson and Hashimoto observe that Barlow "would have been appalled at the curtailment of freedom of expression and access to knowledge on the Internet that Articles 11 and 13 will almost certainly bring about."[35]

However their view is not entirely, or even mainly, pessimistic. They argue that artists have managed to find ways to get compensated online, in some cases using methods that Barlow predicted, and conclude that the real danger is that attempts to restore pre-digital levels of control may actually threaten the attractive features of the network along with the illicit activity.

> John Perry Barlow had a vision of an economy of ideas in which information would flow freely through the Internet ether. While his hope that copyright would disappear in the new creative economy is unlikely to transpire, there is some reason to hope that policymakers will come to recognize that creative sectors of the economy are thriving. Barlow insisted that

> > we have a profound responsibility to be better ancestors. What we do now will likely determine the productivity and freedom of 20 generations of artists yet unborn. So it is time to stop speculating about when the new economy of

---

[34] *Id.* at 109–110 (footnotes omitted).
[35] *Id.* at 111.

> ideas will arrive. It's here. Now comes the hard part, which also happens to be the fun part: making it work.

As a tribute to Barlow, let's not screw things up by adopting stronger copyright rules that will inhibit rather than promote the progress of science, as the Constitution directs.[36]

Jessica Litman, in her article, *Imaginary Bottles*,[37] also gives Barlow high marks for his predictive powers about the digital marketplace of the future.

> Some of Barlow's initial musings on the nature and value of information seem startlingly prescient 25 years later. His prediction that, in the near future, "information will be generated collaboratively by the cyber-tribal hunter-gatherers of Cyberspace," was an eerily accurate description of Twitter. Barlow's suggestion that information itself was supplanting money as our dominant currency presaged a future ruled by Google, Facebook, and Amazon, three companies that derive much of their monetary value from trafficking in information. He proposed that we reconceptualize information in the networked digital environment as more akin to a living organism than a static package of knowledge. As a non-carbon-based life form, Barlow suggested, information evolves, spreads, and, over time, it spoils. It creates relationships and meaning. Some information's value depends on exclusivity; other information is worth more the more common it becomes.[38]

Like Samuelson and Hashimoto, Litman thinks that,

> Barlow might have underestimated the tenacity of legacy copyright owners. Despite significant missteps, bad bets, and massive investment in stupid initiatives, they seem to have emerged into a new world where, from their vantage point, the copyright rules are startlingly similar to the rules that governed the old world, only better.[39]

When she says "better," Litman means that, under the guise of protecting intellectual property from a digital threat, copyright owners were able—through technological happenstance, poorly reasoned court decisions or legislative fiat—to extend their exclusive rights to actions that copyright law had never previously regulated. Litman argues that this was not, as many expected it to be, by extending their powers through encryption but rather by taking a different approach.

---

[36] *Id.* at 126 (footnotes omitted).
[37] Jessica Litman, *Imaginary Bottles*, 18 DUKE L. & TECH. REV. 127 (2019).
[38] *Id.* at 128 (footnotes omitted).
[39] *Id.* at 128–29.

The key to this approach was a breathtakingly expansive reinterpretation of the exclusive right to reproduce a work in copies, predicated on a very broad definition of "copy." Fans of this new understanding maintain that whenever a work appears in the working memory of any computer anywhere, an actionable copy has been made, in violation of the statutory reproduction right. By insisting, again and again, that the word "copy" had long been understood in this broader sense, and by behaving as if they were right about that, copyright owners were able to persuade some courts that the copyright law, if properly interpreted, afforded them extensive rights to control any appearance of their works over digital networks.

The new definition requires some mental gymnastics for readers who pay attention to statutory language. The copyright statute has, since 1976, defined "copies" as "material objects . . . in which a work is fixed." Congress hasn't revised that definition, and copyright owners haven't asked Congress to do so. Being attached to a material object, though, is precisely the characteristic that Barlow argued that digital files lack. The modern revisionist interpretation expands the understanding of a "copy" beyond the idea of a tangible material object to include temporary and ephemeral instantiations. Essentially, it reads the words "material objects" out of the statutory definition.

