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THE PAST AND FUTURE OF THE INTERNET: A Symposium for John Perry Barlow

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John Perry Barlow
1947–2018

¹ Picture by Joi Ito. See Joi Ito, *John Perry Barlow*, FLICKR (July 17, 2007), <https://www.flickr.com/photos/joi/835393447> (last visited Mar. 1, 2018). Available under a Creative Commons Attribution 2.0 Generic, <https://creativecommons.org/licenses/by/2.0/>.

THE PAST AND FUTURE OF THE INTERNET: A SYMPOSIUM FOR JOHN PERRY BARLOW¹

JAMES BOYLE[†]

John Perry Barlow passed away on Feb 7th, 2018. John Perry's name is generally followed by a long list of qualities: poet, lyricist, rancher, civil libertarian, co-founder of the Electronic Frontier Foundation, teller-of-stories, organizer of parties, bringer of light. Good friend. Certainly he was all of these. The picture above gives you some sense of his personality. But he was also the author of two influential essays in the very early days of the World Wide Web—*A Declaration of the Independence of Cyberspace*² and *Selling Wine Without Bottles: The Economy of Mind on the Global Net*.³

Written in 1996, *A Declaration of the Independence of Cyberspace* declared the moral and legal independence of the online world. Its tone, both hopeful and defiant, can be captured from this brief excerpt:

Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.

We have no elected government, nor are we likely to have one, so I address you with no greater authority than that with which liberty itself always speaks. I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose on us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear.

¹ This article is made available under a Creative Commons Attribution, Non Commercial, Sharealike license. <https://creativecommons.org/licenses/by-nc-sa/3.0/>.

[†] William Neal Reynolds Professor of Law, Duke Law School

² Originally published as John Perry Barlow, *A Declaration of the Independence of Cyberspace*, ELEC. FRONTIER FOUND. (Feb. 8, 1996), <https://www.eff.org/cyberspace-independence>. The essay can also be found in this volume at 18 DUKE L. & TECH. REV. 5 (2019).

³ Originally published as John Perry Barlow, *The Economy of Ideas*, WIRED (Mar. 1, 1994), <https://www.wired.com/1994/03/economy-ideas/>. The essay can also be found in this volume at 18 DUKE L. & TECH. REV. 8 (2019) (*reprinted from* John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, ELEC. FRONTIER FOUND., <https://www.eff.org/pages/selling-wine-without-bottles-economy-mind-global-net>).

....

You have not engaged in our great and gathering conversation, nor did you create the wealth of our marketplaces. You do not know our culture, our ethics, or the unwritten codes that already provide our society more order than could be obtained by any of your impositions.

You claim there are problems among us that you need to solve. You use this claim as an excuse to invade our precincts. Many of these problems don't exist. Where there are real conflicts, where there are wrongs, we will identify them and address them by our means. We are forming our own Social Contract. This governance will arise according to the conditions of our world, not yours. Our world is different.

....

We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth.

We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity.

Your legal concepts of property, expression, identity, movement, and context do not apply to us. They are all based on matter, and there is no matter here.⁴

Selling Wine Without Bottles had been written for WIRED in 1994 under the title *The Economy of Ideas*. It asked how the creative economy and its legal and ethical superstructure—particularly intellectual property—would fare in this new context. Barlow makes many predictions—including the rise of encryption as a central feature of the economy, an increased primacy of viewpoint, voice and timeliness to online experience, and the difficulties of creative people getting paid in the digital world. But he also makes bold claims about what will happen to intellectual property.

The riddle is this: if our property can be infinitely reproduced and instantaneously distributed all over the planet without cost, without our knowledge, without its even leaving our possession, how can we protect it? How are we going to get paid for the work we do with our minds? And, if we can't get paid, what will assure the continued creation and distribution of such work?

⁴ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, 18 DUKE L. & TECH. REV. 5, 5–6 (2019).

Since we don't have a solution to what is a profoundly new kind of challenge, and are apparently unable to delay the galloping digitization of everything not obstinately physical, we are sailing into the future on a sinking ship.

This vessel, the accumulated canon of copyright and patent law, was developed to convey forms and methods of expression entirely different from the vaporous cargo it is now being asked to carry. It is leaking as much from within as without.

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.⁵

Versions of the Internet date back to the 1950's but the World Wide Web is of much more recent provenance. Histories date its "invention" by Tim Berners-Lee to 1989, but the network as we know it did not have any real public manifestation until late 1991 or 1992. These essays, in other words, are from its very first days. How do they stand up today, more than 20 years later? To be sure, John Perry was far from the only internet visionary. Others, including some of the people writing in this volume, tried their own hand at it and offered perspectives that brought in academic rigor, interdisciplinary insight and complex legal analysis. But for many of us, these essays started a conversation. Where is that conversation now? Are Barlow's visions hopelessly outdated or, worse still, discredited by the digital evils we now know so well—from YouTube comment trolls to privacy-invading social networks to hackers attempting to subvert elections? There are arguments both ways. To quote from Cindy Cohn, who also writes in this volume:

Barlow was sometimes held up as a straw man for a kind of naive techno-utopianism that believed that the Internet could solve all of humanity's problems without causing any more. As someone who spent the past 27 years working with him at EFF, I can say that nothing could be further from the truth. Barlow knew that new technology could create and empower evil as much as it could create and empower good. He made a conscious decision to focus on the latter: "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

⁵ John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8, 8–9 (2019).

running start before the laws of Moore and Metcalfe delivered up what Ed Snowden now correctly calls ‘turn-key totalitarianism.’”⁶

Rather than offer a simple Festschrift for Barlow, this symposium uses those two essays as the jumping off point for a reflection on the current state of the digital world. They marked a particular moment in time and space. How far from that moment, from those hopes and fears, are we now? What mistakes did we make? What opportunities did we grasp or miss? In an online environment dominated by closed and controlled apps rather than the open web, on a web without a guarantee of net neutrality, with many global citizens having their experiences defined by a monopolistic telecom, or a government-imposed Great Firewall of China, is it even worth our breath to talk about a “World Wide Web” anymore? What will we wish we had worried about, or hoped for, in our digital environment when another 20 years has passed? The distinguished contributors—and it is not going too far to say their work has set the terms of the legal and policy debate we are now in—have each agreed to write a short essay offering their own answers.

The articles gathered here do not seek to canonize John Perry or praise his ideas where our contributors believe they were simplistic or flawed: he would have found that offensive. Worse, he would have found it boring. There is criticism here as well as praise. But, in their own way, these remarkable essays offer a memorial to his work, insight and humor, to his contribution to our world.

We are all the poorer for losing him. I miss him.

⁶ Cindy Cohn, *John Perry Barlow, Internet Pioneer, 1947–2018*, ELEC. FRONTIER FOUND. (Feb. 7, 2018), <https://www.eff.org/deeplinks/2018/02/john-perry-barlow-internet-pioneer-1947-2018>.

A DECLARATION OF THE INDEPENDENCE OF CYBERSPACE¹

JOHN PERRY BARLOW

Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.

We have no elected government, nor are we likely to have one, so I address you with no greater authority than that with which liberty itself always speaks. I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose on us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear.

Governments derive their just powers from the consent of the governed. You have neither solicited nor received ours. We did not invite you. You do not know us, nor do you know our world. Cyberspace does not lie within your borders. Do not think that you can build it, as though it were a public construction project. You cannot. It is an act of nature and it grows itself through our collective actions.

You have not engaged in our great and gathering conversation, nor did you create the wealth of our marketplaces. You do not know our culture, our ethics, or the unwritten codes that already provide our society more order than could be obtained by any of your impositions.

You claim there are problems among us that you need to solve. You use this claim as an excuse to invade our precincts. Many of these problems don't exist. Where there are real conflicts, where there are wrongs, we will identify them and address them by our means. We are forming our own Social Contract. This governance will arise according to the conditions of our world, not yours. Our world is different.

Cyberspace consists of transactions, relationships, and thought itself, arrayed like a standing wave in the web of our communications. Ours is a world that is both everywhere and nowhere, but it is not where bodies live.

¹ Reprinted from John Perry Barlow, *A Declaration of the Independence of Cyberspace*, ELEC. FRONTIER FOUND. (Feb. 8, 1996), <https://www.eff.org/cyberspace-independence>.

We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth.

We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity.

Your legal concepts of property, expression, identity, movement, and context do not apply to us. They are all based on matter, and there is no matter here.

Our identities have no bodies, so, unlike you, we cannot obtain order by physical coercion. We believe that from ethics, enlightened self-interest, and the commonweal, our governance will emerge. Our identities may be distributed across many of your jurisdictions. The only law that all our constituent cultures would generally recognize is the Golden Rule. We hope we will be able to build our particular solutions on that basis. But we cannot accept the solutions you are attempting to impose.

In the United States, you have today created a law, the Telecommunications Reform Act, which repudiates your own Constitution and insults the dreams of Jefferson, Washington, Mill, Madison, DeToqueville, and Brandeis. These dreams must now be born anew in us.

You are terrified of your own children, since they are natives in a world where you will always be immigrants. Because you fear them, you entrust your bureaucracies with the parental responsibilities you are too cowardly to confront yourselves. In our world, all the sentiments and expressions of humanity, from the debasing to the angelic, are parts of a seamless whole, the global conversation of bits. We cannot separate the air that chokes from the air upon which wings beat.

In China, Germany, France, Russia, Singapore, Italy and the United States, you are trying to ward off the virus of liberty by erecting guard posts at the frontiers of Cyberspace. These may keep out the contagion for a small time, but they will not work in a world that will soon be blanketed in bit-bearing media.

Your increasingly obsolete information industries would perpetuate themselves by proposing laws, in America and elsewhere, that claim to own speech itself throughout the world. These laws would declare ideas to be another industrial product, no more noble than pig iron. In our world, whatever the human mind may create can be reproduced and distributed infinitely at no cost. The global conveyance of thought no longer requires your factories to accomplish.

These increasingly hostile and colonial measures place us in the same position as those previous lovers of freedom and self-determination who had to reject the authorities of distant, uninformed powers. We must declare our virtual selves immune to your sovereignty, even as we continue to consent to your rule over our bodies. We will spread ourselves across the Planet so that no one can arrest our thoughts.

We will create a civilization of the Mind in Cyberspace. May it be more humane and fair than the world your governments have made before.

SELLING WINE WITHOUT BOTTLES: THE ECONOMY OF MIND ON THE GLOBAL NET¹

JOHN PERRY BARLOW

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of everyone, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me. That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density at any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation. Inventions then cannot, in nature, be a subject of property.

–Thomas Jefferson

Throughout the time I've been groping around Cyberspace, there has remained unsolved an immense conundrum which seems to be at the root of nearly every legal, ethical, governmental, and social vexation to be found in the Virtual World. I refer to the problem of digitized property.

The riddle is this: if our property can be infinitely reproduced and instantaneously distributed all over the planet without cost, without our knowledge, without its even leaving our possession, how can we protect it? How are we going to get paid for the work we do with our minds? And, if we can't get paid, what will assure the continued creation and distribution of such work?

Since we don't have a solution to what is a profoundly new kind of challenge, and are apparently unable to delay the galloping

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digitization of everything not obstinately physical, we are sailing into the future on a sinking ship.

This vessel, the accumulated canon of copyright and patent law, was developed to convey forms and methods of expression entirely different from the vaporous cargo it is now being asked to carry. It is leaking as much from within as without.

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.

Intellectual property law cannot be patched, retrofitted, or expanded to contain the gasses of digitized expression any more than real estate law might be revised to cover the allocation of broadcasting spectrum. (Which, in fact, rather resembles what is being attempted here.) We will need to develop an entirely new set of methods as befits this entirely new set of circumstances.

Most of the people who actually create soft property—the programmers, hackers, and Net surfers—already know this. Unfortunately, neither the companies they work for nor the lawyers these companies hire have enough direct experience with immaterial goods to understand why they are so problematic. They are proceeding as though the old laws can somehow be made to work, either by grotesque expansion or by force. They are wrong.

The source of this conundrum is as simple as its solution is complex. Digital technology is detaching information from the physical plane, where property law of all sorts has always found definition.

Throughout the history of copyrights and patents, the proprietary assertions of thinkers have been focused not on their ideas but on the expression of those ideas. The ideas themselves, as well as facts about the phenomena of the world, were considered to be the collective property of humanity. One could claim franchise, in the case of copyright, on the precise turn of phrase used to convey a particular idea or the order in which facts were presented.

The point at which this franchise was imposed was that moment when the “word became flesh” by departing the mind of its originator and entering some physical object, whether book or widget. The subsequent arrival of other commercial media besides books didn’t alter the legal importance of this moment. Law protected expression and, with few (and recent) exceptions, to express was to make physical.

Protecting physical expression had the force of convenience on its side. Copyright worked well because, Gutenberg notwithstanding, it

was hard to make a book. Furthermore, books froze their contents into a condition which was as challenging to alter as it was to reproduce. Counterfeiting or distributing counterfeit volumes were obvious and visible activities, easy enough to catch somebody in the act of doing. Finally, unlike unbounded words or images, books had material surfaces to which one could attach copyright notices, publisher's marques, and price tags.

Mental to physical conversion was even more central to patent. A patent, until recently, was either a description of the form into which materials were to be rendered in the service of some purpose or a description of the process by which rendition occurred. In either case, the conceptual heart of patent was the material result. If no purposeful object could be rendered due to some material limitation, the patent was rejected. Neither a Klein bottle nor a shovel made of silk could be patented. It had to be a thing and the thing had to work.

Thus the rights of invention and authorship adhered to activities in the physical world. One didn't get paid for ideas but for the ability to deliver them into reality. For all practical purposes, the value was in the conveyance and not the thought conveyed.

In other words, the bottle was protected, not the wine.

Now, as information enters Cyberspace, the native home of Mind, these bottles are vanishing. With the advent of digitization, it is now possible to replace all previous information storage forms with one meta-bottle: complex—and highly liquid—patterns of ones and zeros.

Even the physical/digital bottles to which we've become accustomed, floppy disks, CD-ROM's, and other discrete, shrink-wrappable bit-packages, will disappear as all computers jack into the global Net. While the Internet may never include every single CPU on the planet, it is more than doubling every year and can be expected to become the principal medium of information conveyance if, eventually, the only one.

Once that has happened, all the goods of the Information Age—all of the expressions once contained in books or film strips or records or newsletters—will exist either as pure thought or something very much like thought: voltage conditions darting around the Net at the speed of light, in conditions which one might behold in effect, as glowing pixels or transmitted sounds, but never touch or claim to "own" in the old sense of the word.

Some might argue that information will still require some physical manifestation, such as its magnetic existence on the titanic hard

disks of distant servers, but these are bottles which have no macroscopically discrete or personally meaningful form.

Some will also argue that we have been dealing with unbottled expression since the advent of radio, and they would be right. But for most of the history of broadcast, there was no convenient way to capture soft goods from the electromagnetic ether and reproduce them in anything like the quality available in commercial packages. Only recently has this changed and little has been done legally or technically to address the change.

Generally, the issue of consumer payment for broadcast products was irrelevant. The consumers themselves were the product. Broadcast media were supported either by selling the attention of their audience to advertisers, using government to assess payment through taxes, or the whining mendicancy of annual donor drives.

All of the broadcast support models are flawed. Support either by advertisers or government has almost invariably tainted the purity of the goods delivered. Besides, direct marketing is gradually killing the advertiser support model anyway.

Broadcast media gave us another payment method for a virtual product in the royalties which broadcasters pay songwriters through such organizations as ASCAP and BMI. But, as a member of ASCAP, I can assure you this is not a model which we should emulate. The monitoring methods are wildly approximate. There is no parallel system of accounting in the revenue stream. It doesn't really work. Honest.

In any case, without our old methods of physically defining the expression of ideas, and in the absence of successful new models for non-physical transaction, we simply don't know how to assure reliable payment for mental works. To make matters worse, this comes at a time when the human mind is replacing sunlight and mineral deposits as the principal source of new wealth.

Furthermore, the increasing difficulty of enforcing existing copyright and patent laws is already placing in peril the ultimate source of intellectual property, the free exchange of ideas.

That is, when the primary articles of commerce in a society look so much like speech as to be indistinguishable from it, and when the traditional methods of protecting their ownership have become ineffectual, attempting to fix the problem with broader and more vigorous enforcement will inevitably threaten freedom of speech.

The greatest constraint on your future liberties may come not from government but from corporate legal departments laboring to

protect by force what can no longer be protected by practical efficiency or general social consent.

Furthermore, when Jefferson and his fellow creatures of The Enlightenment designed the system which became American copyright law, their primary objective was assuring the widespread distribution of thought, not profit. Profit was the fuel which would carry ideas into the libraries and minds of their new republic. Libraries would purchase books, thus rewarding the authors for their work in assembling ideas, which otherwise “incapable of confinement” would then become freely available to the public. But what is the role of libraries in the absence of books? How does society now pay for the distribution of ideas if not by charging for the ideas themselves?

Additionally complicating the matter is the fact that along with the physical bottles in which intellectual property protection has resided, digital technology is also erasing the legal jurisdictions of the physical world, and replacing them with the unbounded and perhaps permanently lawless seas of Cyberspace.

In Cyberspace, there are not only no national or local boundaries to contain the scene of a crime and determine the method of its prosecution, there are no clear cultural agreements on what a crime might be. Unresolved and basic differences between European and Asian cultural assumptions about intellectual property can only be exacerbated in a region where many transactions are taking place in both hemispheres and yet, somehow, in neither.

Even in the most local of digital conditions, jurisdiction and responsibility are hard to assess. A group of music publishers filed suit against CompuServe this fall for it having allowed its users to upload musical compositions into areas where other users might get them. But since CompuServe cannot practically exercise much control over the flood of bits which pass between its subscribers, it probably shouldn't be held responsible for unlawfully “publishing” these works.

Notions of property, value, ownership, and the nature of wealth itself are changing more fundamentally than at any time since the Sumerians first poked cuneiform into wet clay and called it stored grain. Only a very few people are aware of the enormity of this shift and fewer of them are lawyers or public officials.

Those who do see these changes must prepare responses for the legal and social confusion which will erupt as efforts to protect new forms of property with old methods become more obviously futile, and, as a consequence, more adamant.

I. FROM SWORDS TO WRITS TO BITS

Humanity now seems bent on creating a world economy primarily based on goods which take no material form. In doing so, we may be eliminating any predictable connection between creators and a fair reward for the utility or pleasure others may find in their works.

Without that connection, and without a fundamental change in consciousness to accommodate its loss, we are building our future on furor, litigation, and institutionalized evasion of payment except in response to raw force. We may return to the Bad Old Days of property.

Throughout the darker parts of human history, the possession and distribution of property was a largely military matter. “Ownership” was assured those with the nastiest tools, whether fists or armies, and the most resolute will to use them. Property was the divine right of thugs.

By the turn of the First Millennium A.D., the emergence of merchant classes and landed gentry forced the development of ethical understandings for the resolution of property disputes. In the late Middle Ages, enlightened rulers like England’s Henry II began to codify this unwritten “common law” into recorded canons. These laws were local, but this didn’t matter much as they were primarily directed at real estate, a form of property which is local by definition. And which, as the name implied, was very real.

This continued to be the case as long as the origin of wealth was agricultural, but with dawning of the Industrial Revolution, humanity began to focus as much on means as ends. Tools acquired a new social value and, thanks to their own development, it became possible to duplicate and distribute them in quantity.

To encourage their invention, copyright and patent law were developed in most western countries. These laws were devoted to the delicate task of getting mental creations into the world where they could be used—and enter the minds of others—while assuring their inventors compensation for the value of their use. And, as previously stated, the systems of both law and practice which grew up around that task were based on physical expression.

Since it is now possible to convey ideas from one mind to another without ever making them physical, we are now claiming to own ideas themselves and not merely their expression. And since it is likewise now possible to create useful tools which never take physical form, we have taken to patenting abstractions, sequences of virtual events, and mathematical formulae—the most un-real estate imaginable.

In certain areas, this leaves rights of ownership in such an ambiguous condition that once again property adheres to those who can muster the largest armies. The only difference is that this time the armies consist of lawyers.

Threatening their opponents with the endless Purgatory of litigation, over which some might prefer death itself, they assert claim to any thought which might have entered another cranium within the collective body of the corporations they serve. They act as though these ideas appeared in splendid detachment from all previous human thought. And they pretend that thinking about a product is somehow as good as manufacturing, distributing, and selling it.

What was previously considered a common human resource, distributed among the minds and libraries of the world, as well as the phenomena of nature herself, is now being fenced and deeded. It is as though a new class of enterprise had arisen which claimed to own air and water.

What is to be done? 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 are trying to up by force what can no longer be upheld by popular consent.

The legalists, desperate over their slipping grip, are vigorously trying to extend it. Indeed, the United States and other proponents of GATT are making adherence to our moribund systems of intellectual property protection a condition of membership in the marketplace of nations. For example, China will be denied Most Favored nation trading status unless they agree to uphold a set of culturally alien principles which are no longer even sensibly applicable in their country of origin.

In a more perfect world, we'd be wise to declare a moratorium on litigation, legislation, and international treaties in this area until we had a clearer sense of the terms and conditions of enterprise in Cyberspace. Ideally, laws ratify already developed social consensus. They are less the Social Contract itself than a series of memoranda expressing a collective intent which has emerged out of many millions of human interactions.

Humans have not inhabited Cyberspace long enough or in sufficient diversity to have developed a Social Contract which conforms to the strange new conditions of that world. Laws developed prior to consensus usually serve the already established few who can get them passed and not society as a whole.

To the extent that either law or established social practice exists in this area, they are already in dangerous disagreement. The laws regarding unlicensed reproduction of commercial software are clear and stern . . . and rarely observed. Software piracy laws are so practically unenforceable and breaking them has become so socially acceptable that only a thin minority appears compelled, either by fear or conscience, to obey them.

I sometimes give speeches on this subject, and I always ask how many people in the audience can honestly claim to have no unauthorized software on their hard disks. I've never seen more than ten percent of the hands go up.

Whenever there is such profound divergence between the law and social practice, it is not society that adapts. And, against the swift tide of custom, the Software Publishers' current practice of hanging a few visible scapegoats is so obviously capricious as to only further diminish respect for the law.

Part of the widespread popular disregard for commercial software copyrights stems from a legislative failure to understand the conditions into which it was inserted. To assume that systems of law based in the physical world will serve in an environment which is as fundamentally different as Cyberspace is a folly for which everyone doing business in the future will pay.

As I will discuss in the next segment, unbounded intellectual property is very different from physical property and can no longer be protected as though these differences did not exist. For example, if we continue to assume that value is based on scarcity, as it is with regard to physical objects, we will create laws which are precisely contrary to the nature of information, which may, in many cases, increase in value with distribution.

The large, legally risk-averse institutions most likely to play by the old rules will suffer for their compliance. The more lawyers, guns, and money they invest in either protecting their rights or subverting those of their opponents, the more commercial competition will resemble the Kwakiutl Potlatch Ceremony, in which adversaries competed by destroying their own possessions. Their ability to produce new technology will simply grind to a halt as every move they make drives them deeper into a tar pit of courtroom warfare.

Faith in law will not be an effective strategy for high tech companies. Law adapts by continuous increments and at a pace second only to geology in its stateliness. Technology advances in the lunging jerks, like the punctuation of biological evolution grotesquely

accelerated. Real world conditions will continue to change at a blinding pace, and the law will get further behind, more profoundly confused. This mismatch is permanent.

Promising economies based on purely digital products will either be born in a state of paralysis, as appears to be the case with multimedia, or continue in a brave and willful refusal by their owners to play the ownership game at all.

In the United States one can already see a parallel economy developing, mostly among small fast moving enterprises who protect their ideas by getting into the marketplace quicker than their larger competitors who base their protection on fear and litigation.

Perhaps those who are part of the problem will simply quarantine themselves in court while those who are part of the solution will create a new society based, at first, on piracy and freebooting. It may well be that when the current system of intellectual property law has collapsed, as seems inevitable, that no new legal structure will arise in its place.

But something will happen. After all, people do business. When a currency becomes meaningless, business is done in barter. When societies develop outside the law, they develop their own unwritten codes, practices, and ethical systems. While technology may undo law, technology offers methods for restoring creative rights.

II. A TAXONOMY OF INFORMATION

It seems to me that the most productive thing to do now is to look hard into the true nature of what we're trying to protect. How much do we really know about information and its natural behaviors?

What are the essential characteristics of unbounded creation? How does it differ from previous forms of property? How many of our assumptions about it have actually been about its containers rather than their mysterious contents? What are its different species and how does each of them lend itself to control? What technologies will be useful in creating new virtual bottles to replace the old physical ones?

Of course, information is, by its nature, intangible and hard to define. Like other such deep phenomena as light or matter, it is a natural host to paradox. And as it is most helpful to understand light as being both a particle and a wave, an understanding of information may emerge in the abstract congruence of its several different properties which might be described by the following three statements:

- Information is an activity.
- Information is a life form.
- Information is a relationship.

In the following section, I will examine each of these.

A. INFORMATION IS AN ACTIVITY

1. Information Is a Verb, Not a Noun

Freed of its containers, information is obviously not a thing. In fact, it is something which happens in the field of interaction between minds or objects or other pieces of information.

Gregory Bateson, expanding on the information theory of Claude Shannon, said, "Information is a difference which makes a difference." Thus, information only really exists in the Δ [delta]. The making of that difference is an activity within a relationship. Information is an action which occupies time rather than a state of being which occupies physical space, as is the case with hard goods. It is the pitch, not the baseball, the dance, not the dancer.

2. Information Is Experienced, Not Possessed

Even when it has been encapsulated in some static form like a book or a hard disk, information is still something which happens to you as you mentally decompress it from its storage code. But, whether it's running at gigabits per second or words per minute, the actual decoding is a process which must be performed by and upon a mind, a process which must take place in time.

There was a cartoon in the Bulletin of Atomic Scientists a few years ago which illustrated this point beautifully. In the drawing, a holdup man trains his gun on the sort of bespectacled fellow you'd figure might have a lot of information stored in his head. "Quick," orders the bandit, "Give me all your ideas."

3. Information Has to Move

Sharks are said to die of suffocation if they stop swimming, and the same is nearly true of information. Information which isn't moving ceases to exist as anything but potential . . . at least until it is allowed to move again. For this reason, the practice of information hoarding, common in bureaucracies, is an especially wrong-headed artifact of physically-based value systems.

4. Information Is Conveyed by Propagation, Not Distribution

The way in which information spreads is also very different from the distribution of physical goods. It moves more like something from nature than from a factory. It can concatenate like falling dominos or grow in the usual fractal lattice, like frost spreading on a window, but it cannot be shipped around like widgets, except to the extent that it can be contained in them. It doesn't simply move on. It leaves a trail of itself everywhere it's been.

The central economic distinction between information and physical property is the ability of information to be transferred without leaving the possession of the original owner. If I sell you my horse, I can't ride him after that. If I sell you what I know, we both know it.

B. INFORMATION IS A LIFE FORM

1. Information Wants to Be Free

Stewart Brand is generally credited with this elegant statement of the obvious, recognizing both the natural desire of secrets to be told and the fact that they might be capable of possessing something like a "desire" in the first place.

English Biologist and Philosopher Richard Dawkins proposed the idea of "memes," self-replicating, patterns of information which propagate themselves across the ecologies of mind, saying they were like life forms.

I believe they are life forms in every respect but a basis in the carbon atom. They self-reproduce, they interact with their surroundings and adapt to them, they mutate, they persist. Like any other life form they evolve to fill the possibility spaces of their local environments, which are, in this case the surrounding belief systems and cultures of their hosts, namely, us.

Indeed, the sociobiologists like Dawkins make a plausible case that carbon-based life forms are information as well, that, as the chicken is an egg's way of making another egg, the entire biological spectacle is just the DNA molecule's means of copying out more information strings exactly like itself.

2. Information Replicates into the Cracks of Possibility

Like DNA helices, ideas are relentless expansionists, always seeking new opportunities for lebensraum. And, as in carbon-based nature, the more robust organisms are extremely adept at finding new places to live. Thus, just as the common housefly has insinuated itself

into practically every ecosystem on the planet, so has the meme of “life after death” found a niche in most minds, or psycho-ecologies.

The more universally resonant an idea or image or song, the more minds it will enter and remain within. Trying to stop the spread of a really robust piece of information is about as easy as keeping killer bees South of the Border. The stuff just leaks.

3. Information Wants to Change

If ideas and other interactive patterns of information are indeed life forms, they can be expected to evolve constantly into forms which will be more perfectly adapted to their surroundings. And, as we see, they are doing this all the time.

But for a long time, our static media, whether carvings in stone, ink on paper, or dye on celluloid, have strongly resisted the evolutionary impulse, exalting as a consequence the author’s ability to determine the finished product. But, as in an oral tradition, digitized information has no “final cut.”

Digital information, unconstrained by packaging, is a continuing process more like the metamorphosing tales of prehistory than anything which will fit in shrink wrap. From the Neolithic to Gutenberg, information was passed on, mouth to ear, changing with every re-telling (or re-singing). The stories which once shaped our sense of the world didn’t have authoritative versions. They adapted to each culture in which they found themselves being told.

Because there was never a moment when the story was frozen in print, the so-called “moral” right of storytellers to keep the tale their own was neither protected nor recognized. The story simply passed through each of them on its way to the next, where it would assume a different form. As we return to continuous information, we can expect the importance of authorship to diminish. Creative people may have to renew their acquaintance with humility.

But our system of copyright makes no accommodation whatever for expressions which don’t at some point become “fixed” nor for cultural expressions which lack a specific author or inventor.

Jazz improvisation, standup comedy routines, mime performances, developing monologues, and unrecorded broadcast transmissions all lack the Constitutional requirement of fixation as a “writing.” Without being fixed by a point of publication the liquid works of the future will all look more like these continuously adapting and changing forms and will therefore exist beyond the reach of copyright.

Copyright expert Pamela Samuelson tells of having attended a conference last year convened around the fact that Western countries may legally appropriate the music, designs, and biomedical lore of aboriginal people without compensation to their tribe of origin since that tribe is not an “author” or “inventor.”

But soon most information will be generated collaboratively by the cyber-tribal hunter-gatherers of Cyberspace. Our arrogant legal dismissal of the rights of “primitives” will be back to haunt us soon.

4. Information Is Perishable

With the exception of the rare classic, most information is like farm produce. Its quality degrades rapidly both over time and in distance from the source of production. But even here, value is highly subjective and conditional. Yesterday’s papers are quite valuable to the historian. In fact, the older they are, the more valuable they become. On the other hand, a commodities broker might consider news of an event which is more than an hour old to have lost any relevance.