Over the past 20 years, this expanded meaning of "copy" has ceased to be seen as radical. That has allowed copyright owners to sell their wine in what I would call make-believe bottles . . . .[40]

And thus, over 25 years, we move from selling wine without bottles to selling wine in imaginary bottles. All of this was accomplished, Litman argues, without much in the way of other changes to copyright law.

Most of what was idiotic and counterproductive about the ways that copyright law worked in 1994 is still idiotic and counterproductive in 2019. If the purpose of copyright law is to compensate creators for the products of their minds, it hasn't yet come close to achieving that goal. Oodles of money flood into the copyright system. Most of that money is siphoned off before it reaches creators' pockets, and where and why the money goes where it goes is kept a closely guarded secret. Creators across a wide swathe of fields complain of a shocking lack of transparency . . . .

Yet Barlow's musings about the organic and volatile nature of information remain compelling; they seem even truer today than they seemed 25 years ago. Remove information from its containers and it spills. Spills spread. As different individual creators and

---

[40] *Id.* at 131–32 (footnotes omitted).

researchers discover closely-held details of how money and rights move through the copyright system, that knowledge may itself transform the ways that copyright owners do business . . . . Even if the heavily fortified legacy copyright system fails to crumble under its own weight, a flood of newly revealed information may enable the rest of us to piece together a truer picture of where and how the system is failing, and what interventions might help creators to wrest back some control, or at least some money, from the legacy rights holders seeking to preserve the old regime.[41]

Jonathan Zittrain is the author of a wonderful book, *The Future of the Internet: And How to Stop It*,[42] that explores many of the issues in this symposium. In that book, Zittrain argues that the openness of the internet does indeed make it vulnerable to misuse, to spam and malware and misinformation. Yet he argues that the cure for openness may sometimes be more openness. Spam sites originally loaded themselves with the words that searchers might look for, making search engines useless. Search engines reacted by turning to so called "water hole" algorithms, using the links created by the denizens of the network as a form of informal peer review, thus once again elevating the real sites to the top of search lists. Spammers responded with search engine optimization strategies, gamed links and so on—an endless arms race in which the open nature of the network is both disease and cure, or at least inoculation.

In his contribution to this volume, *John Perry Barlow's Call for Persuasion Over Power*,[43] Zittrain muses on copyright law and Barlow's comments about it, noting that even before the digital revolution, copyright laws had strayed far indeed from a layperson's common sense understanding of what behavior was regulated.

> A glance at the U.S. copyright code by the time of Napster showed just how far Title 17 had quietly diverged from day-to-day reality. The idea that singing a song aloud at a birthday party could result in thousands of dollars in "damages" was counterintuitive, to say the least, even as there's legitimate rationale for the core "performance right" within copyright. The statutory limitations to the right are tellingly mincing, such as 17 U.S.C. § 110(6), which establishes that notwithstanding the public performance right, there are some limited exceptions, such as:

---

[41] *Id.* at 135–36 (footnotes omitted).

[42] JONATHAN L. ZITTRAIN, THE FUTURE OF THE INTERNET AND HOW TO STOP IT (2006).

[43] Jonathan L. Zittrain, *John Perry Barlow's Call for Persuasion Over Power*, 18 DUKE L. & TECH. REV. 137 (2019).

> performance of a nondramatic musical work by a governmental body or a nonprofit agricultural or horticultural organization, in the course of an annual agricultural or horticultural fair or exhibition conducted by such body or organization . . . .

> (It appears to be an open question whether the first gathering by a horticultural organization can be "annual" and thus qualify for the exception, or if litigants must wait until the following year to see if there is another one.)[44]

It was this tangled body of law that content owners tried to reformulate in the digital age, now always with success.