C. INFORMATION IS A RELATIONSHIP

1. Meaning Has Value and Is Unique to Each Case

In most cases, we assign value to information based on its meaningfulness. The place where information dwells, the holy moment where transmission becomes reception, is a region which has many shifting characteristics and flavors depending on the relationship of sender and receiver, the depth of their interactivity.

Each such relationship is unique. Even in cases where the sender is a broadcast medium, and no response is returned, the receiver is hardly passive. Receiving information is often as creative an act as generating it.

The value of what is sent depends entirely on the extent to which each individual receiver has the receptors . . . shared terminology, attention, interest, language, paradigm . . . necessary to render what is received meaningful.

Understanding is a critical element increasingly overlooked in the effort to turn information into a commodity. Data may be any set of facts, useful or not, intelligible or inscrutable, germane or irrelevant. Computers can crank out new data all night long without human help, and the results may be offered for sale as information. They may or may not actually be so. Only a human being can recognize the meaning which separates information from data.

In fact, information, in the economic sense of the word, consists of data which have been passed through a particular human mind and

found meaningful within that mental context. One fella's information is all just data to someone else. If you're an anthropologist, my detailed charts of Tasaday kinship patterns might be critical information to you. If you're a banker from Hong Kong, they might barely seem to be data.

2. Familiarity Has More Value Than Scarcity

With physical goods, there is a direct correlation between scarcity and value. Gold is more valuable than wheat, even though you can't eat it. While this is not always the case, the situation with information is usually precisely the reverse. Most soft goods increase in value as they become more common. Familiarity is an important asset in the world of information. It may often be the case that the best thing you can do to raise the demand for your product is to give it away.

While this has not always worked with shareware, it could be argued that there is a connection between the extent to which commercial software is pirated and the amount which gets sold. Broadly pirated software, such as Lotus 1-2-3 or WordPerfect, becomes a standard and benefits from Law of Increasing Returns based on familiarity.

In regard to my own soft product, rock and roll songs, there is no question that the band I write them for, the Grateful Dead, has increased its popularity enormously by giving them away. We have been letting people tape our concerts since the early seventies, but instead of reducing the demand for our product, we are now the largest concert draw in America, a fact which is at least in part attributable to the popularity generated by those tapes.

True, I don't get any royalties on the millions of copies of my songs which have been extracted from concerts, but I see no reason to complain. The fact is, no one but the Grateful Dead can perform a Grateful Dead song, so if you want the experience and not its thin projection, you have to buy a ticket from us. In other words, our intellectual property protection derives from our being the only real-time source of it.

3. Exclusivity Has Value

The problem with a model which turns the physical scarcity/value ratio on its head is that sometimes the value of information is very much based on its scarcity. Exclusive possession of certain facts makes them more useful. If everyone knows about conditions which might drive a stock price up, the information is valueless.

But again, the critical factor is usually time. It doesn't matter if this kind of information eventually becomes ubiquitous. What matters is being among the first who possess it and act on it. While potent secrets

usually don't stay secret, they may remain so long enough to advance the cause of their original holders.

4. Point of View and Authority Have Value

In a world of floating realities and contradictory maps, rewards will accrue to those commentators whose maps seem to fit their territory snugly, based on their ability to yield predictable results for those who use them.

In aesthetic information, whether poetry or rock 'n' roll, people are willing to buy the new product of an artist, sight-unseen, based on their having been delivered a pleasurable experience by previous work.

Reality is an edit. People are willing to pay for the authority of those editors whose filtering point of view seems to fit best. And again, point of view is an asset which cannot be stolen or duplicated. No one but Esther Dyson sees the world as she does and the handsome fee she charges for her newsletter is actually for the privilege of looking at the world through her unique eyes.

5. Time Replaces Space

In the physical world, value depends heavily on possession, or proximity in space. One owns that material which falls inside certain dimensional boundaries and the ability to act directly, exclusively, and as one wishes upon what falls inside those boundaries is the principal right of ownership. And of course there is the relationship between value and scarcity, a limitation in space.

In the virtual world, proximity in time is a value determinant. An informational product is generally more valuable the closer the purchaser can place himself to the moment of its expression, a limitation in time. Many kinds of information degrade rapidly with either time or reproduction. Relevance fades as the territory they map changes. Noise is introduced and bandwidth lost with passage away from the point where the information is first produced. Thus, listening to a Grateful Dead tape is hardly the same experience as attending a Grateful Dead concert. The closer one can get to the headwaters of an informational stream, the better his chances of finding an accurate picture of reality in it. In an era of easy reproduction, the informational abstractions of popular experiences will propagate out from their source moments to reach anyone who's interested. But it's easy enough to restrict the real experience of the desirable event, whether knock-out punch or guitar lick, to those willing to pay for being there.

6. *The Protection of Execution*

In the hick town I come from, they don't give you much credit for just having ideas. You are judged by what you can make of them. As things continue to speed up, I think we see that execution is the best protection for those designs which become physical products. Or, as Steve Jobs once put it, "Real artists ship." The big winner is usually the one who gets to the market first (and with enough organizational force to keep the lead).

But, as we become fixated upon information commerce, many of us seem to think that originality alone is sufficient to convey value, deserving, with the right legal assurances, of a steady wage. In fact, the best way to protect intellectual property is to act on it. It's not enough to invent and patent, one has to innovate as well. Someone claims to have patented the microprocessor before Intel. Maybe so. If he'd actually started shipping microprocessors before Intel, his claim would seem far less spurious.

7. *Information as Its Own Reward*

It is now a commonplace to say that money is information. With the exception of Krugers, crumpled cab-fare, and the contents of those suit-cases which drug lords are reputed to carry, most of the money in the informatized world is in ones and zeros. The global money supply sloshes around the Net, as fluid as weather. It is also obvious, as I have discussed, that information has become as fundamental to the creation of modern wealth as land and sunlight once were.

What is less obvious is the extent to which information is acquiring intrinsic value, not as a means to acquisition but as the object to be acquired. I suppose this has always been less explicitly the case. In politics and academia, potency and information have always been closely related.

However, as we increasingly buy information with money, we begin to see that buying information with other *information* is simple economic exchange without the necessity of converting the product into and out of currency. This is somewhat challenging for those who like clean accounting, since, information theory aside, informational exchange rates are too squishy to quantify to the decimal point.

Nevertheless, most of what a middle class American purchases has little to do with survival. We buy beauty, prestige, experience, education, and all the obscure pleasures of owning. Many of these things can not only be expressed in non-material terms, they can be acquired by non-material means.

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.

This may become the dominant form of human trade, and if we persist in modeling economics on a strictly monetary basis, we may be gravely misled.

8. Getting Paid in Cyberspace

How all the foregoing relates to solutions to the crisis in intellectual property is something I've barely started to wrap my mind around. It's fairly paradigm-warping to look at information through fresh eyes—to see how very little it is like pig iron or pork bellies, to imagine the tottering travesties of case law we will stack up if we go on treating it legally as though it were.

As I've said, I believe these towers of outmoded boilerplate will be a smoking heap sometime in the next decade and we mind miners will have no choice but to cast our lot with new systems that work.

I'm not really so gloomy about our prospects as readers of this jeremiad so far might conclude. Solutions will emerge. Nature abhors a vacuum and so does commerce.

Indeed, one of the aspects of the electronic frontier which I have always found most appealing—and the reason Mitch Kapor and I used that phrase in naming our foundation—is the degree to which it resembles the 19th Century American West in its natural preference for social devices which emerge from its conditions rather than those which are imposed from the outside.

Until the west was fully settled and "civilized" in this century, order was established according to an unwritten Code of the West which had the fluidity of etiquette rather than the rigidity of law. Ethics were more important than rules. Understandings were preferred over laws, which were, in any event, largely unenforceable.

I believe that law, as we understand it, was developed to protect the interests which arose in the two economic “waves” which Alvin Toffler accurately identified in *The Third Wave*. The First Wave was agriculturally based and required law to order ownership of the principal source of production, land. In the Second Wave, manufacturing became the economic mainspring, and the structure of modern law grew around the centralized institutions which needed protection for their reserves of capital, manpower, and hardware.

Both of these economic systems required stability. Their laws were designed to resist change and to assure some equability of distribution within a fairly static social framework. The possibility spaces had to be constrained to preserve the predictability necessary to either land stewardship or capital formation.

In the Third Wave we have now entered, information to a large extent replaces land, capital, and hardware, and as I have detailed in the preceding section, information is most at home in a much more fluid and adaptable environment. The Third Wave is likely to bring a fundamental shift in the purposes and methods of law which will affect far more than simply those statutes which govern intellectual property.

The “terrain” itself—the architecture of the Net—may come to serve many of the purposes which could only be maintained in the past by legal imposition. For example, it may be unnecessary to constitutionally assure freedom of expression in an environment which, in the words of my fellow EFF co-founder John Gilmore, “treats censorship as a malfunction” and re-routes proscribed ideas around it.

Similar natural balancing mechanisms may arise to smooth over the social discontinuities which previously required legal intercession to set right. On the Net, these differences are more likely to be spanned by a continuous spectrum which connects as much as it separates.

And, despite their fierce grip on the old legal structure, companies which trade in information are likely to find that in their increasing inability to deal sensibly with technological issues, the courts will not produce results which are predictable enough to be supportive of long-term enterprise. Every litigation becomes like a game of Russian roulette, depending on the depth the presiding judge’s clue-impairment.

Uncodified or adaptive “law,” while as “fast, loose, and out of control” as other emergent forms, is probably more likely to yield something like justice at this point. In fact, one can already see in development new practices to suit the conditions of virtual commerce. The life forms of information are evolving methods to protect their continued reproduction.

For example, while all the tiny print on a commercial diskette envelope punctiliously requires much of those who would open it, there are, as I say, few who read those provisos, let alone follow them to the letter. And yet, the software business remains a very healthy sector of the American economy.

Why is this? Because people seem to eventually buy the software they really use. Once a program becomes central to your work, you want the latest version of it, the best support, the actual manuals, all privileges which are attached to ownership. Such practical considerations will, in the absence of working law, become more and more important in getting paid for what might easily be obtained for nothing.

I do think that some software is being purchased in the service of ethics or the abstract awareness that the failure to buy it will result in its not being produced any longer, but I'm going to leave those motivators aside. While I believe that the failure of law will almost certainly result in a compensating re-emergence of ethics as the ordering template of society, this is a belief I don't have room to support here.

Instead, I think that, as in the case cited above, compensation for soft products will be driven primarily by practical considerations, all of them consistent with the true properties of digital information, where the value lies in it, and how it can be both manipulated and protected by technology.

While the conundrum remains a conundrum, I can begin to see the directions from which solutions may emerge, based in part on broadening those practical solutions which are already in practice.

9. Relationship and Its Tools

I believe one idea is central to understanding liquid commerce: Information economics, in the absence of objects, will be based more on relationship than possession.

One existing model for the future conveyance of intellectual property is real time performance, a medium currently used only in theater, music, lectures, stand-up comedy and pedagogy. I believe the concept of performance will expand to include most of the information economy from multi-casted soap operas to stock analysis. In these instances, commercial exchange will be more like ticket sales to a continuous show than the purchase of discrete bundles of that which is being shown.

The other model, of course, is service. The entire professional class—doctors, lawyers, consultants, architects, etc.—are already being paid directly for their intellectual property. Who needs copyright when you're on a retainer?

In fact, this model was applied to much of what is now copyrighted until the late 18th Century. Before the industrialization of creation, writers, composers, artists, and the like produced their products in the private service of patrons. Without objects to distribute in a mass market, creative people will return to a condition somewhat like this, except that they will serve many patrons, rather than one.

We can already see the emergence of companies which base their existence on supporting and enhancing the soft property they create rather than selling it by the shrink-wrapped piece or embedding it in widgets.

Trip Hawkins' new company for creating and licensing multimedia tools, 3DO, is an example of what I'm talking about. 3DO doesn't intend to produce any commercial software or consumer devices. Instead, they will act as a kind of private standards setting body, mediating among software and device creators who will be their licensees. They will provide a point of commonalty for relationships between a broad spectrum of entities.

In any case, whether you think of yourself as a service provider or a performer, the future protection of your intellectual property will depend on your ability to control your relationship to the market—a relationship which will most likely live and grow over a period of time.

The value of that relationship will reside in the quality of performance, the uniqueness of your point of view, the validity of your expertise, its relevance to your market, and, underlying everything, the ability of that market to access your creative services swiftly, conveniently, and interactively.

10. Interaction and Protection

Direct interaction will provide a lot of intellectual property protection in the future, and, indeed, it already has. No one knows how many software pirates have bought legitimate copies of a program after calling its publisher for technical support and being asked for some proof of purchase, but I would guess the number is very high.

The same kind of controls will be applicable to “question and answer” relationships between authorities (or artists) and those who seek their expertise. Newsletters, magazines, and books will be supplemented by the ability of their subscribers to ask direct questions of authors.

Interactivity will be a billable commodity even in the absence of authorship. As people move into the Net and increasingly get their information directly from its point of production, unfiltered by centralized media, they will attempt to develop the same interactive ability to probe reality which only experience has provided them in the

past. Live access to these distant “eyes and ears” will be much easier to cordon than access to static bundles of stored but easily reproducible information.

In most cases, control will be based on restricting access to the freshest, highest bandwidth information. It will be a matter of defining the ticket, the venue, the performer, and the identity of the ticket holder, definitions which I believe will take their forms from technology, not law.

In most cases, the defining technology will be cryptography.

11. Crypto Bottling

Cryptography, as I’ve said perhaps too many times, is the “material” from which the walls, boundaries—and bottles—of Cyberspace will be fashioned.

Of course there are problems with cryptography or any other purely technical method of property protection. It has always appeared to me that the more security you hide your goods behind, the more likely you are to turn your sanctuary into a target. Having come from a place where people leave their keys in their cars and don’t even have keys to their houses, I remain convinced that the best obstacle to crime is a society with its ethics intact.

While I admit that this is not the kind of society most of us live in, I also believe that a social over-reliance on protection by barricades rather than conscience will eventually wither the latter by turning intrusion and theft into a sport, rather than a crime. This is already occurring in the digital domain as is evident in the activities of computer crackers.

Furthermore, I would argue that initial efforts to protect digital copyright by copy protection contributed to the current condition in which most otherwise ethical computer users seem morally untroubled by their possession of pirated software.

Instead of cultivating among the newly computerized a sense of respect for the work of their fellows, early reliance on copy protection led to the subliminal notion that cracking into a software package somehow “earned” one the right to use it. Limited not by conscience but by technical skill, many soon felt free to do whatever they could get away with. This will continue to be a potential liability of the encryption of digitized commerce.

Furthermore, it’s cautionary to remember that copy protection was rejected by the market in most areas. Many of the upcoming efforts to use cryptography-based protection schemes will probably suffer the

same fate. People are not going to tolerate much which makes computers harder to use than they already are without any benefit to the user.

Nevertheless, encryption has already demonstrated a certain blunt utility. New subscriptions to various commercial satellite TV services sky-rocketed recently after their deployment of more robust encryption of their feeds. This, despite a booming backwoods trade in black decoder chips conducted by folks who'd look more at home running moonshine than cracking code.

Another obvious problem with encryption as a global solution is that once something has been unscrambled by a legitimate licensee, it may be openly available to massive reproduction.

In some instances, reproduction following decryption may not be a problem. Many soft products degrade sharply in value with time. It may be that the only real interest in some such products will be among those who have purchased the keys to immediacy.

Furthermore, as software becomes more modular and distribution moves online, it will begin to metamorphose in direct interaction with its user base. Discontinuous upgrades will smooth into a constant process of incremental improvement and adaptation, some of it man-made and some of it arising through genetic algorithms. Pirated copies of software may become too static to have much value to anyone.

Even in cases such as images, where the information is expected to remain fixed, the unencrypted file could still be interwoven with code which could continue to protect it by a wide variety of means.

In most of the schemes I can project, the file would be "alive" with permanently embedded software which could "sense" the surrounding conditions and interact with them. For example, it might contain code which could detect the process of duplication and cause it to self-destruct.

Other methods might give the file the ability to "phone home" through the Net to its original owner. The continued integrity of some files might require periodic "feeding" with digital cash from their host, which they would then relay back to their authors.

Of course files which possess the independent ability to communicate upstream sound uncomfortably like the Morris Internet Worm. "Live" files do have a certain viral quality. And serious privacy issues would arise if everyone's computer were packed with digital spies.

The point is that cryptography will enable a lot of protection technologies which will develop rapidly in the obsessive competition which has always existed between lock-makers and lock-breakers.

But cryptography will not be used simply for making locks. It is also at the heart of both digital signatures and the aforementioned digital cash, both of which I believe will be central to the future protection of intellectual property.

I believe that the generally acknowledged failure of the shareware model in software had less to do with dishonesty than with the simple inconvenience of paying for shareware. If the payment process can be automated, as digital cash and signature will make possible, I believe that soft product creators will reap a much higher return from the bread they cast upon the waters of Cyberspace.

Moreover, they will be spared much of the overhead which presently adheres to the marketing, manufacture, sales, and distribution of information products, whether those products are computer programs, books, CD's, or motion pictures. This will reduce prices and further increase the likelihood of non-compulsory payment.

But of course there is a fundamental problem with a system which requires, through technology, payment for every access to a particular expression. It defeats the original Jeffersonian purpose of seeing that ideas were available to everyone regardless of their economic station. I am not comfortable with a model which will restrict inquiry to the wealthy.

12. An Economy of Verbs

The future forms and protections of intellectual property are densely obscured from the entrance to the Virtual Age. Nevertheless, I can make (or reiterate) a few flat statements which I earnestly believe won't look too silly in fifty years.

- In the absence of the old containers, almost everything we think we know about intellectual property is wrong. We are going to have to unlearn it. We are going to have to look at information as though we'd never seen the stuff before.
- The protections which we will develop will rely far more on ethics and technology than on law.
- Encryption will be the technical basis for most intellectual property protection. (And should, for this and other reasons, be made more widely available.)
- The economy of the future will be based on relationship rather than possession. It will be continuous rather than sequential.

- And finally, in the years to come, most human exchange will be virtual rather than physical, consisting not of stuff but the stuff of which dreams are made. Our future business will be conducted in a world made more of verbs than nouns.

Ojo Caliente, New Mexico, October 1, 1992
New York, New York, November 6, 1992
Brookline, Massachusetts, November 8, 1992
New York, New York, November 15, 1993
San Francisco, California, November 20, 1993
Pinedale, Wyoming, November 24–30, 1993
New York, New York, December 13–14, 1993

This expression has lived and grown to this point over the time period and in the places detailed above. Despite its print publication here, I expect it will continue to evolve in liquid form, possibly for years.

The thoughts in it have not been “mine” alone but have assembled themselves in a field of interaction which has existed between myself and numerous others, to whom I am grateful. They particularly include: Pamela Samuelson, Kevin Kelly, Mitch Kapor, Mike Godwin, Stewart Brand, Mike Holderness, Miram Barlow, Danny Hillis, Trip Hawkins, and Alvin Toffler.

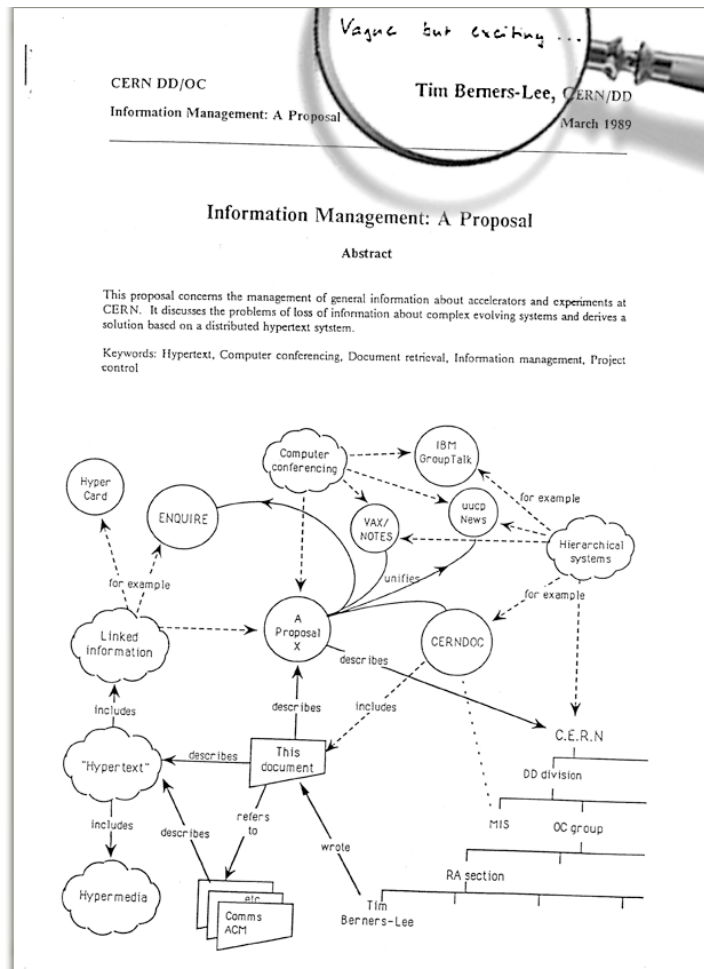
However, I should note in honesty that when WIRED sends me a check for having temporarily “fixed” it on their pages, I alone will cash it

...

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 this²:



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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-neutrality⁷ 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 errand¹⁰—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 Davos¹³—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 sky¹⁹

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 effluents

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. 85–86 (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 bottles⁴⁰

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 reformed 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 about⁴⁵

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 them⁵⁴

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 agoraphobia⁵⁸—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).

BARLOW'S LEGACY

CORY DOCTOROW

“Who controls the past controls the future; who controls the present controls the past.”¹

And now we are come to the great techlash, long overdue and desperately needed. With the techlash comes the political contest to assemble the narrative of What Just Happened and How We Got Here, because “Who controls the past controls the future. Who controls the present controls the past.”

Barlow is a key figure in that narrative, and so defining his legacy is key to the project of seizing the future. As we contest over that legacy, I will here set out my view on it. It's an insider's view: I met Barlow first through his writing, and then as a teenager on The WELL, and then at a dinner in London with Electronic Frontier Foundation (EFF) attorney Cindy Cohn (now the executive director of EFF), and then I worked with him, on and off, for more than a decade, through my work with EFF. He lectured to my students at USC, and wrote the introduction to one of my essay collections, and hung out with me at Burning Man, and we spoke on so many bills together, and I wrote him into one of my novels as a character, an act that he blessed. I emceed events where he spoke and sat with him in his hospital room as he lay dying. I make no claim to being Barlow's best or closest friend, but I count myself mightily privileged to have been a friend, a colleague, and a protege of his.

There is a story today about “cyber-utopians” told as a part of the techlash: Once, there were people who believed that the internet would automatically be a force for good. They told us all to connect to one another and fended off anyone who sought to rein in the power of the technology industry, naively ushering in an era of mass surveillance, monopolism, manipulation, even genocide. These people may have been well-intentioned, but they were smart enough that they should have known better, and if they hadn't been so unforgivably naive (and, possibly, secretly in the pay of the future monopolists) we might not be in such dire shape today.

In support of this contention, they cite aphorisms like “The Net interprets censorship as damage and routes around it,” coined by

¹ GEORGE ORWELL, NINETEEN EIGHTY-FOUR 331 (Outside The Box Ebook Publishing 2018) (1949) (ebook).

Barlow's EFF-co-founder and erstwhile roommate John Gilmore who rivals Barlow for the title of internet zelig. Gilmore has a hand in the invention of the Free Software movement, the legalization of civilian access to cryptography, the ISP industry, commercial open source, software-defined radio, marijuana legalization, and a hundred other projects large and small.

But context 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."

Critics of political slogans take note: the fact that a complex idea is reduced to a pithy bumper-sticker is not (necessarily) reductive; it can be a necessary and extremely valuable convenience. A URL is not a web-page and even the best URL rarely substitutes for the page it refers to. But requiring us to forego pointers and deal only in things, to refer to web-pages solely by their complete texts rather than the brief summaries that unambiguously point to them, would be a hard discourse.

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 Huxelyism was the means for realizing the nightmares of Orwell.

You don't 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.

“If there is hope . . . it lies in the proles”²

The techlash began within tech. Naturally. Notwithstanding the genuine privilege-blindness of techies who often live in a bubble of wealth, technological competence, and agency, no one was better situated to spot the problems with tech—market-concentration, the reckless collection and warehousing of sensitive personal information, deceptive and manipulative business practices, the misuse of tech by repressive states, bullies, stalkers, and would-be ethnic cleansers—than people who understood precisely how the technology worked, knew the people responsible for the key decisions, and understood their frailty and capacity for self-deception.

These early coalmine canaries were atomized and isolated. At EFF, we heard from some of them: whistleblowers who came in with printouts and wild tales. Think of Mark Klein, who wandered through the front door of the old Shotwell Street office in San Francisco's Mission district with a sheaf of documents and a hard-to-believe tale about his years at AT&T building a secret room for the NSA to use while illegally wiretapping the whole internet. Klein wasn't a crank. He was a hero, and the litigation spawned by his act of bravery is still underway, more than a decade later.

Tech is a great force-multiplier. The canny user of technology can project their will over millions or even billions of devices, and, potentially, over the people who use those devices, too. That kind of power is terrifying, especially in the hands of unaccountable, frail, and fallible elites.

The project of teaching “STEM” to everyone did not begin as an attempt to maximize the national GDP by raising a generation of startup founders: it was a prescient attempt at self-defense, a mission to pluralize the power of tech.

“Tech” is not a force unto itself. Technology's imperatives are the imperatives of the people who design, control, and use technology. Information doesn't want to be free, but people do.

² ORWELL, *supra* note 1, at 94.

Barlow loved people. When Skype was invented, he kept it turned on at all hours, and allowed anyone in the world to initiate a session with him. Some were colleagues, some were admirers, and a good fraction were randos who were just exploring this new videoconferencing system. Barlow doted on these randos, and rhapsodized about the joy of helping a stranger halfway across the world practice their conversational English.

The last time I spoke with Barlow, as he lay in a hospital bed in San Francisco, he told me that if he ever got out, he wanted to go drive a car for Lyft, and just meet new people all day long and talk to them about what they wanted and what he wanted and make human connections.

Barlow was not naive about the ways in which humans could be terrible to other people and themselves. His posthumously published memoir, finished just weeks before he died, is simultaneously full of celebrations of the people who crossed his path and score-settling that verges on the unseemly or petty.

It's just that Barlow thought that the answer to human frailty was more humans. The answer to an empathy gap was spending time with the people for whom you lacked empathy. That while these things did not guarantee the development of an ethical stance, their absence guaranteed a kind of rootless, free-floating sociopathy.

Doctrinal free-market thinkers have excused much sociopathy with the self-evident aphorism that "incentives matter." As with "the Net interprets censorship, etc," this saying references much subtext, notably the idea that kindness creates dependency and helplessness. It is a doctrine of cruelty, dressed up as pragmatism.

But incentives do matter. Designing a system that can only be navigated by being a selfish bastard creates selfish bastardry, and the cognitive dissonance of everyday cruelties generates a kind of protective scar-tissue in the form of a reflex of judgment, dismissal, and cruelty.

And contrariwise, designing a system where we celebrate civic duty, kindness, empathy and the giving of gifts without the expectation of a reward produces an environment where the angels of our better nature can shout down the cruel, lizard-brain impulses that mutter just below the threshold of perception.

“Freedom is the freedom to say that two plus two makes four.”³

Generations of elevation of selfishness to virtue has produced a public discourse where espousing a belief in human goodness marks you out as a patsy at best and a dangerous idiot at worst.

There's a statistical illiteracy in this proposition. After all, if 99.9 percent of the world is composed of bastards, how unlikely is it that you and everyone you know are just unremarkably flawed vessels whose nature fluctuates between reaction and reason?

But the idea that humans are mostly OK and made worse or better by the stories they tell about their own nature has been in disrepute since the Reagan years, and without the freedom to admit this otherwise obvious truth, we've had to compose all kinds of other excuses for our world.

Take the concentration of tech into Big Tech: the theorists who insisted that unfettered markets and doctrinal selfishness would produce competitive and vibrant markets find themselves scrambling to explain the conversion of the internet from a crazy bazaar into five big services filled with screenshots from the other four. They field all manner of unconvincing explanations for this phenomenon, like “first-mover advantage”⁴ or “network effects,”⁵ because they can't say, “Dismantling antitrust enforcement gave rise to a new wave of trusts on a scale not seen since the robber-barons.”

But if first-movers and network effects predicted success, we'd all be searching the internet by logging into Altavista from our Crays.

The utterly plausible explanation for Big Tech—that we stopped enforcing the rules that punished underhanded growth tactics like mergers to monopoly—is resisted with the fervor of an anti-vaxxer explaining away their kid's measles: “It's not because I didn't get her vaccinated, it's because of environmental toxins!”

³ ORWELL, *supra* note 1, at 109.

⁴ “In marketing strategy, first-mover advantage (FMA) is the advantage gained by the initial (‘first-moving’) significant occupant of a market segment.” *First-mover advantage*, WIKIPEDIA, https://en.wikipedia.org/wiki/First-mover_advantage (last accessed June 9, 2019).

⁵ “A network effect (also called network externality or demand-side economies of scale) is the effect described in economics and business that an additional user of a good or service has on the value of that product to others. When a network effect is present, the value of a product or service increases according to the number of others using it.” *Network effect*, WIKIPEDIA, https://en.wikipedia.org/wiki/Network_effect (last accessed June 9, 2019).

Bigness multiplies all the risks of tech. Putting everyone's social lives on Facebook creates a one-stop shop for mass-scale manipulation. Putting everyone's mobile data in one of two silos creates an irresistible target for state surveillance. Putting everyone's attention at the mercy of four or five gatekeepers turns their normal human foibles and cherishes illusions into facts of life that everyone else in the world must navigate.

Think of this in analogy to climate change. Your racist Facebook uncle's climate denial around the Thanksgiving table may ruin your digestion, but it won't cook the planet. But change your uncle's name to Koch, give him a multi-billion-dollar war chest, give it a generation, and before you know it we'll be drinking our urine and digging through rubble looking for canned goods.

In the same way, your idiotic college roommate's social theory that "everyone should just be honest, all the time," might make you want to change the locks on your dorm-room. But make that kid's name Zuckerberg, put him in charge of the social lives of two billion people, and his bizarre belief that "Having two identities for yourself is an example of a lack of integrity"⁶ becomes an existential threat to human thriving.

Implicit in the belief in bigness is a belief in a special kind of person, an Ayn Randian titan, whose innate superiority is so fabulous that any attempt to rein it in will redound to the detriment of all of us. Markets act as a kind of sorting hat, finding these natural rulers and elevating them to positions of power, and the scurrying little people's misguided attempt to dethrone them must be resisted, for their own sakes.

But no one is smart enough and competent enough to be the dictator of two billion peoples' social lives. It's not merely that Mark Zuckerberg is wrong about how people get along, it's that no one is right enough to wield that power.

Generations of insistence that some among us are born to rule, and revelations that the people who rise to power in that environment are at best fallible and at worst deplorable have created a massive dissonance, a great collective yearning for a One True King to lead us out of our dark times.

There's a narrative about Cambridge Analytica and the 2016 election of a boorish white supremacist grifter to the US presidency:

⁶ See Miguel Helft, *Facebook, Foe of Anonymity, Is Forced to Explain a Secret*, N.Y. TIMES (May 13, 2011), <https://www.nytimes.com/2011/05/14/technology/14facebook.html>.

Cambridge Analytica lied about everything except their sales literature, where they truthfully revealed that they had discovered a way to turn Facebook into a mind-control ray that would make decent people into racists.

But there's another, more plausible version of that narrative: Facebook spied on everyone and found all the racists, whose imperfections have a variety of causes, but prominent among them is the belief that some people are better than others and markets tell you who is and isn't good. Having found the racists, Cambridge Analytica convinced them that voting for Donald Trump would advance their cause.

This version of events suggests several countermeasures: make Facebook stop spying on people; help people see that the winners and losers in the marketplace are better predicted by cruelty and indifference to their neighbors than by virtue; ease the anxiety that everyone who doesn't win big in the 21st Century lottery will lose terribly.

That is: fix the incentives; find the better natures of people; help people understand and master their technology; reverse the forces that permit a few people to rise to dominate the rest of us.

That is: treat the internet with the gravitas that it is due, as a system that could be a force for great human flourishing, but only if we ensure that it isn't used to snuff out human dignity and agency.

Barlow made his reputation by insisting, long before it was obvious to most people, that getting the internet's future right would be a necessary precondition to getting humanity's future right. By insisting that the toy network used for telling jokes and arguing about Star Trek would grow up to be the pluripotent network that allowed anyone, anywhere to talk to anyone else, anywhere, using any program or protocol they chose. By insisting that the internet be regulated with regard to all the ways that it would come to touch our lives in the future—and not merely as a better radio station, or a very convenient video-on-demand service, or a jihadi recruiting tool, or as the greatest pornography distribution system in human history.

When a problem is a long way off, activists' primary activity for many years is to simply convince people that there is a problem: that someday your cigarettes will give you cancer; that someday, climate change will threaten billions of lives; that someday, the text-messaging system called "the internet" will grow to be our species-wide, civilization-spanning nervous system.

But if the activist is right, then eventually convincing people that there is a problem will take care of itself. Your doctor finds a tumor. California burns. Burmese mobs visit genocide upon the Rohingya.

I call that moment “peak indifference.” It’s the moment when the problem’s unchecked progress creates its own momentum, and every day, of their own accord, people recognize that the problem is there.

After peak indifference, the activist’s job changes: now, they must convince people not to give in to nihilism. Because by the time a problem like cancer or climate or concentration is so manifest that we can’t deny it, it can seem like it’s too late to do anything about it.

After peak indifference, the activist’s job changes to convincing people to have hope.

Barlow never gave up hope. He was unabashedly, unashamedly, publicly and vocally hopeful.

That hope plays into the narrative of techno-utopian naivete. But Barlow wasn’t naive. He knew how much trouble we were in—and he also knew how wonderful things could be, if we could only dig ourselves out of that trouble. The techlash isn’t a repudiation of Barlow’s hopefulness: it is his vindication.

Barlow’s legacy, then, isn’t a foolish belief that history would steer clear of dystopia of its own accord; rather, his legacy is the noble belief that we, together, pluralistically and through collective reasoning and collective action, could navigate the dangerous waters we find ourselves in, patch the holes the rocks knocked in our ship, and find our way to a better land.

INVENTING THE FUTURE: BARLOW AND BEYOND

CINDY COHN

We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth.

We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity.

....

We will create a civilization of the Mind in Cyberspace. May it be more humane and fair than the world your governments have made before.¹

I know the purpose of this volume is not to merely praise or bury John Perry Barlow, but to use him as a jumping off point. But I don't think I can get to the second part without addressing what many of his critics miss about what he was trying to do with the *A Declaration of the Independence of Cyberspace (Declaration)*.

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. The basic straw man story goes like this: Barlow was the leader of a band of naïve techno-utopians who believed that the Internet would magically fix all problems without creating any new ones. History has shown that the Internet didn't solve all problems and created many new ones, so Barlow was a fool or worse. Pieces like this showed up periodically during his lifetime too.

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."² 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

¹ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, 18 DUKE L. & TECH. REV. 5, 5–7 (2019), reprinted from John Perry Barlow, *A Declaration of the Independence of Cyberspace*, ELEC. FRONTIER FOUND. (FEB. 8, 1996), <https://www.eff.org/cyberspace-independence>.

² *Id.* at 5.

on us.”³ 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.

But I think that this approach misses what Barlow was up to. Barlow wasn't trying to predict the future; he was trying to invent it. Here's what he wrote in response to one of those “straw men” articles in the Washington Post in 2015:

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 a number of secretive institutions, public and private (not that there's a useful distinction).⁴

Barlow was trying to use the force of his will and mighty pen to bring a good future to pass in a world where it was far from certain. He was trying to get out ahead of what he knew would be the powerful forces against freedom online.

To be truthful, I didn't really understand that at first either. I used to start my early Internet law presentations with a quote from Ecclesiastes: “there is nothing new under the sun.”⁵ 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.⁶ I would tie the need for digital encryption to the physical encryption systems

³ *Id.*

⁴ Letter to the Editor from John Perry Barlow to the Wash. Post (sent in response to J. Silverman, *The Internet's First Anarchist*, WASH. POST, Mar. 22, 2015 (evening edition)).

⁵ *Ecclesiastes* 1:9.

⁶ A series of 85 essays, written by Alexander Hamilton, James Madison, and John Jay, explaining the Constitution and urging its ratification in the State of New York. *See generally* THE FEDERALIST (Alexander Hamilton et al).

used by Madison and Jefferson.⁷ Later I would tie the fight against mass surveillance to James Otis' fight against general warrants.⁸ 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. Unlike me, he gave a big voice to the dream that the digital world could be a chance for a fresh start against the incumbents—governments, telecommunications companies, movie and record cartels and more. His vision drew strongly on that powerful American idea that one could, like Huck Finn, “light out for the territory” to start anew.⁹

Remember, Barlow was writing in 1996 as the United States government tried to stop “indecent” speech online and demanded that all telecommunications lines be built to be easily tappable.¹⁰ Barlow co-founded EFF with Mitch Kapor and John Gilmore in 1990 in response to government raids on online services like bulletin boards that reflected a nearly complete lack of understanding about the early users of public digital networks.¹¹ Governments were the biggest worry for building a

⁷ See Rachel B. Doyle, *The Founding Fathers Encrypted Secret Messages, Too*, ATLANTIC (Mar. 20, 2017),

<https://www.theatlantic.com/science/archive/2017/03/h3110-mr-pr3s1d3nt/521193/>; see also Chris Campbell, *Thomas Jefferson Used Encryption*, LAISSEZ FAIRE BOOKS (Sept. 1, 2012), <https://lfb.org/thomas-jefferson-used-encryption/>.

⁸ See Kade Crockford, *A Brilliant Young Man Who Left Plum Job in Opposition to General Warrants (in 1760)*, AM. CIVIL LIBERTIES UNION (June 18, 2013), <https://www.aclu.org/blog/national-security/secretcy/brilliant-young-man-who-left-plum-job-opposition-general-warrants>; see also David Snyder, *The NSA's "General Warrants"*, ELEC. FRONTIER FOUND. (2007), <https://www.eff.org/files/filenode/att/generalwarrantsmemo.pdf>.

⁹ MARK TWAIN, *THE ADVENTURES OF HUCKLEBERRY FINN 295* (Glassbook Classic N.D.) (1884) (ebook).

¹⁰ See Communications Assistance for Law Enforcement Act, Pub. L. No. 103-414, 108 Stat. 4279 (1994) (codified at 47 U.S.C. §§ 1001–1021 (2012)); see also Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C. (2012)).

¹¹ See John Perry Barlow, *A Not Terribly Brief History of the Electronic Frontier Foundation*, ELEC. FRONTIER FOUND. (Nov. 8, 1990),

free technology future in the early to mid-1990s so it's no surprise that Barlow focused his attention there.¹²

Barlow did so much inventing of the future that sometimes we forget what has gone his way. Chief among them is that the digital revolution eliminated barriers that physical distance used to create for information sharing and connection. He inspired people to believe that this new network would let them speak and connect to anyone around the world. On that score, the Internet has given a voice to far more people than broadcast or cable television or newspapers. Barlow's vision arguably led, along with some strong legal strategy, to the Supreme Court's embrace of the Internet as a place protected by the First Amendment in *Reno v. ACLU*:

From the publishers' point of view, it constitutes a vast platform from which to address and hear from a world-wide audience of millions of readers, viewers, researchers, and buyers. Any person or organization with a computer connected to the Internet can "publish" information. Publishers include government agencies, educational institutions, commercial entities, advocacy groups, and individuals.¹³

This promise is not over. At EFF we continue to work with people in remote (and not so remote) parts around the world who are struggling to make their voices heard and who still view the Internet as that best pathway to operating outside of repressive government control. Oppressed people worldwide continue to go to extraordinary lengths to use the Internet to get their message out to the world.

Barlow's early focus on governments as key obstacles to online freedom has helped us gain some protections that we might not have had without him. In order to ensure that the Internet became a place for formerly marginalized voices, we helped ensure that those places could

<https://www.eff.org/pages/not-terribly-brief-history-electronic-frontier-foundation>.

¹² Barlow didn't just write about governments in the 1990s either and those who stop with the *Declaration* are selling him short. In 1993, long before the *Declaration*, Barlow published *Selling Wine Without Bottles: The Economy of Mind on the Global Net*. This essay, much longer and less expansive than the *Declaration*, recognized that the internet would create fundamental problems for intellectual property regimes and the companies that make their money from them. See John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8 (2019), also available at ELEC. FRONTIER FOUND. (1994), <https://www.eff.org/pages/selling-wine-without-bottles-economy-mind-global-net>.

¹³ *Reno v. ACLU*, 521 U.S. 844, 853 (1997).

exist, in part by standing up for the idea that, except in criminal circumstances, hosts should not be held legally responsible for what those voices say.¹⁴ We have also seen digital search and seizure laws move slowly in the right direction, most importantly through the growing recognition from the Supreme Court, that the Fourth Amendment must be interpreted to reflect the realities of the modern world.¹⁵ We lifted government restrictions on developing and sharing tools that protect privacy and security.¹⁶

Today we take it for granted that we can type or talk or scheme or build a tool or product or share or store information with someone in Gabon, Sao Paolo, or Bali just as easily as we can someone across town. People build friendships, create and grow political movements, fall in love and make each other laugh or cry across incredible physical distances instantaneously. We create mixes and remixes of our culture, building on each other's ideas with insight and ease. We have collaborative projects from Wikimedia to the Tor Project to Creative Commons Network, which span the globe in ways that were unthinkable in 1990. The same is true for businesses large and small. That this sort of distance-hopping would become commonplace was not obvious in the 1990s. Barlow's impact, "We will spread ourselves across the Planet so that no one can arrest our thoughts[,] is undeniable."¹⁷

But there are major differences in the world we inhabit now and the world Barlow tried to invent. One of the key areas that has emerged as critical is a focus on how, through network effects, a lack of competition and stifled innovation, a small set of private entities has

¹⁴ 17 U.S.C. § 512 (2012) (protecting, through the safe harbor provisions of the Digital Millennium Copyright Act of 1998, service providers who meet certain conditions from monetary damages for the infringing activities of their users and other third parties on the Internet); 47 U.S.C. § 230 (2012) (providing, in the safe harbor provision of the Communications Decency Act of 1996, "[n]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider").

¹⁵ See *Carpenter v. United States*, 138 S. Ct. 2206, 2214 (2018) (stating that as "technology has enhanced the Government's capacity to encroach upon areas normally guarded from inquisitive eyes," the Supreme Court must assure preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted).

¹⁶ See *Bernstein v. United States Dep't of Justice*, 176 F.3d 1132 (9th Cir. 1999) (holding that software source code was speech protected by the First Amendment and that the government's regulations preventing its publication were unconstitutional).

¹⁷ Barlow, *supra* note 1, at 7.

ended up having a tremendous impact on our civil liberties even if they are not the primary focus of the Constitution. While in the 1990s it was reasonable to focus on the government as the biggest risk to freedom online, we now have to address the problem of centralized corporate power, both as a tool of governmental repression and as its own problem for privacy, speech, and innovation.¹⁸ Governments didn't go away, though. With the rise of authoritarian governments around the world we may soon see more focus on Barlow's original targets and there are now far more of them that have the technical wherewithal to censor, undermine and attack activists. The growth in the importance of the Internet means that the fronts on which we have to defend it have grown too.

Unlike the early days of the Internet, where a somewhat blank slate allowed the powerful offline incumbent companies to be cheerfully upended by upstart new players, we now have a set of big Internet companies that, having created their fortresses, are now trying to pull up the ladder. This is in addition to the long-ago success of the big telecommunications companies in eliminating serious competition in the broadband market. So, from the top layer of the Internet infrastructure to the bottom we have fewer choices and leverage than we should.

Sadly, the big Internet companies are now backing away from the kinds of protections that helped make it possible for them to exist. They are too often abandoning any commitment to provide a forum for marginalized people to speak, including the legal protections necessary for someone to create a new speech platform. They attack or fail to defend the right to build interoperable and competitive tools. They use one-sided click-wrap "contracts" to both disempower their users and support technical and legal claims that prevent reverse engineering and other sorts of follow-on innovation. *These Internet giants may not need the protection of these laws anymore, but their future competitors will.*

This centralization of corporate power has other consequences as well. Barlow believed that new approaches to solving conflicts would emerge, "Where there are real conflicts, where there are wrongs, we will identify them and address them by our means. We are forming our own Social Contract."¹⁹ At this point in our contentious Internet history, it's clear that this hasn't occurred, at least not yet and not at scale.

¹⁸ Note that Barlow himself recognized this concern about corporate power in 2015. *See supra* note 4 and accompanying text. There are smatterings of it in earlier writings as well—Barlow had no love for monopolies or cartels, even if that wasn't his primary concern in the *Declaration*.

¹⁹ *See* Barlow, *supra* note 1.

Harassment, hatred and other serious problems online have instead spurred calls for large online platforms to serve as judge, jury and executioner of what people may say online, even as the business models of these platforms arguably feed this behavior. The big companies have obliged, and now happily report how much speech they have censored rather than how well they have done differentiating the bad speech from the good or providing a forum for marginalized voices, much less adjusting their business models.

Finally, we have not succeeded in building a world “without privilege or prejudice,” instead all too often re-creating or even making worse offline discrimination of marginalized people. While technology has made it possible for marginalized groups to find each other, associate and build communities together, this has not translated into the kind of political, financial or social power Barlow envisioned. Worse, the technology companies that have reaped the most financial benefits of this new world are even less diverse at the top than the corporate dinosaurs they replaced.

In the end, I think Barlow was right to focus on technological advances empowering users and communities to self-organize to respond to bad actors and actions online, even if we aren’t there yet. But we also need law and policy to ensure that we can create and support the tools necessary to keep the Internet free. Without that, the big corporations are inevitably going to cater to those with the most power and voice, rather than stand with the less powerful. And governments will happily put pressure on them to do so. By pressuring our corporate dictators to protect us, without efforts to empower users and communities to protect themselves, we risk further re-creating online the marginalization that the powerless have long experienced.

In short, we are seeing that in many ways the new bosses are the same as the old bosses. Offline prejudices and power differentials are more easily replicated online than Barlow had hoped—and they are just as difficult to undo.

INVENTING 2039

So on to the fun question posed by this symposium. What should we take from today into the next 20 years? Or as Barlow might put it, what do we need to say and do today to invent the future we want? While 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 squelch freedom of expression, freedom to tinker or innovation online, and more.

But Barlow would want us to go further. I brainstormed a bit with my EFF colleagues and the theme that came up consistently in our conversations was envisioning a future where power and control rested to the end points in the network—the humans. Here are some of the ideas we generated, presented with a light touch of Barlow-style rhetoric:

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.

We're building a society where technological advances serve to empower humans rather than tricking, manipulating or replacing them. Builders take care to ensure that all technologies, no matter how sophisticated, are fundamentally accountable to the humans who are impacted by them, not just the humans who build or deploy them.

We are building a society where control has moved from centralized systems—from the Facebooks and Amazons and Alphabets—to the end points, the users. A society where power is distributed along with technology, including the power to control who can see what we do and say and to keep ourselves secure. We are building a civilization where people not only have the right to speak, they have the right to have their voices heard and heeded. A civilization where people can gather together to build a better world, free of government or corporate surveillance. A civilization where agreements must really be “agreed” to, because all those party to them have the power to require a real negotiation and meeting of the minds. A civilization where the consequences of inevitable technological mistakes and glitches are borne by those who implement and benefit from the technology, not just those who are affected by their mistakes or lack of care.

We seek a civilization governed not by corporate policies but primarily by self-governing communities of trust, where protections for users come from their tools and communities, who have careful, thoughtful mechanisms for stepping in when users are harassed, threatened or harmed, along with mechanisms to correct mistakes and redress wrongs. If that fails, people can obtain real legal redress from those who have harmed them, but also have an easy path to leave, including to choose or start a community that better reflects their values and protects them. We seek a world where people have many such communities to choose from and can participate in multiple ones seamlessly, including choosing a separate identity for each. Ultimately, we seek a civilization that contains multiple options, laboratories and experiments for how to organize a society, so that we can all learn and make conscious choices to move forward.

We are building a civilization where empowerment is not expressed through property rights, ownership and one-sided adhesion contracts as much as by protecting autonomy and control while still promoting free expression and transparency. Just as Barlow recognized the need for new methods of monetizing creative work,²⁰ in the next 20 years we will evolve new ways to establish control and protection over our personal data. We will recognize both the need for personal and associational privacy and control and the critical role of free flowing information in keeping us informed and empowered.

In short, we are building a world where everyone has free (as in speech) access to read, speak, create, and control their experience, including creating their own tools and protecting their own privacy. A world where humans have the legal, policy and cultural support and protection to do so. Where individuals have the strength and processing power to take on larger organizations, whether government or corporate, as well as to be protected from them. A world where our technology, whether as simple as an email or as complex as an AI system, is trustworthy and loyal to us.

May it be more humane and fair than the world your governments and giant companies have made before.

²⁰ See Barlow, *supra* note 12.

A POLITICAL ECONOMY OF UTOPIA?

YOCHAI BENKLER

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?*"¹ 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*.² *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. In this, for me a telling passage was:

[M]ost of what a middle class American purchases has little to do with survival. We buy beauty, prestige, experience, education, and all the obscure pleasures of owning. Many of these things can not only be expressed in non-material terms, they can be acquired by non-material means.

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.

¹ MONTY PYTHON'S LIFE OF BRIAN (Sony Pictures 1979).

² FRED TURNER, FROM COUNTERCULTURE TO CYBERCULTURE (2006).

Rather they are getting paid in something besides money. It is an economy which consists almost entirely of information.³

Here was the nub of it. An ambition to live in spaces where the commodity form was not everything. Where we could produce with and for each other in relations of social exchange. The problem was not so much markets as markets. It was the totalizing sense that markets are all there is. Nothing captured this so clearly at the time than the battles over music copyright, where the Recording Industry Association of America's (RIAA) vision of a celestial jukebox meant that music was a relationship that should be fully mediated by money, down to the briefest moments of pleasure or cultural reference. The position that Barlow presented here, widely shared by many of us who worked to theorize and practically construct the public domain, was a vision that music was a social relationship and that markets had to be cabined alongside a robust commons-based cultural production.

I spent much of the last twenty-five years focused primarily on the latter of the two problems—the extent of the market and how we can escape its totalizing reach. Only occasionally, and quite late in my own work, did I turn to how we think about how we counter the oppressive potential of the state without losing the benefits of its ability to deliver public goods, contain market power, and redistribute wealth.

As I was preparing for the oddly introspective exercise of writing my contribution here, I dug up an August 1995 draft of the job talk with which I tried to persuade law schools to hire me. I opened with this:

Recognizing this historical moment presents us with a rare instance at which we can make choices about the architecture of the new technological base upon which our society and economy will be built. Choices we make now will affect investment and use patterns, which in turn will further affect the paths along which technology itself will develop, and will affect how we conceive of information and knowledge, and how we produce and consume that information and knowledge. The network architecture and the patterns of use of electronic communications that will develop from these choices will have significant effects on our cultural, social, and economic structure.

And then closed with:

Because the attributes of digital communications technology have the potential to effect profound changes in the way we interact with

³ John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8, 23–24 (2019).

one another, the stakes of how we regulate the networks through which we will interact are very high. We could move ourselves towards a society in which the production and consumption of information and knowledge is decentralized and diversified, emphasizing those attributes of digital technology that make possible nonhierarchical, open communications available on a more-or-less equal basis to all end users. We could also move our society towards a centralized economy, in which a few large information conglomerates have such fine-tuned information about our preferences, powers, and vulnerabilities, that they can exert a tremendous amount of control over our every choice. We will likely move towards something that is neither Cybertopia nor Orwell's dystopia. But where along the spectrum from phobia to utopia our society will actually end up will likely be affected by accumulated choices we make today and tomorrow about who controls the various components and aspects of the communications infrastructure upon which our information society will be built. That is where legislators, judges, and lawyers come in, for in every legal decision, regulatory action, or law that effects an institutional determination about who controls which resources that are pertinent to the development of the electronic communications network, a piece of our future is being determined.

Plus ça change.

In the 1990s, the particular institutional battle over power to control the information economy and society were battles over the scope of commons. I thought that the most important choices would be about property and commons—in particular how building robust commons could provide a steady resource base on which decentralized, self-governing communities and individuals could construct a robust system of information, communications, knowledge, and cultural production that was not dependent on market relations and could provide a measure of freedom from powerful market actors, as well as from the state.

The primary failure of that vision was that except in important isolated settings, where commons-based practices took root early and were able to outcompete the state and the market, expansion of the domain of nonmarket production has stalled.

The fundamental battle that I think Barlow insisted we join, and that I too focused on, was the right battle for its time. It continues to be the case that battles over the shape of property rights and technological affordances will shape bargaining power within markets, and will shape the existence and relative prevalence or importance of non-market forms of production and social exchange. It's still the case that in principle, as we project twenty-five years forward, we might be in a world in which a

core set of basic materials is pumped into our homes as electricity and water are, and feed distributed fabricators (3D printers) become as ubiquitous as laundry machines or microwaves. Such a system would allow us to share designs as free and open source software (FOSS), user innovation, or fan fiction are shared today, and to fabricate much of the stuff we need in non-commodified, household production for our own use and to share and exchange with others. No one has captured the potential for such a non-commodified society like Cory Doctorow in *Walkaway*. It's still the case that the pattern of control over energy generation could shift toward a distributed system, as solar panels and wind turbines get connected over a neutral, public grid. It's still the case that services that depend on platforms could be structured as cooperatives. Whether any of these developments will emerge will depend in large measure on what institutional choices we make about the technology and about how it is used in actual institutional settings and firms. It will depend on whether this time (unlike in the 1990s), we will succeed in seeing a population-level cultural change from people perceiving themselves as consumers to people seeing themselves as producers. And it will depend on whether we can integrate that shift into our day to day practice as a revised view of the state and the market, rather than as a displacement.

And there's the rub. Because the 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 effluents 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,⁴ and using the "free" nature of the open parts of the infrastructure as low cost input from

⁴ See generally Yochai Benkler, *Degrees of Freedom, Dimensions of Power*, 145 DAEDALUS 18 (2016).

which to then mine our “biopolitical public domain,” as Julie Cohen puts it.⁵

What the past quarter century has taught us is that there are five basic failure modes of commons-based strategies to construct more attractive forms of social relations.

1. Companies and countries can usually sustain focused strategic efforts for longer and more actively than distributed networks of users. They can and do use these advantages strategically to re-centralize control over consumers and voters using mechanisms that are layered over or circumvent the still-open parts of the ecosystem. This is not true in all cases; Wikipedia has enough activated users that they are able to overcome concerted efforts to distort information; major FOSS development projects of core pieces of infrastructure beat out proprietary solutions. But, as Wikipedia approaches its 20th anniversary, we have to recognize that these major examples of successful distributed commons-based social production continue to be our prime examples. Time and again over the past twenty years we have seen companies spending money to harness relatively passive consumers—whether it is in carrier-operated WiFi networks that completely overshadowed the emergence of community wireless networks, or whether it is in the App economy that Apple introduced, based on the App Store model, that increasingly has displaced for most people the open-standards based personal computer running an open-standards based html browser. And in the past five years we have seen countries find ways of using the open nature of communications to engage in propaganda and manipulation, as well as to track dissidents and opponents by tapping into the surveillance capabilities that companies developed to continuously gather information about their users for commercial sale.
2. Distributed social relations can themselves develop internal hierarchies and inequities (the Iron Law of Oligarchy), as current debates over Wikipedia and FOSS gender participation ratios and governance make clear.

⁵ See generally Julie E. Cohen, *The Biopolitical Public Domain: The Legal Construction of the Surveillance Economy*, 31 PHILOSOPHY & TECH. 213 (2018).

3. Distributed open communications have provided enormous play for genuinely hateful and harmful behavior, such that we find ourselves seeking some power to control the worst abuses—the power of the platforms we want to hold democratically accountable, or the power of countries to regulate those platforms for us. As early as Gamergate, when networked gamers mobilized to harass and intimidate women: game developers and media critics, in the name of geek masculinity and free speech, and more prominently since the various elections of 2016, we have come to appreciate the extent to which fully distributed networks can underwrite abusive behavior.
4. More fundamentally, as long as we live in a society where people have to make money to eat and keep a roof over their heads, markets produce stuff we really like and want. For all the broad complaints about Amazon, it has produced enormous consumer welfare. More directly, for all the romanticization of fan videos and remix, the emergence of subscription streaming services like Netflix and Amazon Prime has been a boon to professional video creators and underwritten a golden age of professional video entertainment and narrative, both fiction and non-fiction.
5. States are still necessary to counter market power, provide public goods on a sustained and large-scale basis by using coercive taxing and spending powers, redistribute wealth, and provide basic social and economic security for the majority of the population.

Markets and states have proved remarkably resilient and adaptive. Even where technological standards and institutions made it possible for commons-based, distributed action to take root, both market actors and states have found ways to impose their goals on most of the population. This occurred primarily when the population engaging with technology shifted from the more active and technically capable early adopters to encompass a broader range of users, most of whom couldn't, or didn't care to, use the freedoms that early adopters had put in place for themselves. In part, this “domestication” of user creativity was done as a sustained, intentional campaign, like the RIAA and MPAA's litigation and legislation campaign against remix culture in favor of the celestial jukebox. In part, it may simply reflect the diversity of motivation among human beings and the prevalence of the culture of passive consumption when it is available. Perhaps there simply are more sheep than cats.

Beyond the simple fact that market and state actors re-emerged as central sources of power, states in particular seem to present a much more likely source of accountable power and counteracting force to market-based power than was the prevailing sense among both left- and right-libertarians in the 1990s. 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 need 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.

INTERNET UTOPIANISM AND THE PRACTICAL INEVITABILITY OF LAW

JULIE E. COHEN

INTRODUCTION

Writing at the dawn of the digital era, John Perry Barlow proclaimed cyberspace to be a new domain of pure freedom. Addressing the nations of the world, he cautioned that their laws, which were “based on matter,” simply did not speak to conduct in the new virtual realm.¹ As both Barlow and the cyberlaw scholars who took up his call recognized, that was not so much a statement of fact as it was an exercise in deliberate utopianism. But it has proved prescient in a way that they certainly did not intend. The “laws” that increasingly have no meaning in online environments include not only the mandates of market regulators but also the guarantees that supposedly protect the fundamental rights of internet users, including the expressive and associational freedoms whose supremacy Barlow asserted. More generally, in the networked information era, protections for fundamental human rights—both on- and offline—have begun to fail comprehensively.

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, adapted from a forthcoming book on the evolution of legal institutions in the information era,² 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

¹ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, 18 DUKE L. & TECH. REV. 5, 5 (2012) (originally published on Feb. 8, 1996).

² JULIE E. COHEN, *BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM* (Oxford University Press, forthcoming 2019).

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.

I. THE PLATFORMIZATION OF EVERYTHING:
DISTRIBUTED PRODUCTION, DATA PRIVACY, AND THE
PROBLEM OF INFORMATIONAL CAPITALISM

Some of the scholars and activists who took up Barlow's call prophesied that decentralized coordination of cultural and political activity by networked communities of peers would increasingly displace centralized, top-down control of cultural and political production, with transformative and broadly freedom-promoting effects.³ Without question, decentralized production strategies have expanded access to information and political capacity-building for people all around the world and have come to be regarded as essential tools for fostering human freedom in the networked information era. The grander visions of wholesale, democratizing transformation in political economy and in government have not materialized, however. Instead, strategies for decentralized cultural and political production have fueled a very different kind of transformation, organized around the emergence of dominant global platforms that afford new vantage points for surveillance, data harvesting, surplus extraction, and manipulation.

Some of the obstacles to commons-based cultural and political production were predictable. Leading software firms initially waged public and creative campaigns against open source software, labeling it unreliable, insecure, and a point of entry for organized crime. Although open source products and accompanying services eventually achieved widespread penetration in certain industry sectors and some once-formidable opponents have become adherents, persistent, thorny issues continue to surround the interfaces between open source and proprietary systems and modules.⁴ The major content industries have resisted

³ See, e.g., YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* (2006); Dan Hunter & F. Gregory Lastowka, *Amateur-to-Amateur*, 46 WM. & MARY L. REV. 951 (2004); David R. Johnson & David G. Post, *And How Shall the Net Be Governed?: A Meditation on the Relative Virtues of Decentralized, Emergent Law*, in *COORDINATING THE INTERNET* 62–91 (Brian Kahin & James H. Keller eds., 1997).