> Most legislative proposals stalled in Congress, and the lawsuits against individual users were retired despite most targeted users choosing to settle. This might suggest a victory for Barlow's way of thinking—a certain peace emerged that reformalized commercial relationships around activities that, to the users, could still seem organic. But the copyright wars didn't see victory by one side or the other so much as a muddling through. Today, the chaos of self-published Web pages, hosted on individual Web servers, has given way to the carefully indexed homogeneity of DMCA-takedown-friendly Facebook, including the automatic monitoring of private chat for the presence of links to file sharing sites (as they are found, they are redacted), and Facebook's silent tracking of all usage for the benefit of ad targeting.

> Today music and movies are much less ripped and copied freely than they are subscribed and linked to like a utility—via one of a handful of streaming titans like Spotify, Tidal, Netflix, or Apple—with artists seeking to make a living from their work generally no better off than they were before the Internet came about . . . .[45]

The result, Zittrain argues is a muddle, a tangled mixture of open and closed, artist-favoring and artist-exploiting rules. He closes his article with an ironic "synecdoche: Barlow's *A Declaration of the Independence of Cyberspace* remains free, but the authoritative version of *The Economy of Ideas* (as rendered in a 1994 issue of WIRED) is . . . metered through a paywall."[46]

In their article, *Dancing on the Grave of Copyright?*[47] Madhavi Sunder and Anupam Chander choose what at first might seem a

---

[44] *Id.* at 138 (footnotes omitted).

[45] *Id.* at 140 (footnotes omitted).

[46] *Id.* at 142 (footnotes omitted).

[47] I do have a quibble with their title. They start by telling us that "John Perry Barlow would have wanted us dancing on the grave of copyright." Anupam

whimsical topic through which to approach Barlow's ideas. They argue that "Barlow was right about where the economy would go. He was wrong that intellectual property would not follow."[48] Thus the subject of their contribution to the symposium:

> This essay considers IP in expressions of joy and shared meaning online in the form of emotes, GIFS, and memes: *the stuff of which dreams are made.* These aesthetic experiences bring playfulness and humanity to the internet. Are they the proper subject of intellectual property? Are such forms of cultural innovation and appropriation better addressed by ethics or law?[49]

Barlow had predicted that the wine would float free of the bottles, that citizens would want the experience rather than the packaging it came in. Sunder and Chander believe he was correct, but that the law has shifted to match the new reality, sometimes in ways that seem overly appropriative and controlling.

> Intellectual property, however, has not only survived the doom of the information economy—it has thrived. Today, intellectual property has fully evolved *from goods to a good time.* As consumer researchers have become savvier about how to package and market the human need for fantasy, play, imagination, and haptic experience, areas of thought and expression once free as the air we breathe are increasingly becoming commodified and metered fare, regulated by licenses and royalties, requiring permission and payment.
>
>   . . . .
>
> In recent writing, one of us (Sunder) has repudiated this expansion of rights, decrying the threat to fundamentally human activity, such as the ability to play, imagine, learn with others, and to reference the cultural works that shape our lives and societies. Unlike Barlow, the critique does not turn on the form in which information is conveyed—that is, bottles or no bottles, in Barlow's

---

Chander and Madhavi Sunder, *Dancing on the Grave of Copyright?*, 18 DUKE L. & TECH. REV. 143, 143 (2019). I have to disagree. Indeed, in the very passage they quote to substantiate that claim, Barlow seems to me to say the reverse, that while dancing on the grave of copyright might seem enjoyable, it does not solve the problems we have. "While there is a certain grim fun to be had in it, *dancing on the grave of copyright and patent will solve little*, especially when so few are willing to admit that the occupant of this grave is even deceased, and so many are trying to uphold by force what can no longer be upheld by popular consent." Barlow, *supra* note 12, at 14 (emphasis added).

[48] Chander and Sunder, *supra* note 47, at 145.