⁴ See David S. Evans & Anne Layne-Farrar, *Software Patents and Open Source: The Battle over Intellectual Property Rights*, 9 VA. J.L. & TECH. 1 (2004); Bryan Pfaffenberger, *The Rhetoric of Dread: Fear, Uncertainty, and Doubt (FUD) in Information Technology Marketing*, 13 KNOWLEDGE, TECH. & POL'Y 78 (2000).

commons-based production and open-access distribution strategies for educational and cultural materials and have devised a continuing stream of legal and technological methods for asserting control over their products and business models.⁵ Political activists, for their part, quickly learned that the networked digital information environment afforded not only unprecedented scope for dissent and resistance but also new, hidden control points for state censorship and surveillance.⁶

Other failure modes for commons-based production were wholly unanticipated, and that was so in part because internet utopian projects elevated openness and freedom from control over all other priorities, most notably including privacy and data protection. Evangelists for internet openness, confident in the ability of enlightened netizens to assert their own privacy interests, painted calls for stricter regulation as threats to the net's most fundamental values.⁷ But openness has proved a double-edged sword. The allure of open content models has been a powerful factor driving the emergence of new information businesses whose revenue models are based on harvesting and monetizing the data flows generated by content developers and content users, including global platform giants Google, Facebook, and Amazon and a host of

⁵ See, e.g., Andi Sporkin, *Publishers Applaud "Research Works Act," Bipartisan Legislation to End Government Mandates on Private-Sector Scholarly Publishing*, ASS'N OF AMERICAN PUBLISHERS (Dec. 23, 2011), <https://perma.cc/M5Y5-UJZC>; Ian Graber-Stiehl, *Science's Pirate Queen*, VERGE (Feb. 8, 2018), <https://perma.cc/DY7H-7D4Y>. See generally Anne-Marie Bridy, *Graduated Response and the Turn to Private Ordering in Online Copyright Enforcement*, 89 ORE. L. REV. 81 (2010); Anne-Marie Bridy, *Internet Payment Blockades*, 67 FLA. L. REV. 1524 (2015); Julie E. Cohen, *Pervasively Distributed Copyright Enforcement*, 95 GEO. L.J. 1 (2006); Julie E. Cohen, *The Place of the User in Copyright Law*, 74 FORDHAM L. REV. 347 (2005); Rebecca Tushnet, *All of This Has Happened Before and All of This Will Happen Again: Innovation in Copyright Licensing*, 29 BERKELEY TECH. L.J. 1447 (2014).

⁶ REBECCA MACKINNON, CONSENT OF THE NETWORKED: THE WORLDWIDE STRUGGLE FOR INTERNET FREEDOM 51–66 (2012); ZEYNEP TUFECKI, TWITTER AND TEAR GAS: THE POWER AND FRAGILITY OF NETWORKED PROTEST 251–54 (2017).

⁷ See, e.g., LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 142–62 (1998). But see James Boyle, *Foucault in Cyberspace: Surveillance, Sovereignty and Hardwired Censors*, 66 U. CIN. L. REV. 177 (1997); Julie E. Cohen, *Examined Lives: Informational Privacy and the Subject as Object*, 52 STAN. L. REV. 1373 (2000); Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981 (1996).

others.⁸ Platform protocols invite commons-based production arrangements, and commons-based production arrangements in turn reinforce platform logics of data harvesting and proprietary, algorithmic knowledge production.⁹

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.¹⁰ The result is a sociotechnical apparatus that is also optimized for stoking outrage and deepening preexisting political, ideological, and cultural divisions.

Under conditions of pervasive, data-driven intermediation—enabled in part by thought leaders’ failure to take privacy and data protection seriously as worthy and freedom-advancing projects—power from below becomes power directed toward whatever purpose its organizers want to advance. Platform-based, massively-intermediated environments have become fertile breeding grounds for conspiracy theories (including coordinated campaigns to foster denialism about climate change, vaccination, and similar matters), disinformation campaigns designed to discredit political actors and institutions, and virulent forms of bigotry, ideological extremism, and ethnic

⁸ See TOM SLEE, *WHAT’S YOURS IS MINE: AGAINST THE SHARING ECONOMY* (2017); Guy Pessach, *Beyond IP—The Cost of Free: Informational Capitalism in a Post IP Era*, 54 OSGOODE HALL L. REV. 225 (2016).

⁹ See Julie E. Cohen, *The Biopolitical Public Domain: The Legal Construction of the Surveillance Economy*, 31 PHIL. & TECH. 213 (2018); Julie E. Cohen, *Law for the Platform Economy*, 51 U.C. DAVIS L. REV. 133, 153–61 (2017).

¹⁰ On clickbait and social sharing strategies, see Bryan Gardiner, *You’ll Be Outraged at How Easy It Was to Get You to Click on This Headline*, WIRED (Dec. 18, 2015), <https://perma.cc/4QXK-5M56>; Alice Marwick, *Why Do People Share Fake News? A Sociotechnical Model of Media Effects*, 2 GEO. L. TECH. REV. 474 (2018), <https://perma.cc/DT4C-94E>. On surveillance as behavioral conditioning, see generally SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* (2019).

nationalism.¹¹ At the same time, and paradoxically, the increasingly pronounced orientation toward manufactured outrage and political polarization within such environments also dissipates other kinds of political energy. It has become more difficult to enlist networked publics in the work of building movements capable of growing, sustaining themselves, and organizing for change in the real world.¹²

Among scholars and commentators who write about digital media, a debate has raged about whether it is fair to blame dominant platforms for these problems. According to media scholar Siva Vaidhyanathan, “the problem with Facebook is Facebook,” and more specifically the combination of Facebook’s global reach, its optimization-based business model, and the ways that its information feeds have displaced other, potentially moderating sources of information.¹³ Others argue that such explanations unfairly blame platforms for longstanding dysfunctions that are not of their creation.¹⁴ Without question, part of the problem with Facebook and others is the preexisting social and cultural divisions that information cascades amplify. That logic, though, undercuts the optimism about bottom-up organization that the Internet’s founding visionaries expressed. Part of the problem with Facebook and other platforms is people, easily distracted, highly susceptible to misinformation, and prone to herd behavior. It also undercuts the logic that designated the internet and its networked virtual spaces as sites of utopian separation for the life of the mind. Platform-based environments are inextricably embedded in real-world societies; platform governance requires real-world, institutional (i.e., non-utopian) solutions.

¹¹ See Jonathan Albright, *Untrue-Tube: Monetizing Misery and Disinformation*, MEDIUM (Feb. 25, 2018), <https://perma.cc/Y6BM-CQCD>; Rob Faris, et al., *Partisanship, Propaganda, and Disinformation: Online Media and the 2016 U.S. Presidential Election*, BERKMAN KLEIN CTR. FOR INTERNET AND SOC’Y AT HARVARD UNIV. (Aug. 16, 2017), <https://perma.cc/8SCW-R9HE>; Alice Marwick & Rebecca Lewis, *Media Manipulation & Disinformation Online*, DATA & SOC’Y (2017), <https://perma.cc/356L-XZQA>; Christopher Paul & Miriam Matthew, *The Russian “Firehose of Falsehood” Propaganda Model: Why It Might Work and Options to Counter It*, RAND CORP.: PERSPECTIVES (2016), <https://perma.cc/CLB5-A5AG>; Julia Carrie Wong, *How Facebook and YouTube Help Spread Anti-Vaxxer Propaganda*, GUARDIAN (Feb. 1, 2019), <https://perma.cc/3NN6-R5Q7>.

¹² See TUFECKI, *supra* note 6, at 189–222 (discussing examples).

¹³ SIVA VAIDHYANATHAN, *ANTISOCIAL MEDIA: HOW FACEBOOK DISCONNECTS US AND UNDERMINES DEMOCRACY 1* (2018).

¹⁴ See, e.g., Alexis C. Madrigal, *India’s Lynching Epidemic and the Problem with Blaming Tech*, ATLANTIC (Sept. 25, 2018), <https://perma.cc/MBA8-LNYZ>.

II. UNBUNDLING INSTITUTIONS: ANONYMITY, TRUST AND THE PROBLEM OF SCALE

Other scholars and activists who took up Barlow's call focused on enabling capabilities for distributed, anonymous communication and coordination, and here again the scorecard is mixed. It is indisputable that anonymity has played an essential structural role in modern democratic societies and equally indisputable that networked information and communication technologies have provided anonymous dissenters with invaluable tools for naming and challenging abuses of economic and political power. Around the world, both activists pursuing social change and journalists reporting on controversial topics now rely on capabilities for anonymous, networked communication to protect themselves and their sources, and projects dedicated to creating, maintaining, and improving such capabilities have become sites of ongoing research and activism in their own right.¹⁵ Persistent and intractable questions remain, however, about the extent to which behaviors that historically have functioned as safety valves within more complex institutional structures can assume more central roles in the project of securing fundamental rights and freedoms for all people.

To begin with, and continuing the themes developed in the previous section, anonymous online activity has valences that are more complicated than romanticized narratives equating anonymity with press freedom and democratic self-determination acknowledge. The projects of building and sustaining utopia require utopians—people united in their unequivocal commitment to the ground truths and operating norms of a utopian project. Some utopian ground truths and operating norms are ugly and unworthy of anyone's allegiance. In networked spaces, cadres of technological cognoscenti wield anonymity as a new and potent source of social and political power to be deployed toward a wide variety of ends. They orchestrate large-scale whistleblowing, operate safe channels for journalists, and distribute samizdat on behalf of political dissidents—and also spread hate speech, disinformation, and fascist and nationalist ideologies.

¹⁵ See MACKINNON, *supra* note 6, at 227–37; Eva Galperin, *Cell Phone Guide for Occupy Wall Street Protesters (and Everyone Else)*, ELEC. FRONTIER FOUND. (Oct. 14, 2011), <https://perma.cc/7NAC-M9YB>; Eva Galperin, *Don't Get Your Sources in Syria Killed*, COMMITTEE TO PROJECT JOURNALISTS (May 21, 2012), <https://perma.cc/37NY-TZAQ>; Andy Greenberg, *Laura Poitras on the Crypto Tools That Made Her Snowden Film Possible*, WIRED (Oct. 15, 2014); Jenna McLaughlin, *The FBI vs. Apple Debate Just Got Less White*, INTERCEPT (Mar. 8, 2016), <https://perma.cc/LM53-CRJG>.

More generally, the trajectories of projects designed to scale up certain types of anonymous interaction and communication demonstrate that breaking things is easier than rebuilding them. Consider two much-discussed examples involving anonymous infrastructures for enabling fundamental market and governance functions. The first is the blockchain, a set of technological protocols for enabling distributed, secure authentication of transactions and credentials. In theory, such technologies might be deployed within existing institutional fabrics in ways that eliminate opportunities for corruption, waste, and rent-seeking.¹⁶ But uses for private surplus extraction and self-interested (and environmentally destructive) speculation are far more widespread, and some argue that the highest and best uses of blockchain technologies involve the creation of alternative currencies to displace state-sponsored fiat currency and ultimately the state itself.¹⁷ The second example is WikiLeaks, which rapidly attained heroic status among civil liberties advocates for its stated commitment to facilitating anonymous whistleblowing about powerful wrongdoers. WikiLeaks, however, is not a free press advocacy organization. It rejects certain essential editorial and quality control functions that the press as an institution typically has performed and espouses an endgame that is far more disruptive.¹⁸ WikiLeaks' evolving role in the era of ascendant platform-based disinformation campaigns is proof that the distinction matters.¹⁹

¹⁶ See generally PRIMAVERA DEFILIPPI & AARON WRIGHT, *BLOCKCHAIN AND THE LAW: THE RULE OF CODE* (2018).

¹⁷ See, e.g., Binyamin Appelbaum, *Is Bitcoin a Waste of Electricity, or Something Worse?*, N.Y. TIMES (Feb. 28, 2018), <https://perma.cc/7G2H-W9T6>; Nellie Bowles, *Making a Crypto Utopia in Puerto Rico*, N.Y. TIMES (Feb. 2, 2018), <https://perma.cc/BZL4-AC5K>. See generally KEVIN WERBACH, *THE BLOCKCHAIN AND THE NEW ARCHITECTURE OF TRUST* (2018).

¹⁸ Compare Yochai Benkler, *A Free Irresponsible Press: Wikileaks and the Battle over the Soul of the Networked Fourth Estate*, 46 HARV. C.R.-C.L. L. REV. 311 (2011) (painting WikiLeaks heroically), with ANDY GREENBERG, *THIS MACHINE KILLS SECRETS: HOW WIKILEAKS, CYPHERPUNKS, AND HACTIVISTS AIM TO FREE THE WORLD'S INFORMATION* 285–313 (2012) (developing a more neutral account); see also Bill Keller, *Dealing With Assange and the Wikileaks Secrets*, N.Y. TIMES MAG. (Jan. 26, 2011), <https://perma.cc/XP5Y-525Z> (discussing editorial considerations). On the institutional functions of the press, see Erin C. Carroll, *Platforms and the Fall of the Fourth Estate: Looking Beyond the First Amendment to Protect Watchdog Journalism*, 79 MD. L. REV., https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3300966.

¹⁹ See Mark Fenster, *'Bullets of Truth': Julian Assange and the Politics of Transparency* (Univ. of Fla. Levin Coll. of Law, Research Paper No. 19-12, Jan. 27, 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3323950; David A. Graham, *Is WikiLeaks a Russian Front?*, ATLANTIC (Nov. 29, 2018),

As both of those examples illustrate, moreover, other obstacles to coding scalable, anonymity-centered, democratic institutions are cultural. As Gabriella Coleman has shown, hacker culture speaks the intertwined languages of liberal individualism and libertarianism and posits enlightened self-reliance and, by necessary implication, technical meritocracy as cardinal virtues.²⁰ Those commitments in turn complicate efforts to transform digital anonymity from a tool for resistance to the foundation of a stable framework for guaranteeing fundamental rights and freedoms. Understood as (anti-)institutional projects, both WikiLeaks and blockchain-based cryptocurrency projects reflect ideologies that are powerfully utopian but not particularly democratic. They express and reproduce a particular kind of moral and ideological purity that is inconsistent with a broadly inclusive social compact. And they illustrate powerfully that, although capabilities for anonymous online communication and coordination have played and will continue to play an important role in efforts to secure fundamental rights and freedoms for all people, such capabilities cannot stand in for other kinds of institution-building. Structurally speaking, anonymous dissent and opposition are safety valves. Achieving durable, effective protection for fundamental rights and freedoms also requires other mechanisms.

III. UNRAVELING FUNDAMENTAL RIGHTS: INFORMATION, NETWORKS, AND THE PROBLEM OF POWER

Both strands of utopian thinking about internet-enabled governance that I have just described are rooted in a more general habit of utopian thinking about the relationship between information and human freedom. That habit is deeply ahistorical. Networked information technologies are not simply instruments of liberation, nor do they simply afford new avenues for control and cooptation. Over the course of many decades, social and legal institutions have come to reflect the shaping influence of the “control revolution” that began with the introduction of automated information systems into industrial-era factories and

<https://perma.cc/W3HT-RMV5>; see also Andy Greenberg, *How Reporters Pulled Off The Panama Papers, The Biggest Leak in Whistleblower History*, WIRED (Apr. 4, 2016), <https://perma.cc/WJF9-EUMP> (describing investigative journalists’ use of encryption tools to coordinate a controlled leak of documents detailing a massive scheme for global tax evasion).

²⁰ See generally GABRIELLA COLEMAN, HACKER, HOAXER, WHISTLEBLOWER, SPY: THE MANY FACES OF ANONYMOUS (2014); GABRIELLA COLEMAN, CODING FREEDOM: THE ETHICS AND AESTHETICS OF HACKING 183–205 (2012).

businesses.²¹ The processes of institutional evolution have produced new institutional configurations and competencies that are intensively informational in character and that have posed difficult challenges for traditional approaches to conceptualizing and enforcing fundamental human rights.

The same networked capabilities that enable widespread public access to information also have enabled powerful corporate entities to build and manage far-flung global empires. As a practical matter, such entities wield increasing power over the conditions of human freedom. Giant transnational corporations that construct global networked supply chains enjoy nearly unlimited authority over their workers and outsize influence over the surrounding communities. The state-centered human rights discourses and institutions that emerged in the post-World War II era did not contemplate such rearrangements, and both powerful economic actors and the developed economies of the Global North have resisted reform efforts that might bring transnational norms and domestic constitutional obligations to bear directly on private economic activity.²² In the U.S., at least, the direction of constitutional reform has run the other way.²³

Capabilities for networked digital communication and for highly informationalized, managerial oversight also have catalyzed profound changes in the structure and operation of regulatory and governance institutions, and those changes have unfolded in ways that have accelerated the marginalization of human rights commitments. The increasing power and prominence of network-and-standard-based legal-institutional arrangements for economic governance—arrangements that exist to facilitate global flows of extractive activity and that tend to treat protective regulation as network damage—has left older human rights institutions increasingly sidelined.²⁴ Meanwhile, as emergent human rights discourses and practices organized around capabilities for human flourishing and sustainable development have encountered and engaged

²¹ See generally JAMES R. BENIGER, *THE CONTROL REVOLUTION: TECHNOLOGICAL AND ECONOMIC ORIGINS OF THE INFORMATION SOCIETY* (1986).

²² See generally STEFANIE KHOURY & DAVID WHYTE, *CORPORATE HUMAN RIGHTS VIOLATIONS: GLOBAL PROSPECTS FOR LEGAL ACTION* (2017).

²³ See generally ADAM WINKLER, *WE THE CORPORATIONS: HOW AMERICAN BUSINESSES WON THEIR CIVIL RIGHTS* (2018).

²⁴ On network-and-standard-based governance arrangements, see Julie E. Cohen, *Networks, Standards, and Network-and-Standard-Based Governance*, in *AFTER THE DIGITAL TORNADO* (Kevin Werbach, ed., forthcoming), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3339351.

with economic governance arrangements, they have become increasingly expert-driven and inaccessible to the populations whose futures they affect. In particular, activists and advocates have raised persistent concerns about the methodological tyranny of utilitarianism in the articulation of development goals and benchmarks.²⁵ Efforts to reorient human rights discourse and practice toward the problem of private economic power also have undergone a novel form of institutional cooptation that relocates those efforts inside corporations themselves and restyles them as “corporate social responsibility” (CSR) practice. Initiatives such as the UN Global Compact rely on hortatory strategies to extract commitments that may or may not be honored and project an image of consensus around gradual forward progress that may or may not correspond to reality.²⁶

The powerful global platform businesses that have emerged in the twenty-first century did not cause any of these changes, but they have proved apt at exploiting them. So, for example, as the European Union has worked to export its high standards for personal data protection to the rest of the world, U.S. platform businesses have supported efforts to insert strengthened mandates for cross-border flow into bilateral and multilateral trade agreements, including especially agreements involving the Asian nations that are increasingly significant players in the emerging cross-border data servicing economy.²⁷ Platform businesses also have taken an entrepreneurial approach to the CSR movement. The Global Network Initiative, founded in 2008 by a coalition of platform firms, academics, and human rights NGOs, represented an attempt both to

²⁵ See Sally Engle Merry & John M. Conley, *Measuring the World: Indicators, Human Rights, and Global Governance*, 52 CURRENT ANTHROPOLOGY S83 (2011); AnnJanette Rosga & Margaret L. Satterthwaite, *The Trust in Indicators: Measuring Human Rights*, 27 BERKELEY J. INT’L L. 253 (2009). See generally KEVIN E. DAVIS, ANGELINA FISHER, BENEDICT KINGSBURY & SALLY ENGLE MERRY, EDS., *GOVERNANCE BY INDICATORS: GLOBAL POWER THROUGH QUANTIFICATION AND RANKINGS* (2012).

²⁶ See Special Representative of the Secretary-General, *Report on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises*, HUMAN RIGHTS COUNCIL, U.N. DOC. A/HRC/17/31 (Mar. 21, 2011) (by John Ruggie); *The Ten Principles of the UN Global Compact*, UNITED NATIONS GLOBAL COMPACT, <https://perma.cc/5LZV-AJYY> (last accessed June 26, 2018); KHOURY & WHYTE, *supra* note 22, at 48–61.

²⁷ See Svetlana Yakovleva & Kristina Irion, *The Best of Both Worlds? Free Trade in Services, and EU Law on Privacy and Data Protection*, 2 EUR. DATA PROTECTION L. REV. 191 (2016); Graham Greenleaf, *Free Trade Agreements and Data Privacy: Future Perils of Faustian Bargains*, in *TRANSATLANTIC DATA PRIVACY RELATIONS AS A CHALLENGE FOR DEMOCRACY* 181–212 (Dan Svantesson & Dariusz Kloza eds., 2017).

coordinate resistance to censorship demands by authoritarian states and to respond to criticisms levied at platforms for acceding to such demands.²⁸ Compliance with the GNI's principles, however, remains voluntary and inconsistent, even as the vast and growing extent of commercial surveillance—encompassing information of an astonishing variety, granularity, and intimacy—deepens the symbiosis between public and private surveillance power.²⁹

Last but not least, data-driven, algorithmic processes multiply both obstacles to accountability and opportunities for cooptation of accountability structures. Smart digital technologies produce decisions that are ad hoc, personalized, and pattern-based rather than principled and generalizable. They don't give reasons for—or even draw attention to—the choices they make, and those choices are continually evolving. The design of automated machine-learning processes also includes a number of steps that scrutiny of their end results does not capture.³⁰ Those attributes sit in profound tension with traditional articulations of the institutional features that a commitment to the rule of law requires, and they create oversight problems that extend far outside the traditional competencies of courts.³¹ And here again, efforts to devise new oversight mechanisms have offered new avenues for the assertion and reproduction of informational power: Consider, for example, the Federal Trade Commission's privacy and data security consent decrees, which rely heavily on attestations of compliance by private sector auditors that are

²⁸ *GNI Principles on Freedom of Expression and Privacy*, GLOBAL NETWORK INITIATIVE (May 2017), <https://perma.cc/J32J-GMXB>; see MACKINNON, *supra* note 6, at 138–39, 179–82.

²⁹ See, e.g., Daithi Mac Sithigh & Mathias Siems, *The Chinese Social Credit System: A Model for Other Countries?* (EUI Dept. of Law Working Paper 2019/01), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3310085; David Cole, “We Kill People Based on Metadata,” N.Y. REV. BOOKS (May 10, 2014), <https://perma.cc/ERY2-Z44L>; Clare Garvie, Alvaro Bedoya & Jonathan Frankle, *The Perpetual Lineup: Unregulated Police Face Recognition in America*, CTR. ON PRIVACY AND TECH., GEORGETOWN LAW (Oct. 18, 2016), <https://perma.cc/8FUT-RR3R>; Caroline Haskins, *Dozens of Cities Have Secretly Experimented with Predictive Policing Software*, VICE MOTHERBOARD (Feb. 6, 2019), <https://perma.cc/ZY4B-HDCH>; Tim Cushing, *Cops Wanting To Track Movements Of Hundreds Of People Are Turning To Google For Location Records*, TECHDIRT (Mar. 20, 2018), <https://perma.cc/3K3Z-T8P9>.

³⁰ See David Lehr & Paul Ohm, *Playing with the Data: What Legal Scholars Should Learn about Machine Learning*, 51 U.C. DAVIS L. REV. 653 (2017).

³¹ See generally MIREILLE HILDEBRANDT, SMART TECHNOLOGIES AND THE END(S) OF LAW: NOVEL ENTANGLEMENTS OF LAW AND TECHNOLOGY 133–56, 174–85 (2015); Julie E. Cohen, *Turning Privacy Inside Out*, 20 THEORETICAL INQ. L. 1, (2019).

largely unverifiable and that bootstrap self-defined standards of adequacy.³² Or consider emergent regimes for “content moderation at scale,” which rely on a combination of privatized algorithmic governance and standardized performance reporting as a means of demonstrating compliance to the outside world.³³ Both developments reflect beliefs about the best uses of new informational capabilities to manage legal and regulatory processes; neither expresses a commitment to robust public accountability.

CONCLUSION

None of the problems I have described, of course, is Barlow’s fault. But those who would advance the intertwined projects of human freedom and democratic self-government should choose their prophets carefully—or, perhaps, should not place their faith in prophets at all. Advancing human freedom through the absence of law was never really in the cards. The difficulty, rather, is that the information-era problems now requiring institutional solutions are profoundly unfamiliar to institutional actors whose established modes of both action and self-legitimation are backward-looking. New informational capabilities demand both new governance modalities and new institutional arrangements capable of deploying them effectively. Due in part to hard-to-break habits of framing such questions as anti-openness, anti-innovation, or conducive to censorship (or, more usually, all three), we still have vanishingly little idea what such capabilities and structures might look like and how they might be conformed in some recognizable way to rule-of-law ideals. Those are urgent projects for a post-utopian era.

³² See Daniel J. Solove & Woodrow Hartzog, *The FTC and the New Common Law of Privacy*, 114 COLUM. L. REV. 583 (2014); Megan Gray, *Understanding and Improving Privacy Audits under FTC Orders* (May 5, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3165143.

³³ See generally TARLETON GILLESPIE, CUSTODIANS OF THE INTERNET: PLATFORMS, CONTENT MODERATION, AND THE HIDDEN DECISIONS THAT SHAPE SOCIAL MEDIA (2018).

REVISITING BARLOW'S MISPLACED OPTIMISM

BENJAMIN EDELMAN[†]

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 have created.¹ 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.

Beyond being overly optimistic about how perfectly the 'net would unfold, Barlow was also needlessly skeptical of plausible institutions to bring improvements. He writes: "The only law that all our constituent cultures would generally recognize is the Golden Rule."² 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. As a practical matter, any claim a user has against a goliath requires state institutions to adjudicate and enforce. When Barlow wrote *A Declaration of the Independence of Cyberspace*, tech goliaths were much smaller. Plus, the Internet's early users were in a certain sense more sophisticated than the mainstream users who eventually joined. So the gap from little to big was much narrower then, arguably making governments less important in that era. But as the big get bigger and as the Internet attracts average users who lack the special sophistication of early adopters, governments play key roles—adjudicating disputes, enforcing contracts and beyond.

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¹ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, 18 DUKE L. & TECH. REV. 5, 7 (2019).

² *Id.* at 6.

I. THE SUCCESSES OF RECENT TECH-POLICY

It's easy to criticize government interventions that are ham-handed or worse, and even easier to mock the occasional politician abusing terminology. (Think Ted Stevens' "series of tubes."³) But stepping back, I'm struck by the important work that governments have done with relative success. Let me offer some specific examples:

First, government succeeded in reining in some of the most clear-cut violations of copyright. Consider Napster. It was a remarkable moment when internationally-known tech startups, VC-backed firms, and even publicly-traded firms were fairly alleged to have intentionally facilitated copyright infringement, and indisputably profited from it.⁴ Against that backdrop, Barlow presented piracy as both inevitable and appropriate, and he made the arguments well. But the fact of piracy in the shadows nowhere necessitates investors getting rich—or content creators giving up the rights plainly provided by longstanding law. More recently, rights-holders and service providers found room to disagree about copyright treatment of peer-to-peer video sites,⁵ news articles,⁶ image thumbnails,⁷ and countless other issues arguably at the boundaries of copyright. If one of these is your life's work or your income source, it may seem like no small matter. One wouldn't say courts have offered an overwhelmingly compelling approach to these questions. Nonetheless,

³ Senator Ted Stevens, Remarks at Senate Commerce Committee Hearing on Net Neutrality (June 28, 2006).

⁴ For example, Napster counted among its funders some of Silicon Valley's most well-regarded investors. In separate litigation against video-streaming service Veoh, Universal Music Group alleged that three of Veoh's investors were so intertwined with company operations that they should themselves be liable for the infringement UMG saw at Veoh's site—the Ninth Circuit disagreed. *See UMG Recordings, Inc. v. Shelter Capital Partners L.L.C.*, 718 F.3d 1006, 1013, 1022–23 (9th Cir. 2013). Meanwhile, litigation documents revealed that YouTube co-founders personally uploaded infringing material, embracing a strategy of using infringing videos to attract users and increase the site's valuation. *See Viacom's Statement of Undisputed Facts in Support of Its Motion for Partial Summary Judgment at 8–10, Viacom Int'l Inc. v. YouTube Inc.*, 718 F. Supp. 2d 514 (S.D.N.Y. 2010) (No. 1:07-cv-02103).

⁵ *See e.g., Viacom*, 718 F. Supp. 2d at 514.

⁶ *See e.g., EU Copyright Directive*, Art. 11 (not yet in force); *see also Ley De Propiedad Intelectual* (B.O.E. 2014, 11404) (Spain) (limiting how news aggregators and other online services can use news from publishers, and broadly requiring licenses and payments); *Achtes Gesetz Zur Änderung des Urheberrechtsgesetzes* [Copyright Law], May 7, 2013, BGBl I at 23 (Ger.) (same).

⁷ *See e.g., Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146 (9th Cir. 2007).

courts successfully put a stop to the most brazen illegality, and to those who sought to profit most directly from it. Napster and Grokster, good riddance.⁸

Second, government has made important progress opposing online scams.

- Post-transaction marketers placed ambiguous buttons like “continue” onto retailers’ confirmation screens. Pressing such a button enrolled a user in a high-priced monthly subscription from a company whose site she had never even visited. “But wait!” you might protest: “She never gave that company her credit card number.” That’s true but oddly irrelevant: Post-transaction marketers copied a customer’s credit card numbers from the just-completed transaction, making it altogether too easy to “agree” to a monthly charge that was genuinely unexpected.⁹
- Online platforms sold games and virtual trinkets to kids and denied parents’ requests for refunds. It’s Hornbook law that kids broadly have the right to void transactions,¹⁰ most of all those entered in the “weakness of youth.” Online games, designed to addict, fit the rule in spades. Nonetheless, game and app platforms argued that they had always said “all sales are final,” so they refused refunds. Litigation by private attorneys (this author among them) and the FTC delivered refunds for many who were harmed.¹¹
- Tech support scammers claimed to call from well-known tech companies, but charged big money for snake oil or

⁸ See *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (9th Cir. 2001) (effectively shuttering the firm); *MGM Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005) (same).

⁹ See MAJORITY STAFF OF OFFICE OF OVERSIGHT & INVESTIGATIONS, STAFF OF S. COMM. ON COMMERCE, SCI. & TRANSP., 11TH CONG., *AGGRESSIVE SALES TACTICS ON THE INTERNET AND THEIR IMPACT ON AMERICAN CONSUMERS* (Comm. Print 2009); Benjamin Edelman, *Deception in Post-Transaction Marketing*, BENEDELMAN.ORG (Nov. 19, 2009), <http://www.benedelman.org/posttransaction/>.

¹⁰ See 5 WILLISTON ON CONTRACTS, § 9:5 (4th ed. 2018).

¹¹ See, e.g., *Bohannon v. Facebook, Inc.*, No. 12-cv-01894-BLF, 2019 WL 188671 (N.D. Cal. Jan. 1, 2019); see also FTC proceedings against Amazon.com, Inc. (F.T.C. File No. 122 3238, Civil Action No. 2:14-cv-01038, W.D. Wash.), Apple Inc. (F.T.C. File No. 112 3108), and Google, Inc. (F.T.C. File No. 122 3237).

worse. After a series of raids in the United States and abroad, key perpetrators were brought to justice, and these schemes much reduced.¹²

Super-libertarians sometimes blame victims for their gullibility in falling for these schemes. But I doubt Barlow would have had that instinct. Barlow was always a friend to the little guy, and I never knew him to blame anyone even for the clearest of foolishness. In any event these practices are basically offensive to most Americans. To its credit, the judicial system saw the offense and stepped into action.

Notably, all these successes were achieved via traditional mechanisms of state power. Lawyers wrote complaints and filed motions. Judges heard witnesses and wrote decisions. Politicians held hearings and talked of new legislation. (Occasionally, though only occasionally, they actually passed bills on these subjects.) The industry details would be unfamiliar to the Founding Fathers, but the procedure was as they intended it. Government doesn't look so hopeless after all. Though the misbehavior occurred online, the perpetrators were flesh-and-blood—unavoidably subject to legal proceedings.

II. WORK TO BE DONE

Despite these successes, much important work remains to be done in making online communication all it can be. Some examples:

First, competition policy demands renewed attention. The leading online social network has grown so large that its founder-CEO can't name a viable alternative.¹³ In many countries, the leading search engine outranks competitors fifty-to-one. Even sectors with competition are a far cry from the models in economics textbooks. In online travel booking, two behemoths together control all the brands you've heard of.¹⁴ Competition in smartphone operating systems is similarly just two choices. Some argue that consolidation results from proper factors, causes little harm, or is otherwise unobjectionable. Reasonable people can disagree. But as politicians on both sides of the aisle turn their focus to market concentration, we can't assume unchecked market forces are the end of the story.

¹² See, e.g., *F.T.C. v. Elite IT Partners*, No. 2:19-cv-00125-RJS (D. Utah 2019).

¹³ *Facebook, Social Media Privacy, and the Use and Abuse of Data: Joint Hearing Before the S. Comm. on the Judiciary and the S. Comm. on Commerce, Sci., & Transp.*, 115th Cong. (2018) (testimony of Mark Zuckerberg).

¹⁴ Benjamin Edelman, *Impact of OTA Bias and Consolidation on Consumers*, BENEDELMAN.ORG (July 12, 2017), <http://www.benedelman.org/publications/ota-bias-12jul2017.pdf>.

Second, consumers demand improved handling of hacking, ransomware, and the like. It is an outrage for an anonymous villain to hack your computer, encrypt your files, and demand, quite literally, a ransom for release of your hard-earned data. Equally outrageous are the sites that specialize in hosting material designed to harm—sites designed for negative reviews of small businesses (removable only if businesses pay for that privilege); sites that solicit photos of ex-lovers (again, removed only upon payment). Apparently market forces create these abominations. But no one should be surprised if a civilized democracy elects to prevent them.

Third, cyber-bullying is unsustainable. This isn't just schoolkid antics; careers have been ruined, and lives lost. Tech goliath platforms host these attacks, and they've been troublingly indifferent to the harm they facilitate.

I credit the predictable practical difficulties in government interventions on these subjects. Some schemes cross jurisdictions, creating a longstanding challenge. Do citizens of Illinois want to pay their police to pursue a hacker who mostly targets New Yorkers? How about the citizens of India? Russia? Yet everyone is somewhere. A perpetrator may think himself safe by staying far from his victims, but organized victims can nonetheless seek satisfaction—whether by themselves paying the cost of pursuit, or by targeting the miscreant's inevitable local assets and resources.

Fixing other problems will require consensus on who should actually be blamed. When a user is hacked, should we blame that user (for failing to keep her computer or phone secure), the company whose software or service was too easily hacked, or the hacker who actually pressed the button? Does the answer change when the harm is money lost versus privacy versus life itself? In the abstract, few people endorse blaming the victim. Yet the experts who examine these problems often cannot resist telling victims how they went astray.

Reflecting on these situations, I inevitably turn back to Barlow's reference to the Golden Rule as the supposed only source of authority. The victim of a cyber-mob would be thrilled to agree not to bully anyone in exchange for not being bullied. But that imagined agreement does her little good. The reality is that she is being bullied. Either someone will help, or no one will help. The Barlow I knew would have wanted to help, but with the departure of his body, we're left only with his text which calls for every man to himself. I don't see why that's the right result or a necessary result. Anyone who cares about a victim—really, anyone who knows a victim—should want better.

III. LOOKING FORWARD

In offering a vision of government making genuine progress on these challenges, I'm reminded of the bold government programs that are today largely beyond dispute.

A century ago, the Pure Food and Drug Act sought to assure accurate labeling, purity, and ultimately safety to products Americans consume every day.¹⁵ 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.¹⁶ 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.¹⁷ 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.

Ultimately, we can't have an important area of commercial and social activity that is above the law. Barlow excitedly envisioned a tech sector that was *de facto* above the law. The past twenty years, and especially the past few, have shown why that's every bit as dangerous as it sounds. In Barlow's honor, we should aspire for better.

¹⁵ See Pure Food and Drug Act, Pub. L. No. 59-384, 34 Stat. 768 (1906).

¹⁶ See Servicemen's Readjustment Act of 1944, Pub. L. No. 78-346, 58 Stat. 284.

¹⁷ See Social Security Act of 1965, Pub. L. No. 89-97, §§ 1801–1844, 79 Stat. 286.

THE ENIGMA OF DIGITIZED PROPERTY: A TRIBUTE TO JOHN PERRY BARLOW

PAMELA SAMUELSON[†] & KATHRYN HASHIMOTO^{††}

John Perry Barlow was a seer as well as a great songwriter. His provocative prose from *The Economy of Ideas*¹ speaks to us today as though it was written yesterday:

Throughout the time I've been groping around cyberspace, an immense, unsolved conundrum has remained at the root of nearly every legal, ethical, governmental, and social vexation to be found in the Virtual World. I refer to the problem of digitized property. The enigma is this: If our property can be infinitely reproduced and instantaneously distributed all over the planet without cost, without our knowledge, without its even leaving our possession, how can we protect it? How are we going to get paid for the work we do with our minds? And if we can't get paid, what will assure the continued creation and distribution of such work?²

Twenty-five years after WIRED's publication of Barlow's poetically prescient essay, the enigma of digitized property remains a serious concern to many creators. Recording artists loudly complain that the digital platforms that monetize their music are undercompensating them.³ Surveys of published authors report falling incomes from

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¹ John Perry Barlow, *The Economy of Ideas*, WIRED (Mar. 1, 1994), also available as *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8 (2019) (reprinted from ELEC. FRONTIER FOUND. (1993), <https://www.eff.org/pages/selling-wine-without-bottles-economy-mind-global-net> (earlier version)).

² Barlow, *supra* note 1, at 85, 18 DUKE L. & TECH. REV. at 8 ("The riddle is this . . ."). Google Scholar reports that this essay has been cited in 580 publications, 278 of which were in law review articles.

³ See, e.g., Charlotte Hassan, *Reasons Why Some Artists Absolutely Hate Spotify*, DIGITAL MUSIC NEWS (Mar. 21, 2016), <https://www.digitalmusicnews.com/2016/03/21/why-artists-pull-their-music-from-spotify-but-not-youtube/>.

commercializing their creative work.⁴ Layoffs of news reporters at both conventional and digital newspapers are all too common.⁵ Peer-to-peer file sharing of movies and music continues to be remarkably prevalent,⁶ notwithstanding prodigious efforts by entertainment industry groups to curtail it through lawsuits and private enforcement arrangements with Internet access providers.⁷ Photographers report widespread infringements of their works on the Internet.⁸ Software “piracy” remains at least as rampant today as it was twenty-five years ago.⁹

Although Barlow predicted that copyright would not survive in the digital age,¹⁰ Part I explains that legislatures in the U.S. and EU have

⁴ See, e.g., *Six Takeaways from the Authors Guild 2018 Author Income Survey*, AUTHORS GUILD (Jan. 5, 2019), <https://www.authorsguild.org/industry-advocacy/six-takeaways-from-the-authors-guild-2018-authors-income-survey/>.

⁵ See, e.g., Elizabeth Grieco et al., *About a Third of Large U.S. Newspapers Have Suffered Layoffs Since 2017*, PEW RES. CTR. (July 23, 2018), <http://www.pewresearch.org/fact-tank/2018/07/23/about-a-third-of-large-u-s-newspapers-have-suffered-layoffs-since-2017/>.

⁶ See, e.g., *File Sharing*, TECXIPIO MAG., <https://www.tecxipio.com/statistics-file-sharing> (last accessed Mar. 27, 2019) (reporting that an average of 28 million Internet users per day engage in peer-to-peer file sharing).

⁷ See, e.g., Annemarie Bridy, *Graduated Response and the Turn to Private Ordering for Online Copyright Enforcement*, 89 ORE. L. REV. 81, 101 (2010).

⁸ See, e.g., *Copyright Alternative in Small-Claims Enforcement Act of 2017: Hearing on H.R. 3945 Before the H. Comm. on the Judiciary*, 115th Cong. (2018) (statement of David P. Trust), <https://uscopyrightreform.org/202018/09/29/house-judiciary-committee-hearing-the-case-act-2017/>.

⁹ Barlow, *supra* note 1, at 88, 18 DUKE L. & TECH. REV. at 14. For an example of recent estimates about software piracy, see Joseph Noonan, *2018 Revulytics Software Piracy Statistics and Thoughts on the BSA Global Software Survey*, REVULYTICS BLOG (June 7, 2018), <https://www.revulytics.com/blog/2018-revulytics-software-piracy-statistics> (estimating the commercial value of unlicensed software at \$46.3 billion).

¹⁰ John Perry Barlow, *The Next Economy of Ideas*, 8.10 WIRED 238, 242 (Oct. 2000), <https://www.wired.com/2000/10/download/>. A rich legal literature emerged in the 1990s and 2000s that resonates with Barlow’s skepticism about the future of copyright in the digital age and his celebration of free culture. See, e.g., KEITH AOKI, JAMES BOYLE, & JENNIFER JENKINS, *BOUND BY LAW: TALES FROM THE PUBLIC DOMAIN* (2006); JAMES BOYLE, *THE PUBLIC DOMAIN: ENCLOSING THE COMMONS OF THE MIND* (2008); *THE COMMODIFICATION OF INFORMATION* (Niva Elkin-Koren & Neil Weinstock Netanel eds., 2001); LAWRENCE LESSIG, *FREE CULTURE* (2004); LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* (2001); JESSICA D. LITMAN, *DIGITAL COPYRIGHT* (2000); SIVA VAIDYANATHAN, *COPYRIGHTS AND COPYWRONGS: THE RISE OF INTELLECTUAL PROPERTY AND HOW IT THREATENS CREATIVITY* (2001).

sought to address the enigma of digitized property by strengthening copyright rules and insisting that some previously unregulated uses must be licensed. That Part also discusses Barlow's cry for Internet freedoms, some of which have been echoed by commentators in the EU and U.S. in reaction to stricter copyright rules. Part II explores some ideas Barlow had about how the digitized property enigma might be addressed without tightening copyright rules. He had confidence that creative people would figure out ways to thrive in the economy of ideas. Part III provides evidence that the entertainment, book publishing, and other conventional copyright industries have indeed found ways to overcome the enigma of digitized property. New economies of creativity have emerged that Barlow would have celebrated.

I. LEGISLATIVE EFFORTS TO BOLSTER COPYRIGHT INDUSTRIES IN THE DIGITAL AGE

Legislatures in the U.S. and EU have responded to copyright owner claims about losses due to unauthorized online uses of their works by proposing or enacting new laws. A recent U.S. example is the Music Modernization Act (MMA) which established a revised framework for compulsory licensing of recorded music by online digital services such as Pandora.¹¹ The MMA also extended federal protection to sound recordings produced prior to 1972, which had previously been protected only by state laws.¹² Congress has also considered legislation to allow copyright owners to bring small claims to a review board in the Copyright Office to get compensation for online infringements that now go unremedied because of the high costs of litigation.¹³

¹¹ See Pub. L. No. 115-264, — Stat. — (2018), <https://www.congress.gov/bill/115th-congress/house-bill/1551/text>. For a discussion of how the MMA changed the regulation of sound recording copyright rules and licensing framework, see Tyler Ochoa, *An Analysis of Titles I and III of the Music Modernization Act, Part 2 of 2*, TECH. & MARKETING L. BLOG (Jan. 23, 2019), <https://blog.ericgoldman.org/archives/2019/01/an-analysis-of-title-i-and-title-iii-of-the-music-modernization-act-part-2-of-2-guest-blog-post.htm>.

¹² For an explanation of the part of the MMA that deals with pre-1972 recordings, see Tyler Ochoa, *An Analysis of Title II of Public Law 115-264: The Classics Protection and Access Act*, TECH. & MARKETING L. BLOG (Oct. 28, 2018), <https://blog.ericgoldman.org/archives/2018/10/an-analysis-of-title-ii-of-public-law-115-264-the-classics-protection-and-access-act-guest-blog-post.htm>.

¹³ Copyright Alternative in Small-Claims Enforcement (CASE) Act, H.R. 3945, 115th Cong. (2017). For a discussion of the main features of this Act, see generally Pamela Samuelson & Kathryn Hashimoto, *Scholarly Concerns About a Proposed Copyright Small Claims Tribunal*, 33 BERKELEY TECH. L.J. 689 (2018).

A far more ambitious and far-reaching initiative is the Council of the European Union's proposed Directive on Copyright in the Digital Single Market (DSM).¹⁴ Article 11 of this Directive (sometimes known as the "link tax" provision) would create a new set of exclusive rights for EU press publishers to control online reproductions and distributions of more than a few words from the contents of their sites.¹⁵ Article 13 (sometimes known as the "upload filter" provision) would impose new obligations on Internet content sharing sites (such as YouTube) to block uploads of digital content unless the upload files were either licensed or otherwise known to be non-infringing.¹⁶ Failure to comply with this blocking obligation would result in the sites being directly liable for any user infringements.¹⁷ Article 13 represents a stark break from the "notice and takedown" rules adopted in the late 1990s that provided Internet service providers (ISPs) with a safe harbor from liability for user infringements of which they were unaware or unable to control.¹⁸ The main goal of these significant expansions of ISP liability rules is to give European content owners greater leverage to induce the content sharing

¹⁴ Council of the EU, Proposal for a Directive of the European Parliament and of the Council on Copyright in the Digital Single Market—Outcome of Proceedings, ST 6637 2019 INIT (Feb. 20, 2019) [hereinafter Proposed DSM Directive], <https://data.consilium.europa.eu/doc/document/ST-6637-2019-INIT/en/pdf>. As of this writing, the European Commission, Council, and Parliament completed a "trilogue" on a final text for this Directive, which the European Parliament approved in March 2019 and the EU Council adopted in April 2019. Article 11 is now Article 15; Article 13 is now Article 17. *See*, Carlton Daniel, *What to Make of the European Directive on Copyright in the Digital Single Market*, THE HILL (Apr. 25, 2019, 3:00 PM), <https://thehill.com/opinion/technology/440683-what-to-make-of-the-european-directive-on-copyright-in-the-digital-single>. The final step is for each member state of the EU to transpose the Directive into its national laws by 2021. *See* Eleanora Rosati, *BREAKING: Council Adopts DSM Directive*, IPKAT (Apr. 15, 2019), <http://ipkitten.blogspot.com/2019/04/breaking-council-adopts-dsm-directive.html>. Some parts of this article's discussion of the DSM Directive are drawn from Pamela Samuelson, *Questioning a New Intellectual Property Right for Press Publishers*, 61 COMM. ACM 20 (Mar. 2019) and Pamela Samuelson, *The EU's Controversial Digital Single Market Directive*, 60 COMM. ACM 20 (Nov. 2018).

¹⁵ Proposed DSM Directive, *supra* note 14, art. 11.

¹⁶ Proposed DSM Directive, *supra* note 14, art. 13.

¹⁷ *Id.*

¹⁸ Directive 2000/31/EC, of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, art. 14, 2000 O.J. (L 178) 13; 17 U.S.C. § 512(c) (2012).

platforms to license EU digital contents or face large damage awards in court.¹⁹

Barlow would have been among the fiercest critics of these new liability rules had he lived just a little bit longer. As he wrote in *The Economy of Ideas*:

[W]hen the primary articles of commerce in a society look so much like speech as to be indistinguishable from it, and when the traditional methods of protecting their ownership have become ineffectual, attempting to fix the problem with broader and more vigorous enforcement will inevitably threaten freedom of speech. The greatest constraint on your future liberties may come not from government but from corporate legal departments laboring to protect by force what can no longer be protected by practical efficiency or general social consent.²⁰

Barlow back then believed that “digital technology [was] erasing the legal jurisdictions of the physical world and replacing them with the unbounded and perhaps permanently lawless waves of cyberspace.”²¹ But initiatives such as the DSM Directive vividly demonstrate that conventional copyright industries, their lobbyists, and governments that attend to these industries’ concerns are determined to make and enforce strict copyright rules that will tame the electronic frontier that Barlow so cherished and championed.

Barlow would have been heartened, though, by the many European scholars who have taken up the freedom of expression banner he waved so vigorously way back when. In April 2018, for example, a group of 169 IP academics sent a Statement to the EU Parliament

¹⁹ Articles 11 and 13 are not the only articles of the DSM Directive that aim to enhance licensing of EU creative contents and ensure that authors and other rights holders have more opportunities to receive compensation for their creations or databases. *See, e.g.*, Proposed DSM Directive, *supra* note 14, art. 7 (providing framework for licensing of out-of-commerce works); Proposed DSM Directive, *supra* note 14, arts. 14–16 (aiming to facilitate fair remuneration for authors and performers).

²⁰ Barlow, *supra* note 1, at 86, 18 DUKE L. & TECH. REV. at 11.

²¹ Barlow, *supra* note 1, at 86, 18 DUKE L. & TECH. REV. at 12 (“digital technology is also erasing the legal jurisdictions . . .”). For a legal analysis that resonated with Barlow’s conception, see generally David R. Johnson and David G. Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367 (1996) (suggesting that cyberspace should be regarded as its own jurisdiction).

strongly opposing Article 11.²² These academics believe that Article 11 would likely impede the free flow of news and other information vital to a democratic society, would harm journalists and others involved with news-related content, and would create uncertainty about the Article's coverage and scope.²³ Also unclear was how the new publisher right would interact with existing copyright laws, which typically allow for fair quotations, and database rights, which allow extractions of insubstantial parts of database contents.²⁴

Signatories of this Statement were also unpersuaded by the economic argument for Article 11.²⁵ A new press publisher right would considerably increase transaction costs as well as exacerbate existing power asymmetries in media markets. There was “no indication whatsoever that the proposed right will produce the positive results it is supposed to.”²⁶ Moreover, “considering current high levels of market concentration on online advertising markets and in media, a publishers’ right may well backfire: further strengthening the power of media conglomerates and of global platforms to the detriment of smaller players.”²⁷

Another report on Article 11 observed that online journalists perceive the new right as a threat to the nature of news communication in

²² Marco Ricolfi, Raquel Xalabarder & Mirelle van Eechoud, *Academics Against Press Publishers’ Right*, INST. FOR INFO. LAW (2018), <https://www.ivir.nl/academics-against-press-publishers-right/>. See also MAX PLANCK INST. FOR INNOVATION AND COMPETITION, *Position Statement on Proposed Modernisation of European Copyright Rules, Part E Protection of Press Publications Concerning Digital Uses*, https://www.ip.mpg.de/fileadmin/ipmpg/content/stellungnahmen/MPI_Position_Statement_PART_E_Publishers_2017_02_21_RMH_VM-def-1.pdf; Martin Kretschmer et al., *The European Commission’s Public Consultation on the Role of Publishers in the Copyright Value Chain: A Response by the European Copyright Society*, 38 EUR. INTELL. PROP. REV. 591 (2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2801595.

²³ Ricolfi et al., *supra* note 22.

²⁴ Directive 2001/29/EC, of the European Parliament and of the Council of 22 May 2001 on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society, art. 5, 2001 O.J. (L. 167) 10, 16; Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases art. 8, 1996 O.J. (L. 77) 20, 26.

²⁵ Ricolfi et al., *supra* note 22.

²⁶ *Id.*

²⁷ *Id.*

the modern era: “Paying for links is as absurd as paying for citations in the academy would be.”²⁸

Even more dangerous for freedom of expression on the Internet is Article 13. 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 works such as quotations and parodies.²⁹ Article 13 also 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.³⁰

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.³¹ Among the prominent critics of Article 13 is David Kaye, the United Nation’s Special Rapporteur for Freedom of Expression, who wrote a nine-page letter explaining why Article 13 is inconsistent with EU’s commitments under international human rights instruments.³² In

²⁸ LIONEL BENTLY ET AL., STRENGTHENING THE POSITION OF PRESS PUBLISHERS AND AUTHORS AND PERFORMERS IN THE COPYRIGHT DIRECTIVE: A STUDY COMMISSIONED BY THE EUROPEAN PARLIAMENT 34 (2017) (internal quotes omitted), http://www.europarl.europa.eu/RegData/etudes/STUD/2017/596810/IPOL_STU%282017%29596810_EN.pdf.

²⁹ See, e.g., Benjamin Austin, *Proposed EU Copyright Directive Poses Risks to Free Expression, Consumer Privacy, and Competition*, PUBLIC KNOWLEDGE (June 12, 2018), <https://www.publicknowledge.org/news-blog/blogs/proposed-eu-copyright-directive-poses-risks-to-free-expression-consumer-pri>.

³⁰ *Id.*

³¹ See *Article 13 Research: Studies, Opinions and Sources of Data*, CREATE (UK Copyright and Creative Economy Centre: Univ. of Glasgow), <https://www.create.ac.uk/policy-responses/eu-copyright-reform/article-13-research/> (listing critiques of Article 13); see, e.g., Martin Senfleben et al., *The Recommendation on Measures to Safeguard Fundamental Rights and the Open Internet in the Framework of the EU Copyright Reform*, 40 EUR. INTELL. PROP. REV. 149 (2018), <https://ssrn.com/abstract=3054967>.

³² David Kaye (Special Rapporteur), Mandate of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, 7–8, U.N. Doc. OL OTH 41/2018 (June 13, 2018), <https://www.ohchr.org/Documents/Issues/Opinion/Legislation/OL-OTH-41-2018.pdf> (detailing specific concerns and concluding that “I am very seriously concerned that the proposed Directive would establish a regime of active monitoring and prior censorship of user-generated content that is inconsistent with Article 19(3) of the ICCPR.”).

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.³³

More than 145 civil society organizations have expressed opposition to adoption of Article 13,³⁴ as have more than 5 million people who signed a petition against it.³⁵

Copyright industry lobbying groups, however, have succeeded in persuading EU policymakers to maintain and even strengthen the new rules that will impose strict infringement liability on websites that allow users to upload contents.³⁶ Whether Articles 11 and 13 will achieve the intended goal of boosting compensation to EU content providers from Internet platforms remains to be seen.

Google and Facebook are among the most obvious targets of these new regulations. While these firms may ultimately decide against licensing uses of EU contents,³⁷ at least they can afford to pay such fees

³³ Letter from Vint Cerf et al. to Antonio Tajani, President of the European Parliament (June 12, 2018), <https://www.eff.org/files/2018/06/12/article13-letter.pdf>. See also Rhett Jones, *The Founding Fathers of the Internet Plead with EU to Squash Its Bad Copyright Bill*, GIZMODO (June 13, 2018, 11:57 AM), <https://gizmodo.com/the-founding-fathers-of-the-internet-plead-with-eu-to-s-1826792360>.

³⁴ See, e.g., Open Letter to Member of the European Parliament, <https://copybuzz.com/wp-content/uploads/2018/07/Copyright-Open-Letter-on-EP-Plenary-Vote-on-Negotiation-Mandate.pdf>. See also ASS'N FOR PROGRESSIVE COMMC'NS, *Call to Members of the European Parliament: Open Letter on the EU Copyright Reform* (July 2018), <https://www.apc.org/en/pubs/call-members-european-parliament-open-letter-eu-copyright-reform>.

³⁵ See, e.g., Foo Yun Chee, *EU Lawmakers to Vote on Copyright Overhaul Next Tuesday*, REUTERS (Mar. 21, 2019, 12:05 PM), <https://www.reuters.com/article/us-eu-copyright/eu-lawmakers-to-vote-on-copyright-overhaul-next-tuesday-idUSKCN1R228Z> (linking to the change.org online petition with more than 5 million signatures).

³⁶ Cory Doctorow, *The Final Version of the EU's Copyright Directive Is the Worst One Yet*, ELEC. FRONTIER FOUND. (Feb. 13, 2019), <https://www.eff.org/deeplinks/2019/02/final-version-eus-copyright-directive-worst-one-yet>.

³⁷ See, e.g., Matthew Karnitschnig & Chris Spillane, *Plan to Make Google Pay for News Hits Rocks*, POLITICO (Feb. 15, 2017, 7:36 PM), <https://www.politico.eu/article/plan-to-make-google-pay-for-news-hits-rocks->

if they decide that doing so is their best option. Smaller online services are likely to be much more constrained.

TechDirt, for example, a prominent site for online technology news and commentary, doubts that it can continue publishing in the EU:

Article 13 makes a commenting system untenable, as we simply cannot setup [sic] a filter that will block people from uploading copyright-covered content. Article 11 potentially makes our posts untenable, since we frequently quote other news sites in order to comment on them³⁸

TechDirt notes that the goal of those who support Articles 11 and 13

is not just to close the (made up, mythical) “value gap.” It is to fundamentally change the internet away from an open system of communications—one that anyone can use to **bypass** traditional gatekeepers, to a closed “broadcast” system, in which key legacy gatekeepers control access to the public, via a complicated set of licenses that strip all of the benefits and profits from the system.³⁹

TechDirt perceives Articles 11 and 13 to have serious negative implications for the general public as well as for individual creators:

Not only will [these new rules] do great harm to the general public’s ability to communicate freely over the internet, it will do massive harm to artists and creators—especially more independent ones, who will be effectively blocked from using these platforms to connect directly with their fans. Rather they will be required to go through “licensed” intermediaries, who will demand a huge cut of any money. In other words, it’s a return to the pre-internet days, where if you wanted to become a professional creator, your only options were to sign away all your rights to giant conglomerate record labels/studios/publishers.⁴⁰

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.

copyright-reform-european-commission/ (noting Google refused to license contents from Spanish and German rights holders when those countries adopted Article 11-like press publisher rights).

³⁸ Mike Masnick, *EU Moves Forward with Agreement to Fundamentally Change the Internet from Open to Closed*, TECHDIRT (Feb. 14, 2019, 2:10 AM), <https://www.techdirt.com/articles/20190213/12071341588/eu-moves-forward-with-agreement-to-fundamentally-change-internet-open-to-closed.shtml>.

³⁹ *Id.*

⁴⁰ *Id.*

The EU's adoption of Article 13 will undoubtedly embolden copyright industries with a global reach to try to export that mandate to other countries. The next target will likely be the U.S. Copyright Office, which has been considering whether to recommend changes to the safe harbor rules Congress adopted in 1998 for ISPs.⁴¹ Under current law, ISPs are not liable for user infringements unless copyright owners provide them with specific notice about the presence of infringing materials on their sites and the ISPs fail to promptly take down the infringing materials.⁴² The U.S. safe harbor rules have, in the view of many, supported freedom of expression on the Internet to a considerable degree.⁴³ Barlow would have considered it a great tragedy for freedom of information, speech, and expression on the Internet if Congress abandons these safe harbors and adopts an EU-style filtering mandate in the misguided hope that doing so would solve the enigma of digitized property, as Barlow so eloquently phrased it.

II. JOHN PERRY BARLOW'S IDEAS FOR ADDRESSING THE ENIGMA OF DIGITIZED PROPERTY

Barlow may have been insightful enough to recognize the enigma of digitized property a quarter of a century ago, but he was not enough of a prophet to articulate a framework for a comprehensive solution. Yet, *The Economy of Ideas* offered some thoughts about plausible strategies. He perceived, for example, the emergence of “a parallel economy developing, mostly among small, fast moving enterprises who protect their ideas by getting into the marketplace quicker than their larger competitors” such as incumbent industries “who base their protection on fear and litigation.”⁴⁴ First-mover advantages have indeed proven very important to attaining competitive advantage in the software industry.⁴⁵ Barlow recognized that “people seem to eventually buy the software they really use. Once a program becomes

⁴¹ U.S. COPYRIGHT OFFICE, SECTION 512 STUDY, <https://www.copyright.gov/policy/section512/>.

⁴² 17 U.S.C. § 512 (2012).

⁴³ See, e.g., Electronic Frontier Foundation, Comment Letter on Section 512 Study before the U.S. Copyright Office (Apr. 1, 2016), https://www.eff.org/files/2016/04/01/eff_comments_512_study_4.1.2016.pdf; Electronic Frontier Foundation, Additional Comment Letter on Section 512 Study before the U.S. Copyright Office (Feb. 21, 2017), https://www.eff.org/files/2017/02/22/2015-7_additional_comments_of_eff_512_study.pdf.

⁴⁴ Barlow, *supra* note 1, at 88–89, 18 DUKE L. & TECH. REV. at 16.

⁴⁵ Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1289–90 (2009).

central to your work, you want the latest version of it, the best support, the actual manuals, all privileges attached to ownership.”⁴⁶ The software industry has been very creative over the years in finding ways to monetize its digitized property.⁴⁷

Unsurprisingly, Barlow offered his experience with the Grateful Dead, the rock band for whom he often wrote songs, as an example of how creators can achieve success by encouraging fans to make and share copies of their creations.⁴⁸ The Dead used this strategy of allowing their fans to freely record the band’s live performances to become “the largest concert draw in America.”⁴⁹ Creators who can build relationships with consumers find ways to get paid. Doctors, lawyers, architects, and consultants, for instance, “are already being paid directly for their intellectual property. Who needs copyright when you’re on a retainer?”⁵⁰

More generally, Barlow thought that the ability to monetize creations would depend on “the quality of performance, the uniqueness of your point of view, the validity of your expertise, its relevance to your market, and underlying everything, the ability of that market to access your creative services swiftly, conveniently and interactively.”⁵¹ A point of view, Barlow observed, “is an asset which cannot be stolen or duplicated.”⁵²

Barlow was skeptical, though, about crypto bottling of digital content as a solution to the digitized property enigma.⁵³ In the years after his WIRED article, copyright industries, such as producers of motion pictures and sellers of e-books, have employed technical protection measures (TPMs) to enable them to sell digital copies without undue risk that those digital copies would “leak” and lead to mass infringements.⁵⁴ To provide legal reinforcement for these TPM protections, Congress enacted laws to outlaw bypassing of copyright-protective TPMs as well

⁴⁶ Barlow, *supra* note 1, at 128, 18 DUKE L. & TECH. REV. at 25.