[49] *Id.*

parlance. Rather, the critique is premised on the nature of art itself . . . .[50]

Sunder and Chander give many examples of the use of copyright law to regulate cultural creativity on the microlevel. They conclude by using memes to illustrate their point—and to close their article with an actual debate in meme form. To get that, you will have to read the article.[51]

Peter Jaszi—who introduced me to copyright law, Ring Lardner and a host of other fascinating subjects—has had a central role in copyright reforms and *attempted* copyright reforms over the last 25 years. Most of all he has seen some of the successful campaigns to derail the kinds of copyright expansions that Samuelson and Hashimoto decried. In his essay for this volume, *What Didn't Happen: An Essay in Speculation*,[52] he celebrates the power of inaction.

> Some of the last 25 years' most important positive developments in copyright policy have—in fact—been negatives: the collapse of the SOPA/PIPA bills in 2012, the congressional failure to enact categorical and comprehensive paracopyright legislation in 1998, and the long and ultimately successful effort (throughout the mid- and late-90's) to block enactment of *sui generis* database protection in U.S. law. The congress's failure to enact term extension legislation (despite having been greenlighted by the Supreme Court in *Eldred v. Reno*) is another example.
>
> So one minor goal of this essay is to celebrate the power of inaction. Another is to acknowledge the pleasure of having your predictions proven wrong. I'm happy to say that in 1995 I told a Senate panel that a 20-year term extension would be "represent[] a down payment on perpetual copyright on the installment plan." Obviously, and happily, it didn't work out that way . . . .[53]

Jaszi's point is a good one. Most of the Barlowian energy over the last 25 years has been devoted to a series of attempts to block attempts to expand copyright law, sometimes in ways that seemed to threaten fundamental and attractive components of the internet. Bills with acronym names like SOPA and PIPA tried to make the web safe for copyright, but in the process also seemed to make it safe for censorship. Jaszi, though, focuses in particular on a series of expansions of copyright that affect the network principally in denying to ourselves the ability to

---

[50] *Id.* at 146–148 (footnotes omitted).

[51] That comment was the academic equivalent of clickbait.

[52] Peter Jaszi, *What Didn't Happen: An Essay In Speculation,* 18 DUKE L. & TECH. REV. 162 (2019).

[53] *Id.* at 162–63 (footnotes omitted).

use it to share the culture of the past: copyright term extension. He focuses on the terms of the debate.

> For decades, arguments on both sides of the issue were primarily made in what might be called a "consumerist" frame, with crisscrossing claims about whether a more robust public domain would (or wouldn't) offer more conventional information goods at lower prices. For many (or most) of that era's public domain advocates, myself included, engaged with the issue primarily, if not exclusively, in similar terms. Even the heroes of the early resistance to term extension, such as the late Professor Dennis Karjala, cast their arguments about the costs of a longer protection period primarily in terms of the loss to the public of specific finished derivative works (such as motion pictures based on public domain originals) that it might bring about—an expanded argument, to be sure, but one with roots in the dominant consumerist rhetoric nonetheless . . . .
>
> This narrow, market-oriented understanding of the value of the public domain enabled, in turn, another set of tropes, in which the public domain was figured as a kind of information limbo in which neglected works linger precisely because nobody owns them . . . .[54]

But Jaszi argues that both the culture and the terms of the debate have changed, in precisely the way that Barlow might have predicted; because the network actually changes the way we experience culture.

> Thanks to sweeping changes in the way we think and talk about networked digital technology, no one ever again can refer to the Internet as a "series of tubes" without major risk of embarrassment. What once was viewed as a delivery system is now commonly figured as a space for virtual interaction and collaboration—in accord with Barlow's foundational vision. And it is this shift that (in turn) has enabled the emergence of what was for many a whole new way to think about the public domain: less as a repository for disregarded cultural cast-offs and more as a rich mine of source material. To those of us with an early inchoate sense of the potential value inherent in the unowned, it provided a new wealth of practical and appealing examples of why the public domain really mattered. For others, direct experience online was a powerful teacher in its own right . . . .
>
>   . . . .
>
> In an environment marked by ubiquitous high-speed Internet connectivity, 200 million active websites, and a vast array of information tools, the Web hasn't brought us everything we