⁴⁷ See, e.g., James Bessen & Walter Frick, *How Software Is Helping Big Companies Dominate*, HARV. BUS. REV. (Nov. 19, 2018), <https://hbr.org/2018/11/how-software-is-helping-big-companies-dominate> (explaining how software enables companies to spread into different areas and creates new business models).

⁴⁸ See Barlow, *supra* note 1, at 126, 18 DUKE L. & TECH. REV. at 21.

⁴⁹ *Id.*

⁵⁰ Barlow, *supra* note 1, at 128, 18 DUKE L. & TECH. REV. at 26.

⁵¹ Barlow, *supra* note 1, at 128, 18 DUKE L. & TECH. REV. at 27.

⁵² Barlow, *supra* note 1, at 126, 18 DUKE L. & TECH. REV. at 22.

⁵³ See Barlow, *supra* note 1, at 129, 18 DUKE L. & TECH. REV. at 27–29.

⁵⁴ See, e.g., Gideon Parchomovsky & Philip J. Weiser, *Beyond Fair Use*, 96 CORNELL L. REV. 96, 102 (2010) (describing content owners’ use of TPMs).

as the development and dissemination of tools to bypass the TPMs.⁵⁵ Barlow's prediction that crypto bottles would fail was, it seems, off the mark. Consumers have adjusted to TPMs more than might have seemed likely in 1994.⁵⁶

Barlow circled back to the digital property enigma in a second WIRED article, *The Next Economy of Ideas*, in 2000.⁵⁷ This article discussed the "paradigm-shattering" Napster phenomenon.⁵⁸ Millions of Internet users downloaded Napster's client-side software and used it to interact with Napster's server-side search and directory functions to share many billions of copies of popular music with one another.⁵⁹ "[T]he geriatrics of the entertainment industry," Barlow observed, "didn't see this coming. They figured the Internet was about as much of a threat to their infotainment empire as ham radio was to NBC. Even after that assumption was creamed, they remained as serene as sunning crocodiles."⁶⁰ These crocodiles, however, didn't stay serene for very long. They sued Napster for contributory copyright infringement and were able to get an injunction to shut down that service.⁶¹

That injunction notwithstanding, Barlow articulated three significant problems for the recording industry: first, network-based technologies such as Napster gave ordinary people "distributive power equal to Time Warner's,"⁶² second, users of these technologies "don't give a flying byte about the existing legal battlements,"⁶³ and third, "[n]o law can be successfully imposed on a huge population that does not

⁵⁵ 17 U.S.C. § 1201 (2012). The origins of this legislation are discussed in LITMAN, *supra* note 10, at 136–45. For critical commentary on these anti-circumvention rules, see, e.g., Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519 (1999).

⁵⁶ For an informative discussion of TPMs used to protect copyrights, see, for example, JONATHAN L. ZITTRAIN, *TECHNOLOGICAL COMPLEMENTS TO COPYRIGHT* (2005).

⁵⁷ See Barlow, *supra* note 10. For a discussion about consumer issues with technically protected content, see, for example, NATALI HELBERGER ET AL., *DIGITAL RIGHTS MANAGEMENT AND CONSUMER ACCEPTABILITY* (Dec. 2004), <https://www.ivir.nl/publicaties/download/INDICAREStateoftheArtReport.pdf>.

⁵⁸ Barlow, *supra* note 10, at 240.

⁵⁹ *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1011, 1019 (9th Cir. 2001).

⁶⁰ Barlow, *supra* note 10, at 240.

⁶¹ *Napster*, 239 F.3d at 1019, 1029.

⁶² Barlow, *supra* note 10, at 240.

⁶³ *Id.*

morally support it and possesses easy means for its invisible evasion.”⁶⁴ Barlow was confident that “[t]he future will win; there will be no property in cyberspace.”⁶⁵

Initially seeming to bear out Barlow’s prediction, a number of more decentralized peer-to-peer file sharing technologies were developed to enable ordinary music lovers to continue file sharing to their heart’s content. Although some of these services were also shut down by copyright injunctions,⁶⁶ the BitTorrent protocol has enabled file sharing to continue apace.⁶⁷ Barlow would not have been surprised at estimates that more than 27.4 million people worldwide engaged in file sharing on a daily basis in 2017.⁶⁸

As an alternative to the seemingly ubiquitous file sharing phenomenon, Apple persuaded the recording industry to license digital music to Apple’s iTunes service so that consumers who wanted to lawfully acquire music could do so conveniently and at a modest price-point.⁶⁹ Spotify, Pandora, and TIDAL are among the entities that have subsequently obtained licenses to popular recorded music.⁷⁰ Spotify alone has about 200 million active monthly users, of whom

⁶⁴ *Id.*

⁶⁵ *Id.* at 241.

⁶⁶ *See, e.g., Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Inc.*, 518 F. Supp. 2d 1197, 1241 (N.D. Cal. 2007). For a discussion of why *Grokster* was not as much of a win for MGM as it had hoped, see Pamela Samuelson, *Three Reactions to the Grokster Decision*, 13 MICH. TELECOM. & TECH. L. REV. 177 (2006).

⁶⁷ *See, e.g., Columbia Pictures Indus. v. Fung*, 710 F.3d 1020, 1026–28 (9th Cir. 2013) (explaining BitTorrent’s architecture and how it can be used to engage in infringing conduct).

⁶⁸ *File Sharing Landscape 2017: Where Did Peer-to-Peer Network Users Share Which Files During 2017?*, TECXIPIO MAG. (Jan. 11, 2018), <https://www.tecxipio.com/single-post/file-sharing-in-peer-to-peer-networks-2017>; *see generally* MEDIA PIRACY IN EMERGING ECONOMIES (Joe Karaganis ed., 2011) (reporting on international studies of media piracy, recommending against heavy enforcement of copyrights).

⁶⁹ *See, e.g., Steve Knopper, iTunes’ 10th Anniversary: How Steve Jobs Turned the Industry Upside Down*, ROLLING STONE (Apr. 26, 2013, 6:45 PM), <https://www.rollingstone.com/culture/culture-news/itunes-10th-anniversary-how-steve-jobs-turned-the-industry-upside-down-68985/>.

⁷⁰ *See, e.g., Craig Grannell, A History of Music Streaming*, DYNAUDIO (May 16, 2018), <https://www.dynaudio.com/dynaudio-academy/2018/may/a-history-of-music-streaming>.

approximately 91 million pay for the service.⁷¹ The upshot is that hundreds of millions of users now have lawful access to an almost unimaginably rich array of digital music through these licensed services. Others, of course, continue to prefer to obtain the music they love through file sharing.

Barlow's prediction that Napster was going to spell the death of copyright⁷² may have been wrong, but that industry weathered the Napster and subsequent file sharing storms only by making considerable adjustments to their business models and providing consumers with a wider array of content at more reasonable prices and with fewer technical restrictions than the industry would have preferred in the immediate aftermath of the *Napster* case.

III. THE SKY IS RISING: THE NEW ECONOMY OF IDEAS IS THRIVING

In *The Next Economy of Ideas*, Barlow predicted that creators would find innovative ways to be rewarded for their works in the new economy: "artists and writers of the future will adapt to practical possibility. Many have already done so. They are, after all, creative people."⁷³ He foresaw a creative milieu in cyberspace in which corporate interests would exercise less control and barriers to entry would be low. Barlow imagined a future of creative output and compensation as part of a larger and more fertile digital ecosystem, available to all. "We can enter into a convenient and interactive relationship with audiences, who, being human, will be far more ethically inclined to pay us than the moguls ever were. What could be a stronger incentive to create than that?"⁷⁴

Yet, even conventional copyright industries have been thriving as never before. Although the Recording Industry of America Association may have been convinced that the "easy availability of freely downloadable commercial songs will bring on the apocalypse,"⁷⁵ empirical data in 2000 showed that "during the two years since MP3 music began flooding the Net, CD sales have *risen* by 20 percent."⁷⁶ Several economic studies from the 2010s bear out Barlow's skepticism

⁷¹ Daniel Sanchez, *Spotify Now Has 200 Million Monthly Active Users, But How Many of Them Are Paying?*, DIGITAL MUSIC NEWS (Jan. 11, 2019), <https://www.digitalmusicnews.com/2019/01/11/spotify-200-million-monthly-active-users/>.

⁷² Barlow, *supra* note 10, at 240.

⁷³ *Id.* at 252.

⁷⁴ *Id.*

⁷⁵ *Id.* at 241.

⁷⁶ *Id.*

about the “death knell” warnings from legacy industries⁷⁷ that technological change would cause the destruction or decline of most cultural businesses. These studies show that digitization has ushered in a thriving new creative economy and indeed, a “golden age” of creativity, bringing new products to market and enabling new revenue opportunities. One report published in 2012 stated that the value of the worldwide entertainment industry had grown from \$449 billion to \$745 billion between 1998 and 2010.⁷⁸ Moreover, the share of U.S. household spending on entertainment from 2000 to 2008 had increased 15 percent, and new content creation overall ballooned.⁷⁹ A 2014 update of this report, focusing on the U.S. market, confirmed the continued growth of creative outputs among a more diverse array of independent creators,⁸⁰ just as Barlow had predicted. In the digital age, music, video, and books can be produced and distributed by almost anyone who has access to a computer and an internet connection.

Statistics bear out that the entertainment industry is growing both in terms of revenue and quantity of content. According to the latest iteration of this report, “[t]he internet has provided new tools and services that have enabled more creation, more distribution, more promotion, more access to fans and more ways to make money than ever before.”⁸¹ Looking specifically at four sectors—music, film and video,

⁷⁷ See, e.g., Michael A. Carrier, *No, RIAA, It's Not the End of the World for Musicians*, 83 UMKC L. REV. 287, 287–88 (2014) (describing dire statements made by music industry representatives). See also *supra* notes 3–9.

⁷⁸ MICHAEL MASNICK & MICHAEL HO, *THE SKY IS RISING: A DETAILED LOOK AT THE STATE OF THE ENTERTAINMENT INDUSTRY 2* (2012 ed.) [hereinafter *SKY IS RISING 2012*], <https://www.techdirt.com/skyisrising/> (drawing upon data compiled from PricewaterhouseCoopers (PwC), iDATE, and the Bureau of Labor Statistics).

⁷⁹ *Id.* at 2–3.

⁸⁰ MICHAEL MASNICK & MICHAEL HO, *THE SKY IS RISING: A DETAILED LOOK AT THE STATE OF THE ENTERTAINMENT INDUSTRY* 4–5, 26 (2014 ed.) [hereinafter *SKY IS RISING 2014*], <https://www.techdirt.com/skyisrising2014/>. Two additional reports by the same authors looked, respectively, at similar patterns in Europe and the luxury goods market online. See MICHAEL MASNICK & MICHAEL HO, *THE SKY IS RISING: REGIONAL STUDY* (2013), <https://www.techdirt.com/skyisrising2/> (analyzing six European countries); MICHAEL MASNICK & MICHAEL HO, *THE SKY IS RISING: LUXURY GOODS* (2014), <https://www.techdirt.com/skyisrising/luxury>.

⁸¹ MICHAEL MASNICK & LEIGH BEADON, *THE SKY IS RISING: A DETAILED LOOK AT THE STATE OF THE ENTERTAINMENT INDUSTRY 2* (2019 ed.) [hereinafter *SKY IS RISING 2019*], <https://skyisrising.com/TheSkyIsRising2019.pdf>. See also Carrier, *supra* note 77, at 297–98 (describing Kickstarter, “which, as of November 2014, raised \$1 billion from more than 7 million people to fund

books, and video games—the report found that much more content is being produced, the industries are growing, and the internet is largely responsible for the growth.⁸² The report describes the following success stories in the creative economy:

- music: sources show an increased number of new music releases, by more artists, and more ways for fans to consume their music and support them;⁸³
- video entertainment: new and traditional forms of video, including television, film, online streaming services, and user-generated content, are seeing a significant expansion in investment, content creation, and consumer consumption;⁸⁴
- books, ebooks, and audio books: more than ever before, books of all types—digital and print, in the U.S. and elsewhere—are being published (including a growing self-publishing industry) with a wide array of consumer access opportunities;⁸⁵
- video games: with the rise of the mobile gaming market, live game streaming, and e-sports events, online gaming appears to be rapidly expanding, with even more exciting creative possibilities ahead.⁸⁶

Furthermore, content industries—even those that were struggling earlier—are all now thriving. According to the 2019 report, global

73,000 creative products.”); Steven Johnson, *The Creative Apocalypse That Wasn't*, N.Y. TIMES MAG. (Aug. 19, 2015), https://www.nytimes.com/2015/08/23/magazine/the-creative-apocalypse-that-wasnt.html?_r=1 (“Writers, performers, directors and even musicians report their economic fortunes to be similar to those of their counterparts 15 years ago, and in many cases they have improved. Against all odds, the voices of the artists seem to be louder than ever.”).

⁸² SKY IS RISING 2019, *supra* note 81, at 4.

⁸³ *Id.* at 5–12. *See also* GLYNN S. LUNNEY, JR., COPYRIGHT’S EXCESS: MONEY AND MUSIC IN THE U.S. RECORDING INDUSTRY (2018) (correlating the rise of file sharing and decline in recorded music sales with the creation of more new music).

⁸⁴ SKY IS RISING 2019, *supra* note 81, at 13–24.

⁸⁵ *Id.* at 25–31. *See also* JOEL WALDFOGEL, DIGITAL RENAISSANCE: WHAT DATA AND ECONOMICS TELL US ABOUT THE FUTURE OF POPULAR CULTURE 133 (2018) (“Between 2006 and 2015, the number of new self-published e-books rose from essentially zero to just over 150,000 titles per year.”).

⁸⁶ SKY IS RISING 2019, *supra* note 81, at 32–40.

entertainment and media revenues hit the \$1.88 trillion mark in 2017; experts predict these industries will reach \$2.2 trillion in 2021 and continue to grow 4 to 5 percent beyond that. The sky indeed appears to be rising in the age of online creativity and prosperity, just as Barlow had imagined.

Economist Joel Waldfogel has been studying data on the impact of digital technology for creative industries for over a decade. His recent book reports on sales data and critics' and users' reviews and "best of" lists, from which he ascertained that digitization has reduced production costs for creative output and distribution, yet the quality of content has remained high.⁸⁷ Although Waldfogel acknowledges that certain trade-offs occurred, including initial revenue reductions in some legacy media sectors, he concludes that a net gain has resulted from the increased number and quality of new products created:

While declining revenues are creating real pain for many creators and intermediaries, the volume of new materials created, and the apparent satisfaction that consumers and critics derive from the new content, are both very high by historical standards. So the first takeaway is that *we are living through a digital renaissance*.⁸⁸

Other studies have reached similar conclusions. Focusing on independent creators who have posted their works on nine online platforms, a 2018 ReCreate study found that the internet had enabled a substantial infusion of new creators developing new works, often interacting directly with their audiences and earning revenues from online posting activities without the need to rely on traditional gatekeepers such as book publishers, record labels, and movie studios.⁸⁹ That study reported that an estimated 14.8 million Americans posted their works on Amazon, eBay, Etsy, Instagram, Shapeways, Tumblr, Twitch, WordPress, and YouTube in 2016 and earned approximately \$5.9 billion from commercializing their online contents.⁹⁰ Moreover, the number of such creators in 2017

⁸⁷ Waldfogel, *supra* note 85.

⁸⁸ *Id.* at 252–53.

⁸⁹ ROBERT SHAPIRO & SIDDHARTHA ANEJA, UNLOCKING THE GATES: AMERICA'S NEW CREATIVE ECONOMY 3 (2018), <https://www.recreatecoalition.org/wp-content/uploads/2018/02/ReCreate-New-Creative-Economy-Study-Report-508.pdf>; *see also* Carrier, *supra* note 77, at 287 (“[I]nnovations in technology have made it easier for musicians to participate in every step of the creation, development, and marketing process. And . . . forg[e] stronger connections with their fans.”).

⁹⁰ SHAPIRO & ANEJA, *supra* note 89, at 3.

grew to 16.9 million (+16.6%) and total revenues to \$6.8 billion (+14.8%).⁹¹

Still other studies confirm Barlow's anecdotal observation that live performances would complement recorded music, importantly contributing to the financial well-being of musicians.⁹² Concert revenues and ticket prices have continued to rise in the digital era:

Concert revenues continue to be a bright spot for the music industry, as the North American concert industry grossed a record-breaking \$5.1 billion in 2013, . . . PwC estimated the U.S. concert business at \$8.61 billion for 2013, growing to \$9.2 billion in 2014 with a compound annual growth rate of 3% through 2017. The actual scarcity for seeing a musical performance live appears to be a healthy and sustainable practice for the foreseeable future.⁹³

Moreover, employment in the U.S. entertainment sector increased by nearly 20 percent between 1998 to 2008.⁹⁴ Another study by the World Intellectual Property Organization (WIPO) found that wage trends for creative workers in the digital age in several countries generally

⁹¹ ROBERT SHAPIRO & SIDDHARTHA ANEJA, TAKING ROOT: THE GROWTH OF AMERICA'S NEW CREATIVE ECONOMY 2 (2019), <https://www.recreatecoalition.org/wp-content/uploads/2019/02/ReCreate-2017-New-Creative-Economy-Study.pdf>. The study also surmised that additional (and as-yet unreported) income will have derived from mobile traffic directed from social media. *Id.* at 3; *see also* Giancarlo F. Frosio, *Digital Piracy Debunked: A Short Note on Digital Threats and Intermediary Liability*, 5 INTERNET POL'Y REV. 1, 9 (2016), https://policyreview.info/articles/analysis/digital-piracy-debunked-short-note-digital-threats-and-intermediary-liability#footnoteref16_g7fp0et (describing increased numbers of independent artists and labels in the current music industry).

⁹² *See supra* notes 48–50 and accompanying text.

⁹³ SKY IS RISING 2014, *supra* note 80, at 7; *see also* Carrier, *supra* note 77, at 299 (noting that “[t]ours also offer the opportunity for sponsorship deals that, in the aggregate, are worth billions” including other complements such as apparel); Frosio, *supra* note 91 (citing studies showing that sales of high-priced complements has added to artists' incomes); Joel Waldfogel, *How Digitization Has Created a Golden Age of Music, Movies, Books, and Television*, 31 J. ECON. PERSPECTIVES 195, 211 (Summer 2017) (citing studies correlating digitization with increased concert ticket sales and ticket prices).

⁹⁴ SKY IS RISING 2012, *supra* note 78, at 2. Following the U.S. recession in late 2008, employment reportedly rose again in some entertainment industries. *See* SKY IS RISING 2019, *supra* note 81, at 9–10 (music); *id.* at 19 (television and cable TV).

outperformed other occupations.⁹⁵ Based on these findings, the study concluded:

From a policy perspective, these results do not lend support to the idea that creators' income situation has systematically worsened with the rise of the internet and its intermediaries, as argued by some commentators in 'value gap' discussions. The income changes creators experience over time are not aligned with general trends in the total population: we see creators losing less or even gaining a better income position in relative terms.⁹⁶

Although the recent studies discussed above have focused mainly on major entertainment industries (i.e., movies, television, books, music, and video games), digitization has had profound impacts on other significant industries, and none more so than computer software. In *The Next Economy of Ideas*, Barlow remarked that the software industry, despite "widespread piracy" was "booming."⁹⁷ Why? Barlow asked. "Because the more a program is pirated, the more likely it is to become a standard."⁹⁸ Barlow thus concluded from this and other examples that "[n]oncommercial distribution of information *increases* the sale of commercial information. Abundance breeds abundance And nothing makes you famous faster than an audience willing to distribute your work for free."⁹⁹

Despite the continued prevalence of software piracy, a 2017 report from the Business Software Alliance estimated the software industry had directly contributed \$564.4 billion to the annual U.S. GDP, with a total value-added to GDP, including indirect impacts, in excess of a trillion dollars a year.¹⁰⁰ It also reported significant job growth of 2.9 million jobs (10.5 million jobs including indirect impacts), which represents a 14.6 percent increase since 2014.¹⁰¹ Software-as-a-service (SaaS) operating in the "cloud" is an increasingly successful business

⁹⁵ Alexander Cuntz, *Creators' Income Situation in the Digital Age* (WIPO, Economic Research Working Paper No. 49, Dec. 2018), <http://www.lisdatacenter.org/wps/liswps/755.pdf>.

⁹⁶ *Id.*

⁹⁷ Barlow, *supra* note 10, at 241.

⁹⁸ *Id.*

⁹⁹ *Id.* at 241–42.

¹⁰⁰ See *The Growing \$1 Trillion Economic Impact of Software*, BSA FOUND. (Sep. 2017), <https://software.org/reports/2017-us-software-impact/> (based on 2016 figures).

¹⁰¹ *Id.*

model for software companies, one that isn't vulnerable to software piracy.¹⁰²

In the 1990s, there was considerable skepticism about the commercial viability of an open source sector of the software industry,¹⁰³ perhaps in part because the open-source software movement seemed to exemplify the open, collaborative spirit that Barlow celebrated in his essays. Yet, somehow and quite remarkably, free and open-source software has become a major force in the industry, not only as an accepted norm in enterprise computing environments, but also through the evolution of financially viable business models.¹⁰⁴ The Linux operating system is perhaps the highest profile example of community developed open-source software,¹⁰⁵ but millions more such projects are ongoing today.¹⁰⁶ Mainstream global corporations, such as IBM, Adobe, and Google, are contributing substantial resources in support of Linux and other open-source projects.¹⁰⁷ Indeed, IBM recently made a \$34

¹⁰² Cory Capoccia, *The Final Frontier for SaaS Is CRM for Main Street*, FORBES (Feb. 22, 2019, 9:00 AM),

<https://www.forbes.com/sites/forbestechcouncil/2019/02/22/the-final-frontier-for-saaS-is-crm-for-main-street/#c605b2188cc9> (forecasting the global SaaS market to reach \$186 billion by 2024); *see also* Pamela Samuelson, *The Uneasy Case for Software Copyrights Revisited*, 79 GEO. WASH. L. REV. 1746, 1779 (2011) (discussing software-as-a-service and cloud computing).

¹⁰³ *See, e.g.*, Matt Germonprez et al., *Open Source Communities of Competitors*, 20 INTERACTIONS 54, 54 (Nov–Dec 2013); Samuelson, *supra* note 102, at 1777–78.

¹⁰⁴ *See, e.g.*, STEVEN WEBER, *THE SUCCESS OF OPEN SOURCE* (2004); Katherine Noyes, *Open Source Software Is Now a Norm in Businesses*, PC WORLD (May 18, 2011, 10:07 AM),

https://www.pcworld.com/article/228136/open_source_software_now_a_norm_in_businesses.html; Max Schireson & Dharmesh Thakker, *The Money in Open-Source Software*, TECHCRUNCH (Feb. 9, 2016), <https://techcrunch.com/2016/02/09/the-money-in-open-source-software/>.

¹⁰⁵ *See, e.g.*, Paul Venezia, *Linux at 25: How Linux Changed the World*, INFO WORLD (Aug. 24, 2016), <https://www.infoworld.com/article/3109204/linux-at-25-how-linux-changed-the-world.html>.

¹⁰⁶ For example, GitHub, a software development platform, reported hosting 31 million developers and 96 million repositories in 2018. *See The State of the Octoverse 2018*, GITHUB BLOG (Oct. 16, 2018), <https://github.blog/2018-10-16-state-of-the-octoverse/>.

¹⁰⁷ *See, e.g.*, Sid Sijbrandij, *How Open Source Became the Default Business Model for Software*, FORBES (Jul. 16, 2018, 8:00 AM), <https://www.forbes.com/sites/forbestechcouncil/2018/07/16/how-open-source-became-the-default-business-model-for-software/#62fcdb974e72> (noting open source investments by Google, Facebook, and Adobe, among others); *see also*

billion offer to buy Red Hat, a leading firm that supplies Linux and other open source software and services to enterprise companies.¹⁰⁸ Another highly successful open source product is the Android platform for smartphones, which Google has been able to monetize in other ways than by sales of copies of the program.¹⁰⁹ Open-source software providers often recoup investments in software development through providing value-added services, such as installation, customization, and maintenance, or complementary assets, such as proprietary add-on programs that perform specialized functions.¹¹⁰

CONCLUDING THOUGHTS

The enigma of digitized property may not have been resolved for all creative sectors. Yet it is remarkable how well the economy of ideas, to use Barlow's term, has evolved over the last quarter-century. Yes, copyright infringement is widespread in the online environment, but millions of people make a multitude of non-infringing uses of copyrighted works online as well. The netizens (to use another now archaic term from the 1990s) of cyberspace have been creating and sharing their creations, thereby promoting the greater public good, as well or better now than at any time in human history.

As much as Barlow would have celebrated the financial successes of so many millions of creators in cyberspace, he would also have been pleased that the economy of ideas includes many millions of people who create and share their creations online for free. Barlow eloquently recognized "the inexplicable pleasures of information itself, the joy of learning, knowing, and teaching; the strange good feeling of

Pamela Samuelson, *IBM's Pragmatic Embrace of Open Source*, 49 COMM. ACM 15 (Oct. 2006).

¹⁰⁸ See Alex Sherman & Lora Kolodny, *IBM To Acquire Red Hat in Deal Valued at \$34 Billion*, CNBC (Oct. 28, 2018), <https://www.cnbc.com/2018/10/28/ibm-to-acquire-red-hat-in-deal-valued-at-34-billion.html>. Also in 2018, Microsoft acquired GitHub for \$7.5 billion. See Klint Finley, *Why 2018 Was a Breakout Year for Open Source Deals*, WIRED (Dec. 23, 2018, 11:00 AM), <https://www.wired.com/story/why-2018-breakout-year-open-source-deals/>.

¹⁰⁹ See, e.g., Bogdan Petrovan, *How Does Google Make Money from Android?*, ANDROID AUTHORITY (Jan. 22, 2016), <https://www.androidauthority.com/how-does-google-make-money-from-android-669008/> (surmising that mobile advertising and app sales contribute to Google's Android business).

¹¹⁰ See, e.g., Paul-Noël Guély, *Open-Source Software: From the Periphery of Tech to the Mainstream of Finance*, FORBES (Sep. 3, 2018, 7:45 AM), <https://www.forbes.com/sites/paulnoelguely/2018/09/03/open-source-software-from-the-periphery-of-tech-to-the-mainstream-of-finance/#4472149269ab>.

information coming into and out of oneself.”¹¹¹ Those who share their creations freely, said Barlow, “are getting paid in something besides money,” for there is joy for many in the act of sharing.¹¹²

Those who like to tinker with digital copies of creative works, such as by making remixes or mashups, have been able to participate in the new creative economy as never before.¹¹³ Digitization has made it possible not only to playfully build upon existing works, but also to share those playful creations with others via online video-sharing services.¹¹⁴ Fan fiction has also emerged as another robust sector of the new economy.¹¹⁵ This resonates with Barlow’s contention that ideas and information are “conveyed by propagation, not distribution.”¹¹⁶ As with jazz improvisations, stand-up comedy routines, and mime performances, Barlow characterized information as an activity, oblivious of copyright protection, flourishing with a life of its own.¹¹⁷

¹¹¹ Barlow, *supra* note 1, at 127, 18 DUKE L. & TECH. REV. at 23.

¹¹² Barlow, *supra* note 1, at 127, 18 DUKE L. & TECH. REV. at 24. For a theoretically rich account of this transformation, see, for example, YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* (2007).

¹¹³ See, e.g., LAWRENCE LESSIG, *REMIX: MAKING ART AND COMMERCE THRIVE IN A HYBRID ECONOMY* (2008).

¹¹⁴ See, e.g., David Lange, *At Play in the Fields of the Word: Copyright and the Construction of Authorship in the Post-Literate Millennium*, 55 LAW & CONTEMP. PROBS. 139 (1992); Pamela Samuelson, *Freedom to Tinker*, 17 THEORETICAL INQ. L. 563, 564 (2016). See generally ERIC VON HIPPEL, *DEMOCRATIZING INNOVATION* (2005); KAL RAUSTIALA & CHRISTOPHER SPRIGMAN, *THE KNOCKOFF ECONOMY: HOW IMITATION SPARKS INNOVATION* (2012) (describing several industry sectors in which the freedom to copy promotes creativity).

¹¹⁵ See, e.g., ORGANIZATION FOR TRANSFORMATIVE WORKS, *WHAT WE BELIEVE*, http://www.transformativeworks.org/what_we_believe/ (last visited Mar. 20, 2019).

¹¹⁶ Barlow, *supra* note 1, at 89, 18 DUKE L. & TECH. REV. at 17.

¹¹⁷ Barlow, *supra* note 1, at 90, 18 DUKE L. & TECH. REV. at 18. Barlow also observed that “[i]nformation is a relationship.” Barlow, *supra* note 1, at 126, 18 DUKE L. & TECH. REV. at 20. The WIPO study also recognized that [a]rtists do not have uniform motivations to create. Policy deliberations should thus take into account non-monetary sources of artists’ motivation and carefully build incentive schemes targeting overall psychic income, rather than focusing on income issues alone. For example, changes in legal and other mechanisms can affect peer recognition and ease of attribution of works, which ultimately influence creators’ job satisfaction and further creativity. Income-focused reforms might effectively lead to missing policy goals.

Barlow was an enthusiastic endorser of open access for copyrighted works when he spoke at the 2003 launch of the Creative Commons (CC).¹¹⁸ The uptake of CC licensed works since then may have exceeded the high expectations of its founders. Over 1 billion creative works are now available under CC licenses on millions of Internet sites.¹¹⁹ While many (and perhaps most) of these CC licensed works are freely shared without restrictions, authors can retain rights to control commercial exploitations by making their works available under CC-NC licenses, which only allows free use for non-commercial purposes. Many well-known authors have published digital versions of their books under CC licenses so they are widely available to all online users, but the authors still earn royalties on the sale of physical books.¹²⁰ Millions of scholarly works are now freely available through digital repositories, as colleges and universities have increasingly adopted open access policies for their faculties' scholarly research outputs.¹²¹

Digitization has been beneficial not only for the creation and dissemination of new works, but also in extending the “long tail” of in-copyright works that previously would have faded from public view as they went out of print. Mass digitization of books from research institutions has enabled older works to be rediscovered and used in novel ways.¹²² By digitizing millions of books from research library collections, indexing them, and serving up snippets of the books in response to search queries, Google made it possible for researchers to discover books relevant to their work and provide information on where

See Cuntz, *supra* note 95, at 46.

¹¹⁸ *See* John Perry Barlow at Creative Commons Launch (2002), <https://archive.org/details/lreincclaunch2a-jpbarlow-lres>.

¹¹⁹ *List of major Creative Commons licensed works*, WIKIPEDIA, https://en.wikipedia.org/wiki/List_of_major_Creative_Commons_licensed_works (last visited Apr. 4, 2019).

¹²⁰ *See, e.g.*, Cory Doctorow, *Giving It Away*, FORBES (Dec. 1, 2006, 12:00 PM), https://www.forbes.com/2006/11/30/cory-doctorow-copyright-tech-media_cz_cd_books06_1201doctorow.html#36825d278c20; Made with Creative Commons: Knowledge Unlatched, MEDIUM (Sep. 18, 2017), <https://medium.com/made-with-creative-commons/knowledge-unlatched-a36a822bc77c> (describing case studies).

¹²¹ *See, e.g.*, OPEN ACCESS AND SCHOLARLY PUBLISHING, HARVARD LAW SCHOOL, <https://hls.harvard.edu/library/for-faculty/open-access-and-scholarly-publishing/> (last visited Mar. 20, 2019).

¹²² *See, e.g.*, Matthew Sag, *Orphan Works as Grist for the Data Mill*, 27 BERKELEY TECH. L.J. 1503 (2012).

copies of those books could be located.¹²³ The HathiTrust digital library, which was formed by Google's library partners pooling digital copies of books from their collections, now allows researchers from consortium members to conduct searches across a corpus of more than 16 million books to find ones that are relevant.¹²⁴ Barlow would have been pleased by this development and would have supported the initiative of some libraries to engage in controlled digital lending of books that libraries initially acquired in physical form,¹²⁵ following the lead of the Internet Archive with its online Open Library.¹²⁶

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 ideas will arrive. It's here. Now comes the hard part, which also happens to be the fun part: making it work.¹²⁷

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.¹²⁸

¹²³ See, e.g., *Authors Guild v. Google, Inc.*, 804 F.3d 202, 209 (2d Cir. 2015); *Authors Guild v. HathiTrust*, 755 F.3d 87, 97 (2d Cir. 2014).

¹²⁴ *September 2018 Update*, HATHITRUST, <https://www.hathitrust.org/september-2018-update>. A recent article presents evidence that digitization may in fact enhance demand and increase the sales or reprintings for certain types of physical books. See Abhishek Nagaraj & Imke Reimers, *Digitization and the Demand for Physical Works: Evidence from the Google Books Project* (Feb. 21, 2019), <https://ssrn.com/abstract=3339524>.

¹²⁵ See POSITION STATEMENT ON CONTROLLED DIGITAL LENDING, CONTROLLED DIGITAL LENDING BY LIBRARIES (Sept. 2018), <https://controldigitalending.org/statement>.

¹²⁶ See *Open Library*, INTERNET ARCHIVE, <https://openlibrary.org/> (last visited Mar. 20, 2019).

¹²⁷ Barlow, *supra* note 10, at 252.

¹²⁸ U.S. CONST. art. I, § 8, cl. 8.

IMAGINARY BOTTLES¹

JESSICA LITMAN[†]

i.

In 1994, John Perry Barlow published *The Economy of Ideas* in WIRED magazine.² Subtitled “A Framework for patents and copyrights in the Digital Age (everything you know about intellectual property is wrong),” the article argued that commercializing copyrighted material in a digital age was akin to selling wine without bottles.

Barlow’s metaphor was startlingly apt. For more than 200 years, U.S. copyright law had defined the rights of both owners and users primarily by regulating the creation and distribution of the tangible objects in which copyrighted works were embodied.³ Networked digital technology enabled the promiscuous copying and broad distribution of works completely detached from tangible objects.

The enigma is this: if our property can be infinitely reproduced and instantaneously distributed all over the planet without cost, without our knowledge, without its even leaving our possession, how can we protect it?⁴

¹ This work is licensed under a Creative Commons Attribution-No Derivatives 4.0 International License (CC BY-ND 4.0).

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² John Perry Barlow, *The Economy of Ideas*, WIRED (Mar. 1, 1994), reprinted as *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8 (2019).

³ See, e.g., Ralph S. Brown, *Eligibility for Copyright Protection: A Search for Principled Standards*, 70 MINN. L. REV. 579, 581 (1986); L. Ray Patterson, *Copyright and the “Exclusive Right” of Authors*, 1 J. INTELL. PROP. L. 1, 33 (1993); R. Anthony Reese, *The First Sale Doctrine in the Era of Digital Networks*, 44 B.C. L. REV. 577, 583–610 (2003). As Barlow noted, the 20th century dissemination of works using the broadcast spectrum had also posed a wine-without-bottles problem, but most practical uses of broadcasting involved the creation of copies. Live television and radio programming received no copyright protection at all until the program was embodied in a tangible object. See 17 U.S.C. § 101, 102 (2012); Barlow, *supra* note 2, at 91, 18 DUKE L. & TECH. REV. at 19 (“[B]roadcast transmissions all lack the Constitutional requirement of fixation as a ‘writing.’”).

⁴ Barlow, *supra* note 2, at 85, 18 DUKE L. & TECH. REV. at 8 (as “[t]he riddle is this . . .”).

Barlow's answer was that we needed to reexamine our assumptions about the value and nature of the information that copyright law seeks to secure. Once that authorship was detached from its containers, it would no longer work to assume that container-centric regulation would treat it appropriately.

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,"⁵ was an eerily accurate description of Twitter. Barlow's suggestion that information itself was supplanting money as our dominant currency⁶ 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.⁷

Legacy owners of intellectual property, he complained, were engaging in futile efforts to buttress the old, container-centric rules to enable them to stretch around the new reality. He predicted that the disconnect between traditional copyright law and digital technology would prove to be unbridgeable:

Intellectual property law cannot be patched, retrofitted, or expanded to contain digitized expression any more than real estate law might be revised to cover the allocation of broadcasting spectrum (which, in fact, rather resembles what is being attempted here). We will need to develop an entirely new set of methods as befits this entirely new set of circumstances.⁸

Twenty-five years later, though, it appears 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

⁵ Barlow, *supra* note 2, at 90, 18 DUKE L. & TECH. REV. at 19.

⁶ See Barlow, *supra* note 2, at 127, 18 DUKE L. & TECH. REV. at 24 ("[Information] may become the dominant form of human trade.").

⁷ See Barlow, *supra* note 2, at 89–90, 126–27, 18 DUKE L. & TECH. REV. at 19–21.

⁸ Barlow, *supra* note 2, at 85, 18 DUKE L. & TECH. REV. at 9.

their vantage point, the copyright rules are startlingly similar to the rules that governed the old world, only better.

ii.

Initially, copyright owners relied on a combination of two strategies. First, they put their hopes in what Barlow described as “crypto bottling.”⁹ Second, they backed up that plan with hefty helpings of relentless litigation. In the 1990s, many lobbyists for legacy copyright businesses insisted that, although consumers might enjoy content created by amateurs if it were free, the only good reason for a consumer to pay for Internet access would be to enjoy commercially-produced entertainment and information products. It followed that one could make a profit from providing Internet access by selling subscriptions to consumers eager for that content. If copyright owners could prevent consumers from gaining unlicensed access or making unlicensed copies, they’d be able to charge them lots of money for licensed access. They figured that devising a technological system to prevent unauthorized access or use was just around the corner, and if hacking technological protection were unlawful, that would effectively deter folks from piracy.

Copyright lobbyists persuaded Congress to protect copyright on the Internet by enacting a law that made it illegal to circumvent copy protection technology for any reason.¹⁰ Then, they sat back and waited impatiently for software engineers to invent technology that could encase copyrighted works in impregnable containers of encryption code. And waited. Meanwhile, they delayed making their works available online. While they were waiting, they sued upstart businesses that dared to offer music or video over the Internet, or even to help consumers do it themselves.¹¹ Book publishers, movie studios and record labels were reluctant to launch less-secure offerings, and wary of cannibalizing their

⁹ See Barlow, *supra* note 2, at 129, 18 DUKE L. & TECH. REV. at 28.

¹⁰ See generally Digital Millennium Copyright Act, Pub. L. 105-304, 112 Stat. 2860 (1998).

¹¹ See, e.g., *MGM v. Grokster*, 545 U.S. 913 (2005); *UMG Recordings v. Shelter Capital Partners*, 667 F.3d 1022 (9th Cir. 2011); *Arista Records, L.L.C. v. Launch Media, Inc.*, 578 F.3d 148 (2d Cir. 2009); *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (9th Cir. 2001); *Warner Bros. Entm’t v. WTV Sys.*, 824 F. Supp. 2d 1003 (C.D. Cal. 2011); *UMG Recordings, Inc. v. Hummer-Winblad*, 377 F. Supp. 2d 796 (C.D. Cal. 2005); *Random House, Inc. v. Rosetta Books L.L.C.*, 150 F. Supp. 2d 613 (S.D.N.Y. 2001), *aff’d*, 283 F.3d 490 (2d Cir. 2002); *UMG Recordings v. MP3.com*, 92 F. Supp. 2d 349 (S.D.N.Y. 2000); *Twentieth Century Fox Film Corp. v. iCraveTV*, 53 U.S.P.Q. 2d 1831 (W.D. Pa. 2000).

existing bricks-and-mortar business models.¹² When they finally made their works available over digital networks, they offered pallid and overpriced digital services with terrible user interfaces, often constrained by extremely buggy and annoying digital rights management technology.¹³ So, there was a bunch of pent-up demand and no real competition when a few well-capitalized businesses decided it was worth the litigation risk to enter the digital market with offerings of their own. Apple, Amazon, and Google soon became providers of online music, books, and video. They were willing to defend expensive lawsuits, and faced very little competition. Soon, all three had become obligatory partners for content owners hoping to distribute their works online. Online platforms figured out that they could make more money by selling eyeballs to advertisers than they could by selling movies to viewers or music to listeners. Apple, Amazon, and Google then proceeded to become impossibly wealthy.¹⁴

Copyright owners resent that. They've coined the term "value gap" to describe the injustice of the fact that platforms have too much bargaining power and can therefore shape the terms of copyright licenses to call for lower royalty payments than copyright owners believe they ought to pay.¹⁵ It isn't that platforms don't purchase licenses for the copyrighted content that appears on their services—they do. Because of their market dominance, though, they have the upper hand in negotiations and can insist on paying lower royalties than copyright owners believe would be fair. Given how much money the big online platforms are raking in, copyright owners figure they ought to be sharing a bigger piece of it.¹⁶

Of course, we know now that all of the assumptions underlying the impenetrable crypto-bottle strategy were misguided. There was

¹² See, e.g., ANDREW ALBANESE, *THE BATTLE OF \$9.99* (2013).

¹³ See Jessica Litman, *Antibiotic Resistance*, 30 *CARDOZO ARTS & ENT. L.J.* 53, 53–58 (2012).

¹⁴ See *id.* at 58–66.

¹⁵ See American Assoc. of Independent Music et al., Joint Comments before the US Copyright Office *in re* Section 512 Study, No. 2015-7 (Apr. 1, 2016), <https://www.regulations.gov/document?D=COLC-2015-0013-89806>; Warner Music Group, Comments before the US Copyright Office *in re* Section 512 Study, No. 2015-7 (Mar. 31, 2016), <https://www.regulations.gov/document?D=COLC-2015-0013-86022>.

¹⁶ See Jessica Litman, *What We Don't See When We See Copyright as Property*, 77 *CAMBRIDGE L.J.* 536, 537–42 (2018).

never going to be an impregnable crypto-bottle.¹⁷ The electronic game industry has managed to make good-enough encryption work, but for owners of copyrights in other works, the legal prohibition on hacking copy-protection technology has been a bust.¹⁸ The additional deterrent effect of making it illegal to circumvent digital rights management turned out to be negligible. Moreover, the prohibition is so broadly worded that it seems to forbid an independent mechanic from fixing any car containing software,¹⁹ so people tend not to believe that the behavior it prohibits is unlawful. Anyone can find easy-to-follow circumvention instructions in respectable newspapers and online magazines; circumvention software is ubiquitous.²⁰ Several major media companies have decided not to bother with digital rights management protection at all, since it costs them something to encode every copy, and that encoding doesn't in fact provide meaningful protection.

As the crypto-bottle strategy failed, though, copyright owners stumbled into a second tactic that has been far more effective. 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."²¹ 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.²² By insisting, again and again, that the word "copy"

¹⁷ See CORY DOCTOROW, *INFORMATION DOESN'T WANT TO BE FREE: LAWS FOR THE INTERNET AGE* (2014).

¹⁸ See Jessica Litman, *Real Copyright Reform*, 96 IOWA L. REV. 1, 32–33 (2010).

¹⁹ See Library of Congress, Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 83 Fed. Reg. 54010, 54021–23 (Oct. 26, 2018) (discussing proposed exemption "allowing for circumvention of access controls controlling the functioning of motorized land vehicles for purposes of diagnosis, repair, or lawful modification of a vehicle").

²⁰ See, e.g., Catherine Ellis, *The Best Free DVD Copier 2019*, TECHRADAR (Feb. 11, 2019), <https://www.techradar.com/best/the-best-free-dvd-copier>; Kirk McElhearn, *How To Rip DVDs and Blu-Ray Discs with Make MKV and Handbrake*, MACWORLD (Mar. 13, 2017), <https://www.macworld.com/article/3179350/how-to-rip-dvds-and-blu-ray-discs-with-makemkv-and-handbrake.html>; *MacTheRipper*, GUSTAVUS ADOPHUS COLLEGE, https://gustavus.edu/gts/Mac_the_Ripper (last visited Mar. 6, 2019).

²¹ See Jessica Litman, *Fetishizing Copies*, in RUTH OKEDIJI, *COPYRIGHT IN AN AGE OF LIMITATIONS AND EXCEPTIONS* 107 (2017).

²² See, e.g., *Digital Millennium Copyright Act Section 104 Report: Hearing Before the Subcomm. on Courts of the House Comm. on the Judiciary*, 107th Cong. 96–112 (2002) (testimony of Emery Simon, Business Software Alliance); see generally Aaron Perzanowski, *Fixing RAM Copies*, 104 NW. U. L. REV. 1067 (2010).

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.”²³ 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.²⁴

Over the past 20 years, this expanded meaning of “copy” has ceased to be seen as radical.²⁵ That has allowed copyright owners to sell their wine in what I would call make-believe bottles. Like the digital

²³ 17 U.S.C. § 101 (2012).

²⁴ Most defenses of the expanded conception of “copy” focus only on the wording of the definition of “fixation,” which imposes the additional requirement that the work’s instantiation in a material object must be “sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.” 17 U.S.C. § 101. *See, e.g., Digital Millennium Copyright Act Section 104 Report: Hearing Before the Subcomm. on Courts of the House Comm. on the Judiciary, 104th Cong. (Dec. 12 & 13, 2001) [hereinafter Section 104 Hearing]* (statement of Marybeth Peters, Register of Copyrights). They assume that since computers and computer memory chips are themselves material objects, any time expression occupies a memory chip for a period of more than transitory duration, a copy has been made. Proponents of the view that RAM copies infringe copyrights argue that as long as the computer or other machine is on—and it could be on indefinitely—a copy of the copyrighted work stored there can be perceived or reproduced, thereby satisfying the “more than transitory duration” standard. By that logic, a broadcast tower is a material object, an unrecorded live television broadcast would therefore necessarily result in a copy, and Congress’s conclusion that it did not must have been mistaken. *See Pamela Samuelson, Legally Speaking: The NII Intellectual Property Report, COMM. ACM, Dec. 1994, at 21, 23 (“[H]olding a mirror up to a book would be infringement because the book’s image could be perceived there for more than transitory duration.”).*

²⁵ *See, e.g., DEP’T OF COMMERCE INTERNET POLICY TASK FORCE, COPYRIGHT, CREATIVITY AND INNOVATION IN THE DIGITAL ECONOMY 12 (2013).*

instantiations of the works, these imaginary bottles are not tangible. That lack has turned out to carry with it unexpected advantages for rights holders. Because the bottles are made-up creations, copyright owners can imbue them with whatever characteristics they fancy. By encoding restrictions in the terms of an end user license agreement, distributors of copyrighted works have succeeded in limiting the uses consumers are permitted to make of lawful copies of copyrighted works.²⁶ It has become conventional for copyright owners to insist that digital copies are “licensed,” not “sold,” even in transactions that are expressly denominated as sales.²⁷ Because the terms of the license may permit or forbid any encounter with the work that results in a digital copy, the licensor is entitled to subject the purchaser’s use to whatever conditions it chooses to impose. In particular, copyright owners have insisted that their make-believe bottles are not subject to the first sale doctrine, and the purchasers of those bottles may not pass them on to new owners.²⁸ That’s a neat trick: a digital file may be a copy for the purpose of infringement liability but not a copy for the purpose of transferring ownership.

Copyright owners have even persuaded some courts that their entitlement to denominate transactions as licenses rather than sales also permits them to characterize transfers of physical media containing copyrighted works as licenses of the material objects that may preclude the purchaser from transferring the material object.²⁹

²⁶ The topic of the use of end user license agreements to negate user’s rights under copyright law is much too involved and important for this short essay. Peggy Radin and Aaron Perzanowski and Jason Schultz have published excellent books with masterful discussions of the ramifications. *See* AARON PERZANOWSKI & JASON SHULTZ, *THE END OF OWNERSHIP* (2016); MARGARET JANE RADIN, *BOILERPLATE* (2012).

²⁷ *See, e.g.*, Cory Doctorow, *Even Amazon Can’t Keep Its EULA Story Straight*, BOING BOING (Jan. 12, 2010), <https://boingboing.net/2010/01/12/even-amazon-cant-kee.html>.

²⁸ *See, e.g.*, *First Sale Doctrine*, COPYRIGHT ALLIANCE, <https://copyrightalliance.org/policy/position-papers/first-sale-doctrine/> (last visited Mar. 6, 2019); Amici Curiae Brief of Motion Picture Ass’n of America & Recording Industry Ass’n of America at 7–9, *Capitol Records v. Redigi*, 910 F.3d 649 (2d Cir. 2018) (No. 16-2321), <https://copyrightalliance.org/wp-content/uploads/2017/05/ReDigi-RIAA-Amicus-Brief.pdf>; *see generally First Sale Under Title 17: Hearing Before the Subcomm. on Courts of the H. Judiciary Comm.*, 114th Cong. (June 2, 2014), <https://docs.house.gov/meetings/JU/JU03/20140602/102290/HHRG-113-JU03-Transcript-20140602.pdf>.

²⁹ *Compare Vernor v. Autodesk*, 621 F.3d 1103 (9th Cir. 2010), *with UMG Recordings v. Augusto*, 628 F.3d 1175 (9th Cir. 2011). In *Disney Enterprises v.*

Twenty years ago, proponents of the broad reconstruction of “copy” argued that the expansive understanding was an essential tool to prevent digital piracy, but acknowledged that the law should find some way to allow temporary digital copies that were incidental to legitimate uses.³⁰ Today, the fact that an otherwise legitimate use requires the creation of a unauthorized digital copy is itself enough to make the use illegitimate.³¹

iii.

In 2019, then, make-believe copyright bottles have given copyright owners more legal control over uses of their works than they enjoyed under the old-fangled bricks-and-mortar law. That enhanced legal control hasn’t necessarily translated into actual control, but the businesses that call themselves the “core copyright industries” report that they are earning more money than ever,³² so things seem to be working out okay for them so far.

Redbox Automated Retail, Disney claimed that language on the outside of its boxed blu-ray disk, DVD, and digital download code combo packs that said “codes are not for sale or transfer” and “this product . . . cannot be sold or rented individually,” bound purchasers of the combo packs. Redbox purchased combo packs and sold the three components separately. Disney claimed that a consumer who purchased a download code from Redbox infringed its copyright when she or he downloaded the movie, and that Redbox should be held liable as a contributory infringer. The court initially ruled that the language did not create an enforceable contract, both because it didn’t indicate that opening the box would constitute assent and because the purported prohibition on transfer of BluRay discs and DVDs sought to impose an unenforceable condition in contravention of the first sale doctrine in section 109. Indeed, the district court concluded that the overreaching terms of the purported license should be considered copyright misuse. *See Disney Enters. v. Redbox Automated Retail*, No. CV 17-08655 DDP (AGRx), 2018 U.S. Dist. Lexis 61903 (C.D. Cal. Feb. 20, 2018). Disney revised the language to give purchasers clearer notice on the outside of the combo pack box and added lengthy terms and conditions to its digital download site. The court agreed that Disney could now succeed on its claim that Redbox encouraged its customers to infringe Disney’s copyrights by using the digital download, and entered a preliminary injunction. *See Disney Enters. v. Redbox Automated Retail*, 336 F. Supp 3d 1146 (C.D. Cal. 2018).

³⁰ *See, e.g.*, Section 104 Hearing, *supra* note 24 (statement of Mary Beth Peters, Register of Copyrights); *see also* U.S. COPYRIGHT OFFICE, DMCA SECTION 104 REP. 106-48 (Aug. 2001).

³¹ *See Capitol Records v. Redigi*, 910 F.3d 649 (2d Cir. 2018).

³² *See* STEPHEN E. SIWEK, COPYRIGHT INDUSTRIES IN THE U.S. ECONOMY: THE 2018 REPORT (2018), <https://pmcdeadline2.files.wordpress.com/2018/12/copyright-industry-report-wm.pdf>.

Was Barlow wrong about the intellectual property crisis? He predicted in 1994 that the extant system of IP law would fall under its own weight:

It's fairly paradigm warping to look at information through fresh eyes—to see how very little it is like pig iron or pork bellies, and to imagine the tottering travesties of case law we will stack up if we go on legally treating it as though it were.

As I've said, I believe these towers of outmoded boilerplate will be a smoking heap sometime in the next decade, and we mind miners will have no choice but to cast our lot with new systems that work.³³

That didn't happen, or, at least, it didn't happen in that way or in that time frame. 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,³⁴ it hasn't yet come close to achieving that goal.³⁵ 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.³⁶ Creators across a wide swathe of fields complain of a shocking lack of transparency. Proposals to replace the current system with “new systems that work” have so far failed to attract enough support to make them feasible.

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 researchers discover closely-held details of how money and rights move through the

³³ Barlow, *supra* note 2, at 127, 18 DUKE L. & TECH. REV. at 24.

³⁴ See Barlow, *supra* note 2, at 85, 18 DUKE L. & TECH. REV. at 8.

³⁵ I've discussed this problem elsewhere. See Litman, *supra* note 16, at 539–50; Litman, *supra* note 18, at 8–12.

³⁶ See, e.g., Peter C. DiCola & David Touve, *Licensing in the Shadow of Copyright*, 17 STAN. TECH. L. REV. 397 (2014); Eriq Gardner, *Fox Rocked by \$179M 'Bones' Ruling: Lying, Cheating and "Reprehensible" Studio Fraud*, HOLLYWOOD REP. (Feb. 27, 2019), <https://www.hollywoodreporter.com/thr-esq/fox-rocked-by-179-million-bones-ruling-lying-cheating-reprehensible-studio-fraud-1190346>; Eriq Gardner, *'Walking Dead' Producers Say AMC Won't Explain Basis for Denying Hundreds of Millions in Profits*, HOLLYWOOD REP. (Mar. 6, 2019), <https://www.hollywoodreporter.com/thr-esq/walking-dead-producers-say-amc-wont-explain-basis-denying-hundreds-millions-profits-1192470>.

copyright system,³⁷ that knowledge may itself transform the ways that copyright owners do business. Recent statutory amendments include provisions designed to encourage music and sound recording rights holders to disclose more data about the works they control;³⁸ secrets revealed as a result of publicized legal disputes have shone light on the ways that some rights-holders conceal facts about their earnings and payment.³⁹ 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.

³⁷ See, e.g., Zoe Keating, *Another Year*, TUMBLR, <http://zoekeating.tumblr.com/post/181269142164/another-year> (last visited Mar. 9, 2019); Daniel Sanchez, *What Spotify Paid One Artist in 2018*, DIGITAL MUSIC NEWS (Dec. 19, 2018), <https://www.digitalmusicnews.com/2018/12/19/zoe-keating-spotify-2018-payout/>.

³⁸ See Hatch-Goodlatte Music Modernization Act, Pub. L. No. 115-264 (2018). Cynics suggest that the incentives in the new law will not suffice to persuade major music publishers and labels to give up their secrets.

³⁹ See, e.g., *Twentieth Century Fox Film Corp. v. Wark Ent., Inc.*, Amended Final Award, No. 1220052735 (JAMS Feb. 20, 2019) (Liu, Arb.), <https://pmcdeadline2.files.wordpress.com/2019/02/final-amended-award-redactions.pdf>.

JOHN PERRY BARLOW'S CALL FOR PERSUASION OVER POWER

JONATHAN L. ZITTRAIN

John Perry Barlow's insights were inseparable from his lyrical way of conveying them. Paragraphs like this from his seminal 1994 essay *The Economy of Ideas* come to mind:

What was previously considered a common human resource, distributed among the minds and libraries of the world, as well as the phenomena of nature herself, is now being fenced and deeded. It is as though a new class of enterprise had arisen that claimed to own the air and water.

What is to be done? 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 are trying to force what can no longer be upheld by popular consent.¹

Barlow's expression mates joy and canniness, and one of his talents in writing about new technologies was to flip our conception of the status quo in order to correct it. In 1994, the conventional sense was that the Internet and its champions were heedlessly upsetting a longstanding set of relationships and legal entitlements, with copyright as a signal example. And while that was superficially true, it wasn't the whole story.

Copyright was a natural first area of contention during the mainstreaming of the Internet because there was readily-tallied money at stake; widespread Internet use absolutely stood to put a dent in established, legally-protected cash flows; and polarized cultures of righteousness had developed around views of the ethics of file sharing, also known as "piracy." The young hackers and dot-com founders responsible for much of the internet's mischief—having built the likes of Napster, Gnutella, Napigator, KaZaA—were, to the Hollywood establishment, right out of central casting as barbarians at the gate.

Barlow told us that those appearances were wrong. In fact, the settled relationships of copyright holders comprised the unusual artifice around the centuries-long production of entertainment. The practices of copyright might comfortably apply to the highly stylized dealings to carve up rights to the distribution of a movie, but the average citizen held

¹ John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8, 14 (2019).

an even longer-established set of expectations around performance and sharing with which the free transfer of bits dovetailed very well.

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:

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 organization²

(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.)

The performance right was visited again in the 1998 Fairness in Music Licensing Act, which sought to settle a longstanding dispute between the NRA—that is, the National Restaurant Association—and ASCAP, the leading U.S. organization coordinating licenses for public performances of songs. The dispute was over restaurants’ playing of the radio while people ate. While radio stations already paid for the rights to broadcast music, ASCAP wanted restaurants³ to have to license the music as well. The NRA made great hay of the fact that ASCAP had previously sent letters to Girl Scout camps asking them to license up,⁴ and accused ASCAP of wanting royalties for kids singing Puff the Magic Dragon around campfires. ASCAP’s chief operating officer at first responded combatively: “They buy paper, twine, and glue for their crafts—they can pay for the music, too.”⁵ ASCAP reconsidered and later

² 17 U.S.C. § 110 (2000).

³ *Music Licensing in Restaurants and Retail and Other Establishments: Hearing Before the Subcomm. on Courts & Intellectual Prop. of the H. Comm. on the Judiciary*, 105th Cong. (1997).

⁴ Elisabeth Bumiller, *Ascap Asks Royalties From Girl Scouts, and Regrets It*, N.Y. TIMES (Dec. 17, 1996), <https://www.nytimes.com/1996/12/17/nyregion/ascap-asks-royalties-from-girl-scouts-and-regrets-it.html>.

⁵ Lisa Bannon, *Ascap Cautions the Girl Scouts: Don't Sing 'God Bless America'*, WALL STREET J. (Aug. 21, 1996), <https://www.wsj.com/articles/SB840575892377365000>.

said the demand was a mistake, but the political tide had turned. The Fairness in Music Licensing Act provided that no royalties were needed—at least so long as the restaurants were smaller than 3,750 square feet, and used no more than six speakers to play the music.⁶ (Barlow's own view of ASCAP, for what it's worth: "I'm a member of ASCAP, and if you think that's the solution, I invite you to write some songs.")⁷

The music licensing and recording industry mentality clashed quite a lot with mix-tape culture. As file sharing became routine, the policy drawing board entertained increasingly desperate measures to preserve what in fact had never been—people had always shared music without practical legal burden; the Internet's new affordances posed genuine questions at the clash between what seemed like perfectly reasonable interpersonal behavior, and the new costs it was imposing on the industry. The industry's prior encounters with new technology had, at times, resulted in new restrictions on it. In 1984, the videocassette recorder came within one Supreme Court vote of being found to be an instrument of contributory copyright infringement, and thus illegal without licensing.⁸ And in 1992, the music industry ensured through law that something called the "Serial Copy Management System" would be built into newly-emerging digital audio tape recorders, to prevent copyrighted material from spreading losslessly too well.⁹ (Oddly, Title 17, which defines "children," never specifies what the SCMS actually is.)

It was against that backdrop that Barlow wrote. His observations of the culture clash were vindicated as the industry floated such drastic proposals as to "close the analog hole"¹⁰ by making recording devices refuse to record music or images encountered in the wild that had "don't record me" dog-whistles placed within them. They proposed legislation such as the "SSSCA"¹¹ and "CBPTDA"¹² to mandate that all computing

⁶ Fairness in Music Licensing Act, 17 U.S.C. § 110 (1997).

⁷ John Perry Barlow, Keynote Address at the Winter 1994 USENIX Conference: Stopping the Information Railroad (Jan. 17, 1994) (transcript available at John Perry Barlow, *Stopping the Information Railroad*, ELEC. FRONTIER FOUND. (Jan. 17, 1994), <https://www.eff.org/pages/stopping-information-railroad>).

⁸ See Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417 (1984).

⁹ See Audio Home Recording Act, 17 U.S.C. § 1002(a) (1992).