---

[54] *Id.* at 168–69 (footnotes omitted).

hoped—and has brought much we might never have wished to see. Ultimately, though, it was the Internet itself that came to the rescue of copyright's open spaces. In this at least, John Perry Barlow's organic vision of cyberspace has been realized.[55]

The final essay in this volume comes from Charles Nesson, one of the creators of Harvard's Berkman (later Berkman-Klein) Center and a person who, like Barlow, embraced the possibilities that the network opened up for human freedom. Nesson closes the circle on Barlow's *Declaration* by offering one of his own; *A Declaration of the Mission of University in Barlowspace*.[56] Nesson takes seriously the ills that the network has unleashed or magnified, as well as the good that it has done. He argues, in fact, that we need closed spaces as well as open ones, curated bases of knowledge as well as free-form self-indexing ones. He has a candidate for these closed spaces: our universities.

Universities and schools, on behalf of future generations, I ask you to preserve space for freedom of mind into the future. Only in such shared mindspace will human liberty of thought survive.

. . . .

. . . [T]rust is not an inherent feature of the open net. We must find and build trust within closed classrooms within the wider environment of the open net. Unless the cyberspace of our future contains interior *closed* spaces in which human trust and freedom of mind can live, truth as we have known it will not survive.

. . . .

. . . To find freedom of mind amid the enveloping surveillance and lurking trolls of the open net has proven to be more difficult than many expected. The game is not over. Create space for freedom of mind NOW. Let us call it Barlowspace in his honor.[57]

***

There is much about the contemporary web to make one despair. Some of it has to do with the architecture of openness. The freedom and anonymity that empowers the dissident also protects the troll. Some of it has to do with basic problems in human psychology. We are not as rational as we would like to imagine ourselves and the web can be an echo chamber in which those psychological flaws are amplified in an endless feedback loop. Some of it has to do with regulatory mistakes we have made. The fights over net-neutrality or Europe's Article 13 did not

---

[55] *Id.* at 171–73 (footnotes omitted).

[56] Charles R. Nesson, *A Declaration of the Mission of University in Barlowspace*, 18 DUKE L. & TECH. REV. 174 (2019).

[57] *Id.* at 174–75.

go well. Some has to do with the ability of corporations to replace open with closed, to move from the open web to the closed and controlling app. Some has to do with forms of economic concentration, arguably aided by lax antitrust enforcement, to which the web gives the additional winner-take-all power of network effects. In all of this it is particularly easy to lose hope, which perhaps explains the vitriol with which Barlow's more hopeful (and naïve) pronouncements were attacked. No one is more bitter than the idealist who has lost his faith.

Yet to succumb to doom and gloom would be a mistake. At the beginning of this essay I said "For all intents and purposes, the web that is so central to every aspect of your lives today did not exist at all until 1991. Maybe 1994, if you talk about mediumly-widespread public use. It is as if I told you that no one had thought of roads, or wheels, or *air*, until 25 years ago." The converse is also true. We can see the current state of the network as so dreadful because we have become complacent about all of the good things it brings to our lives, our culture and our economy. This has been the greatest democratization of communicative ability in the history of the species. And it happened in a space of 25 years. Of course not everything went well! Duh!

We have a long history of fearing openness: I call it cultural agoraphobia[58]—the ability to see the downside of open systems, networks and forms of communication with perfect clarity: 20-20 downside vision—and yet to be blind to the positive possibilities they open up. This is not something new. When the Bible was translated into the language of the laity, or the franchise opened wide, people predicted—often accurately—the evils that would follow. Conflicting theologies, religious schism, demagoguery and ugly fanning of mob prejudice; it all actually happened. It happened on the network as well. Yet, to return to the question asked by my title, no, "the internet is not over." It is 25 years old. Today's travails should not make us forget what we have gained. Honoring the life and thought of John Perry Barlow seems a particularly fitting way to do so.

---

[58] JAMES BOYLE, THE PUBLIC DOMAIN 231–36 (2008).