¹⁰ Eric Diehl & Teddy Furon, © Watermark: Closing the Analog Hole (July 2003) (paper presented at IEEE International Conference on Consumer Electronics).

¹¹ Security Systems Standards and Certification Act, Staff Working Draft, 107th Cong. (2001), available at <http://cryptome.org/sssc.htm>.

¹² Consumer Broadband and Digital Television Promotion Act, S. 2048, 107th Cong. (2002).

equipment¹³ have digital rights management software built in. There were outsized lawsuits¹⁴ against people who swapped copyrighted files over peer-to-peer Internet services. There were legal threats against Internet service providers,¹⁵ including universities.¹⁶

Very little of it endured. 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,¹⁷ 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 off¹⁸ than they were before the Internet came about. Recording industry profits, after a downsizing upon leaving the era of \$15 compact discs, seem to have stabilized.¹⁹ Even the American film industry—which is seeing

¹³ Jonathan L. Zittrain, *The Generative Internet*, 119 HARV. L. REV. 1974, 2024–25 (2006).

¹⁴ Sony BMG Music Entm't v. Tenenbaum, 660 F.3d 487 (1st Cir. 2011).

¹⁵ *RIAA v. Verizon*, ELECTRONIC PRIVACY INFO. CTR. (Apr. 7, 2004), <https://epic.org/privacy/copyright/verizon/>.

¹⁶ Anne Broache, *RIAA Threatens 19 Universities with Lawsuits*, CNET (Oct. 18, 2007), <https://www.cnet.com/news/riaa-threatens-19-universities-with-lawsuits/>.

¹⁷ Daniel Sanchez, *Facebook Promises Not to Rip Down Your Music Videos—If You Use Their Music*, DIGITAL MUSIC NEWS (Dec. 11, 2017), <https://www.digitalmusicnews.com/2017/12/11/facebook-sound-collection/>.

¹⁸ Victor Luckerson, *Is Spotify's Model Wiping Out Music's Middle Class?*, RINGER (Jan. 16, 2019), <https://www.theringer.com/tech/2019/1/16/18184314/spotify-music-streaming-service-royalty-payout-model>.

¹⁹ Felix Richter, *Rise of Digital Formats Stops the Music Industry's Decline*, STATISTA (Apr. 26, 2017), <https://www.statista.com/chart/4713/global-recorded-music-industry-revenues/>.

profit growth much slower than that of many global counterparts—appears to be outpacing the broader economy.²⁰

Of course, defending existing profit flows was not Barlow's starting or ending point. The sentiments of Barlow's *A Declaration of the Independence of Cyberspace* transcend something as transactionally-based as the copyright wars. Rather, says Barlow, proposed new restrictions there:

would declare ideas to be another industrial product, no more noble than pig iron. In our world, whatever the human mind may create can be reproduced and distributed infinitely at no cost. The global conveyance of thought no longer requires your factories to accomplish.²¹

What Barlow envisioned was a renaissance of person-to-person interaction, one unmediated by corporate marketing departments:

We will create a civilization of the Mind in Cyberspace. May it be more humane and fair than the world your governments have made before.²²

Alas, from the standpoint of 2019, humane and fair have turned out to be tall orders. There remains a vibrant string of thriving, Lórien-like online communities of art and learning defined largely by their insularity. But the bulk of digital foot traffic has coalesced around sites known as much for meanness and harassment as for earnest exchange, coupled with demands by aggrieved users—rather than yesterday's corporate copyright holders—for intervention by the respective corporate overseers. These sites are not self-governed in content or in design. They are monetarily optimized consumer offerings as authentically community-driven as Disney World's Main Street USA.

And teenagers, or near enough, brought us this too. In his 2005 book *What the Dormouse Said: How the Sixties Counterculture Shaped the Personal Computer Industry*, John Markoff notes that:

Personal computers that were designed for and belonged to single individuals would emerge initially in concert with a counterculture

²⁰ David Robb, *U.S. Film Industry Topped \$43 Billion in Revenue Last Year, Study Finds, But It's Not All Good News*, DEADLINE (July 23, 2018), <https://deadline.com/2018/07/film-industry-revenue-2017-ibisworld-report-gloomy-box-office-1202425692/>.

²¹ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, 18 DUKE L. & TECH. REV. 5, 6 (2019).

²² *Id.* at 7.

that rejected authority and believed the human spirit would triumph over corporate technology, not be subject to it.²³

But, as Markoff goes on to note, the barbarians of yesterday have themselves become the gatekeepers of today. Barlow naturally drew upon the cultural fault lines of 1960s America in limning the heroes and sure-to-lose villains of the digital world, but today those lines aren't quite so clear. The new boss turned out to be the same²⁴ as the old boss—and our conflicts can as easily appear to be with one another as between citizen and state, or consumer and conglomerate. The causes that Barlow embodied and stood for—marked by values of humanity, of openness, of adventure, of good humor, and of inclusion—are ones that endure at every layer of the digital stack. A 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)²⁵ is . . . metered through a paywall.

²³ JOHN MARKOFF, WHAT THE DORMOUSE SAID: HOW THE SIXTIES COUNTERCULTURE SHAPED THE PERSONAL COMPUTER INDUSTRY xv (2005).

²⁴ THE WHO, *Won't Get Fooled Again*, on WHO'S NEXT? (Track Records 1971).

²⁵ See John Perry Barlow, *The Economy of Ideas*, WIRED (Mar. 1, 1994), <https://www.wired.com/1994/03/economy-ideas/> (last accessed Aug. 3, 2019).

DANCING ON THE GRAVE OF COPYRIGHT?

ANUPAM CHANDER[†] AND MADHAVI SUNDER^{††}

*“[I]n the years to come, most human exchange will be virtual rather than physical, consisting not of stuff but the stuff of which dreams are made. Our future business will be conducted in a world made more of verbs than nouns.”*¹

—John Perry Barlow (1994)

INTRODUCTION: TOWARDS AN ECONOMY OF VERBS

John Perry Barlow would have wanted us dancing on the grave of copyright.² Indeed, he told us so. He predicted that the internet would render copyright’s legal fences obsolete. How can you contain information? Ideas are contagious. “Information wants to be free.”³ When produced in its ethereal form, information would be impossible to contain. Intellectual property is a “sinking ship,” and the lawyers preparing intellectual property for digitization are merely rearranging the deck chairs.⁴

Intellectual property law attached when the “word became flesh,”⁵ Barlow argued. A thought would become intellectual property when it entered a “physical object, whether book or widget.”⁶ Intellectual property grew up to protect things—books, machines, and later, records and movies. As the economy moved to focus on information powered by the internet, would intellectual property survive? Barlow predicted that

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¹ John Perry Barlow, *Selling Wine Without Bottles: The Economy of Mind on the Global Net*, 18 DUKE L. & TECH. REV. 8, 31 (2019).

² *See id.* at 14 (“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 are trying to up by force what can no longer be upheld by popular consent.”).

³ *Id.* at 18.

⁴ To be more precise, Barlow believed that the lawyers were either (1) rearranging “deck chair[s],” (2) issuing “stern warnings” of disaster and punishment, or (3) maintaining a “glassy-eyed denial.” *Id.* at 9.

⁵ *Id.*

⁶ *Id.*

the rise of an “economy of verbs”—an economy focused on actions and experiences—would render intellectual property rights largely obsolete.⁷ The “tottering travesties of case law”⁸ used to protect earlier economic products would prove useless in the new world of services and experiences.

The quarter century since Barlow’s writing allows us to assess his prophecy. The economy moved in the very direction that Barlow anticipated—from an economy focused on the ownership of things to an economy based on services and experiences.⁹ In high-income countries, services now account for three-quarters of the gross domestic product.¹⁰

But intellectual property proved more resilient and adaptable than Barlow predicted. Intellectual property law both offered exceptions where necessary, while simultaneously expanding to cover new forms of creativity and activities. In this short essay, we argue that, for good or ill, intellectual property has reconfigured itself for an economy driven by information and experience.

But the evolution is hardly complete. New forms of expression keep testing the limits of intellectual property. Consider the blockbuster game Fortnite. Epic Games offers Fortnite game play for free—but users pay for virtual clothing or various “emotes”—dances that allow users to express themselves online during in-game play. Indeed, Fortnite players paid some \$2.4 billion in 2018 for the right to engage in such expressions—literally, to “emote.”¹¹ Internet entrepreneurs have figured out a way to commodify dancing itself. Barlow believed that the internet

⁷ *Id.* at 26 (“One existing model for the future conveyance of intellectual property is real time performance, a medium currently used only in theater, music, lectures, stand-up comedy and pedagogy.”). Barlow’s prediction came several years before the influential article by B. Joseph Pine II & James H. Gilmore, *Welcome to the Experience Economy*, HARV. BUS. REV. (Jul.–Aug., 1998), <https://hbr.org/1998/07/welcome-to-the-experience-economy>. Pine and Gilmore similarly depicted the new Experience Economy with show tickets on their book cover.

⁸ Barlow, *supra* note 1, at 24.

⁹ See generally Madhavi Sunder, *Intellectual Property in Experience*, 117 MICH. L. REV. 197 (2018) (describing rise of the Experience Economy).

¹⁰ Patricia Buckley & Rumki Majumdar, *The Services Powerhouse: Increasingly Vital to World Economic Growth*, DELOITTE (July 12, 2018), <https://www2.deloitte.com/insights/us/en/economy/issues-by-the-numbers/trade-in-services-economy-growth.html> (“In 2015, services’ value added accounted for 74 percent of GDP in high-income countries, up from 69 percent in 1997.”).

¹¹ Patrick Shanley, *‘Fortnite’ Earned \$2.4 Billion in 2018*, HOLLYWOOD REP. (Jan. 16, 2019), <https://www.hollywoodreporter.com/heat-vision/fortnite-earned-24-billion-2018-1176660>.

would liberate us from the commodifying forces of intellectual property—but rather, the internet brought commodification into previously intimate, sacred spaces. 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?

I. FROM GOODS TO A GOOD TIME: INTELLECTUAL PROPERTY IN EXPERIENCE

Barlow was right about where the economy would go. He was wrong that intellectual property would not follow. A quarter century on, the Economy of Verbs is here.¹² As *The Economist* puts it, in today's economy, "goods and services are no longer enough."¹³ Today's consumers are made happier through "'experiences' over commodities, pastimes over knick-knacks, doing over having."¹⁴ The move from nouns to verbs in fantasy properties exemplifies this shift in the nature of both consumption and entertainment. From *Star Wars* to *Harry Potter*, fans do not just want to watch or read about their favorite characters—they want to *be* them. They don the robes of Gryffindor, flick their wands, and drink the butterbeer. The owners of fantasy properties understand this, expanding their offerings from light sabers in 1977 to the *Galaxy's Edge*, Disney's new "100% immersive" *Star Wars*-inspired resort opening in 2019.¹⁵

Cyberspace and new technologies have enabled "whole new genres of experience, such as interactive games, Internet chat rooms and multi-player games, motion-based simulators, and virtual reality."¹⁶ Experiencing the *Galaxy's Edge* will no doubt require that you wear a radio frequency identification (RFID) chip, transmitting your identity and precise location to sensors throughout the park, allowing computers

¹² This section is adapted from Sunder, *Intellectual Property in Experience*, *supra* note 9.

¹³ *Economics Discovers Its Feelings*, *ECONOMIST* (Dec. 19, 2006), <http://www.economist.com/node/8401269>.

¹⁴ *Id.*

¹⁵ Jennifer Fickley-Baker, *Plans Unveiled for Star Wars-Inspired Themed Resort at Walt Disney World*, *DISNEY PARKS BLOG* (July 15, 2017), <https://disneyparks.disney.go.com/blog/2017/07/plans-unveiled-for-star-wars-inspired-themed-resort-at-walt-disney-world/> (quoting Bob Chapek, Chairman of Walt Disney Parks & Resorts).

¹⁶ Pine & Gilmore, *supra* note 7.

to monitor and inform local engagements with you. Facial recognition will empower many of these experiences. The move toward “simulated lived experience in cyberspace”¹⁷ places renewed emphasis on performance. “In cyberspace . . . one goes from watching the screen to going behind the screen and becoming the performance.” Cyberspace theorist Randall Walser describes the move thusly: “print and radio tell; stage and film show; cyberspace embodies.”¹⁸

Barlow correctly predicted how “interactivity . . . will be a billable commodity.”¹⁹ But while performers would sell tickets to an authentic experience, they could not commodify it and protect it as intellectual property, or so Barlow thought. “The protections which we will develop will rely far more on ethics and technology than on law,” he surmised.²⁰

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.

Increasingly, owners of cultural properties are issuing cease-and-desist demands to third parties and offering their own official pay-to-play options. Amazon.com launched Kindle Worlds, a forum to write and sell fan fiction based on specific licensed media properties.²¹ YouTube algorithms to protect copyright are wreaking havoc on *Game of Thrones* fan theory sites, where fans use video clips from the popular HBO series to discuss everything from character development to symbolism in *The World of Ice and Fire*.²² The Tolkien estate shut down an unlicensed Lord of the Rings summer camp.²³ Disney filed a trademark suit against

¹⁷ JEREMY RIFKIN, *THE AGE OF ACCESS* 170 (2001).

¹⁸ *Id.*

¹⁹ Barlow, *supra* note 1, at 27.

²⁰ Barlow, *supra* note 1, at 30.

²¹ After five years, Kindle Worlds has just been retired. See *Kindle Worlds*, AMAZON, <https://kindleworlds.amazon.com/worldsAmazon> (last visited Jan. 13, 2018).

²² Chris Mills, *HBO is Abusing Copyright to take ‘Game of Thrones’ Fan Videos Off YouTube*, BOY GENIUS REP. (May 10, 2016), <http://bgr.com/2016/05/10/game-of-thrones-youtube-theories-hbo/>.

²³ Mike Masnick, *Tolkien Estate Strikes Again: Forces Summer Camp to Change Name*, TECHDIRT (Apr. 20, 2011, 11:40 AM), <https://www.techdirt.com/story/2011/04/20/tolkien-estate-strikes-again-forces-summer-camp-to-change-name/>.

a game maker for creating a mobile version of the fictional card game from the Star Wars universe, “Sabacc,” in which Han Solo famously won the Millennium Falcon from Lando Calrissian.²⁴ Netflix sent a cease-and-desist letter to the owners of a pop-up bar in Chicago based on its popular new television series, *Stranger Things*, with the quip, “We love our fans more than anything, but you should know the Demogorgon is not always as forgiving.”²⁵ The Cartoon Network prevented fans from opening an unauthorized Rick and Morty themed pop-up bar in Washington, DC, claiming the move “wasn’t polite and aimed at profiting off of Rick and Morty fans.”²⁶ Fans responded that the bar would have been a labor of love and that the company was denying fans the freedom to “geek out.”²⁷

The economy of verbs is now fully delimited by intellectual property. The full pantheon of intellectual property rights—copyrights, trademarks, utility patents and design patents—are marshalled to create exclusive rights in look and feel, aura, and aesthetic experience.²⁸ Ever-expanding merchandising rights, based on copyright’s derivative work right and trademarks’ prevention of sponsorship and endorsement confusion, have propelled the commodification of experiences to go beyond the enclosure of speech into the enclosure of cultural practices. The result is that copyright and trademarks have crept into some of the most intimate spaces of human thought and action: our fantasy lives. Intellectual property laws seek to govern who we imagine ourselves to be and to commodify every endorphin of glee when we hear a reference to our favorite characters or stories. This enclosure has serious implications for humanity. As Yale psychologist Paul Bloom observes, American

.techdirt.com/articles/20110419/01104713954/tolkien-estatestrikes-again-forces-summer-camp-to-change-name.shtml.

²⁴ Ashley Cullins, *Hollywood Docket: ‘Star Wars’ Sabacc Game Sparks Another Lawsuit*, HOLLYWOOD REP. (May 4, 2018), <https://www.hollywoodreporter.com/thr-esq/hollywood-docket-star-wars-sabacc-game-sparks-lawsuit-1108386>.

²⁵ John Lynch, *Netflix Asked a ‘Stranger Things’ Pop-Up Bar to Shut Down with this Humorous Cease-and-Desist Letter*, BUS. INSIDER (Sept. 19, 2017), <http://www.businessinsider.com/netflix-stranger-things-pop-up-bar-funny-cease-anddesist-letter-2017-9>.

²⁶ Jessica Sidman, *Rick and Morty-Themed Bar Shut Down After Threats from Turner Broadcasting*, WASHINGTONIAN (Aug. 18, 2018), <https://www.washingtonian.com/2018/08/18/rick-and-morty-themed-bar-shut-down-after-threats-from-turner-broadcasting/>.

²⁷ *Id.*

²⁸ Peter Lee & Madhavi Sunder, *The Law of Look and Feel*, 90 S. CAL. L. REV. 529, 529 (2017).

adults spend on average four minutes a day on sex and over four hours a day in imaginary worlds.²⁹

The demands to cease such activity follow the old, refuted logic: “If value, then right.” Rochelle Dreyfuss first offered this pithy formulation, but the logic had been repudiated much earlier. Felix Cohen explained the circularity that this approach rests upon: “The vicious circle inherent in this reasoning is plain. It purports to base legal protection upon economic value, when, as a matter of fact, the economic value of a sales device depends upon the extent to which it will be legally protected.”³⁰

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.³¹ Unlike Barlow, the critique does not turn on the form in which information is conveyed—that is, bottles or no bottles, in Barlow’s parlance. Rather, the critique is premised on the nature of art itself. Perhaps the most influential theorist of aesthetic experience is John Dewey. Dewey argued that aesthetic progress ought to be measured not by the creation of artistic works, but by the extent of human engagement and participation with cultural works.³² Dewey’s insights are all the more poignant today in the wake of DIY (do-it-yourself), the Maker Movement, and User Generated Content (UGC) enabled by new technologies and the Internet. Kenneth Arrow’s theory of “learning by doing” and Michael Polanyi’s account of tacit knowledge, which reveals how scientific knowledge must be experimented within labs with mentors and colleagues, are also gaining new purchase in copyright scholarship and in the digital context, as we increasingly recognize that cultural knowledge, too, must be actively experienced, repeated, held, touched, tasted, and practiced with others to be fully known and enjoyed. Performance theory, which describes the development of individual agency through physical “embodiment” in the cultural worlds we love, also has important lessons for crafting limits on property rights in experience, especially in cyberspace, where embodiment is the primary mode of experience and play.

²⁹ PAUL BLOOM, *HOW PLEASURE WORKS: THE NEW SCIENCE OF WHY WE LIKE WHAT WE LIKE* 155 (2010).

³⁰ Felix Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 814 (1935).

³¹ Sunder, *supra* note 9.

³² See generally JOHN DEWEY, *ART AS EXPERIENCE* (1934).

II. ONCE MORE, WITH FEELING: COPYRIGHTING EMOTES

Now, copyright and trademark are poised to dive further into the realms of imagination and experience. Instead of dancing on the grave of copyright, we consider copyrighting dance itself.

Today, dancing online is sold as a commodity, to the tune of literally billions of dollars. As mentioned earlier, Epic Games offers its blockbuster videogame Fortnite for free. Players fight to the death in a battle royale (the concept itself borrowed from an earlier Japanese manga and movie). The game's explosive popularity stems not just from the exciting competition, but the inclusion of aesthetic elements of joy and style in the form of avatar skins and "emotes."³³ Emotes are literally in-game expressions: "After a kill, players can dance . . . , adding a fillip of humor and split-second grace to the victory."³⁴ The sale of emotes and skins made Epic over \$2 billion in profits in 2018 alone.³⁵

Emotes often borrow popular dance moves—typically, without licensing. Recently, a number of individuals who created the original dance moves have sued Epic. Alfonso Ribeiro, a star of the television show "The Fresh Prince of Bel-Air," sued Epic Games appropriating his signature "Carlton dance." The rappers 2 Milly and BlocboyJB have also sued Epic on similar grounds for the "Milly Rock" and "Shoot" dances, respectively. The lawsuits argue that Epic's unauthorized use of the artists' dance moves violates their intellectual property rights, including copyright, trademark, and right of publicity.³⁶

The first round of the legal battle royale went to the corporation. The U.S. Copyright Office denied registration on Ribeiro's dance moves known as "The Carlton Dance," characterizing it as "simple routine" "not registrable as a choreographic work."³⁷ The U.S. Copyright Office's

³³ Sarah L. Kaufman, *The Dances in 'Fortnite' Have Become Nearly as Contagious as the Game*, WASH. POST (Sept. 10, 2018), https://www.washingtonpost.com/news/arts-and-entertainment/wp/2018/09/10/the-dances-in-fortnite-have-become-nearly-as-contagious-as-the-game/?utm_term=.79f417466135 (arguing that aesthetics in the form of skins and emotes allow players to create personal style, making the game both more fun and immensely profitable).

³⁴ *Id.*

³⁵ Shanley, *supra* note 11.

³⁶ Elizabeth A. Harris, *A Real-World Battle Over Dancing Avatars: Did Fortnite Steal the Floss?*, N.Y. TIMES (Jan. 11, 2019), <https://www.nytimes.com/2019/01/11/arts/fortnite-floss-dance-lawsuits.html>.

³⁷ Defendant's Memorandum of Points and Authorities in Support of Motion to Dismiss at 12, *Ribeiro v. Take-Two Interactive Software*, 2:18-cv-10417 (filed Feb. 13, 2019) [hereinafter *Motion to Dismiss*].

longstanding position is that social dances are not copyrightable³⁸ and that individual dance steps are un-copyrightable ideas that must remain in the public domain as “the building blocks of choreographic expression.”³⁹ A recent Supreme Court decision adds a further stumbling block for the plaintiffs: they cannot file a copyright lawsuit without a copyright registration.⁴⁰

While there are important questions about copyrightability, there is also a racial dimension to the conflict. Some of the artists complaining of theft are African-American. When Epic offered its first in-game concert, it invited a white electronic musician, Marshmello, to perform, partnering with him to offer a “branded” (and likely duly licensed) Emote.⁴¹ “Meanwhile black artists must resort to lawsuits to even be acknowledged,” bemoans cultural critic Yusef Cole, saying that it is not simply Fortnite’s failure to share profits with black creators, but its erasure of the dances’ authorship that is the true offense. “To recognize someone’s contribution to culture is to lend that person, and their community some measure of power.”⁴²

The law has not thus far not offered support for copyright in the popular dance moves of the “Milly Rock,” the “Carlton Dance,” or “Shoot.” The dances are renamed and repackaged for predominantly white audiences,⁴³ the serial numbers connecting them to black creators and their communities rifled off. There are reasons to worry about the

³⁸ See U.S. COPYRIGHT OFF., CIRCULAR 52 COPYRIGHT REGISTRATION OF CHOREOGRAPHY AND PANTOMIME 1 (2017) (“Choreography and pantomimes consisting of ordinary motor activities, social dances, commonplace movements or gestures, or athletic movements may lack a sufficient amount of authorship to qualify for copyright protection.”).

³⁹ See *Motion to Dismiss*, *supra* note 37, at 10.

⁴⁰ See *Fourth Estate Pub. Benefit Corp. v. Wall-Street.Com, L.L.C.*, 139 S. Ct. 881, 886 (2019) (providing certain exceptions).

⁴¹ Yusef Cole, *Fortnite’s Appropriation Issue Isn’t About Copyright Law, It’s About Ethics*, WAYPOINT (Feb. 11, 2019),

https://waypoint.vice.com/en_us/article/a3bkgj/fortnite-fortnight-black-appropriation-dance-emote (describing long history of social dancing first developed by black performers “on dance floors and sidewalks, rather than on stages and in studios” being “plagued by appropriation and unoriginality”).

⁴² *Id.*

⁴³ *Id.* (“[W]hen these dances are turned into to Emotes, their connections with poverty and racism are elided and they are reduced to nothing more than a funny dance, cut off and erased, made vanilla and palatable. This is not simply bad luck, it is the latest in a long trend of omission. . . . Shoot becomes Hype, Milly Rock becomes Swipe It. Blackness becomes a grey area, becomes bundles of mocap data, and is made ultimately invisible.”).

extension of copyright to a very limited set of dance steps, but, given the context of a wealthy corporation further enriching itself based on the creativity of others, there seems little occasion for a victory dance.

III. CAN HAS CHEEZBURGER?: THE LAW OF MEMES AND GIFS

“Information wants to be free.” This is perhaps the best-known slogan of the information age. John Perry Barlow credited “this elegant statement of the obvious” to Stewart Brand. Barlow recognized that the statement implied agency in information,⁴⁴ an idea that science and technology studies scholars would find familiar. Barlow explicitly borrowed biologist Richard Dawkins’ concept of a meme—in Barlow’s words, “self-replicating patterns of information that propagate themselves across the ecologies of mind . . .”⁴⁵

Barlow was not content with mere replication, but also evolution: information would not only propagate, it would “evolve constantly into forms which will be more perfectly adapted to their surroundings[,]” he wrote.⁴⁶ Barlow wrote:

Digital information, unconstrained by packaging, is a continuing process more like the metamorphosing tales of prehistory than anything which will fit in shrink wrap. From the Neolithic to Gutenberg, information was passed on, mouth to ear, changing with every re-telling (or re-singing). The stories which once shaped our sense of the world didn’t have authoritative versions. They adapted to each culture in which they found themselves being told.⁴⁷

Everything old was new again.

As Barlow predicted, the internet would explode with replicating and evolving memes. From grumpy cat to doge, memes often serve to entertain and to inform, and often both. Sites like

⁴⁴ See Barlow, *supra* note 1, at 18 (noting that slogan “information wants to be free” “recognizes . . . the fact that [information] might be capable of possessing something like a ‘desire’ in the first place”).

⁴⁵ *Id.* In a subsequent article describing “Godwin’s Law of Nazi Analogies,” Mike Godwin would describe a “meme” as “an idea that functions in a mind the same way a gene or virus functions in the body.” Mike Godwin, *Meme, Counter-Meme*, WIRED (Oct. 1, 1994), <https://www.wired.com/1994/10/godwin-if-2/>. For a fuller discussion of memes, see Angela Watercutter & Emma Grey Ellis, *The WIRED Guide to Memes*, WIRED (Apr. 1, 2018), <https://www.wired.com/story/guide-memes/>.

⁴⁶ Barlow, *supra* note 1, at 19.

⁴⁷ *Id.*

ICanHas.Cheezeburger.com (named after an original nonsensical meme) collect such memes.⁴⁸ Usually, the meme borrows an image or set of video stills and adds a caption that removes the image from its original context and deploys it in a way that the original image creator would not have anticipated. Websites and apps offer the ability to write one's own captions to popular memes, tailoring them to one's own politics or viewpoints.⁴⁹ One popular meme takes a clip from a 2004 German film to add different captions to a scene where Hitler learns that the Nazis have lost Berlin.⁵⁰

But memes were not the only new vocabulary of the internet: emojis and GIFs also emerged as a form of expression. Eric Goldman writes that emojis offer “a powerful and efficient way to express ourselves.”⁵¹ He observes, “The right emoji can convey emotional valence, cultural jokes, or other valuable information to a message.”⁵² Most importantly, emojis “make communicating fun.”⁵³

Where memes seem to have developed independently without need for a particular corporate sponsor, GIFs and emojis needed technological encoding to function across platforms. GIFs emerged only when a corporation sponsored a file format that allowed compressing graphical information so that it could be shared widely without burdening limited communications resources. Compuserve invented the “Graphic Interchange Format” in 1987 as a means of bringing “a little color and movement to the Web.”⁵⁴

⁴⁸ See, e.g., I CAN HAS CHEEZBURGER?, <https://icanhas.cheezburger.com/> (last visited Mar. 27, 2019).

⁴⁹ See, e.g., MEME CREATOR, <https://www.memecreator.org/> (last visited May 16, 2019) (collecting popular memes and permitting users to generate new captions for them).

⁵⁰ See Aaron Schwabach, *Reclaiming Copyright from the Outside In: What the Downfall Hitler Meme Means for Transformative Works, Fair Use, and Parody*, 8 BUFF. INTELL. PROP. J. 1, 2 (2012) (“[P]arodies, posted on YouTube and elsewhere, using clips from the 2004 German film *Der Untergang* (released in the US as *Downfall*), particularly the climactic rant scene after Hitler (played by Bruno Ganz) learns that Felix Steiner has not mobilized troops to break the Soviet assault on Berlin—meaning that the Nazis have lost the war.” (footnote omitted)).

⁵¹ Eric Goldman, *Emojis and the Law*, 93 WASH. L. REV. 1227, 1228 (2018).

⁵² *Id.*

⁵³ *Id.* at 1229.

⁵⁴ Alex Williams, *Fresh From the Internet's Attic*, N.Y. TIMES (Feb. 13, 2013), http://www.nytimes.com/2013/02/14/fashion/common-on-early-internet-gif-files-make-comeback.html?_r=0.

Since that time, GIFs have become a means to invoke cultural references to express an idea with a flourish. As Arwa Haider notes, “In an age of 24/7 information, where there’s pressure to stand out, and a general expectation that we should react to news in real time, we need to say something as quickly and emphatically as possible—so we say it with gifs.”⁵⁵ Where memes are often used to originate and promote ideas, even complicated ones, GIFs are often used to express a response. Haider explains: GIFs “embody a range of expressions that have become everyday patter, thanks to social media: the ‘eye roll’, the ‘facepalm’, the ‘mic drop’. These are potent little shots of melodrama; gifs are inherently camp.”⁵⁶

This does not mean that GIFs are free of problematic aspects. Some have noted that non-black users often use GIFs featuring black figures to express themselves—that black people are deployed to perform the emotional labor “as a kind of modern minstrelsy, . . . reinforc[ing] racist caricatures.”⁵⁷ This works by exploiting our culture’s racist association of “black people with excessive behaviors”⁵⁸—the kind of dramatic gesture often found in GIFs. Not only is the usage of GIFs distributed unequally, the types of available GIFs also exhibit disparities. Because there are few Latino, Asian American, and Native American celebrities in Western media, there seem to be few GIFs featuring these races. A quick perusal of GIF repository Giphy.com will attest to this absence.⁵⁹ This may reduce the reinforcement of racist caricatures, but it also compels non-white and non-black individuals to utilize folks who don’t look like them to express themselves, furthering a sense of invisibility in contemporary culture.

Unlike emojis, which are designed for public use, GIFs and memes rely on copyrighted works—almost invariably without the permission of the copyright holders. These devices often borrow stills from broadcast video or movies. They often focus on particularly striking moments, a pose or gesture within a larger scene. So why haven’t GIFs and memes succumbed to a wave of copyright infringement claims?

For his part, John Perry Barlow did not believe that sharing memes was illegal. He tweeted this point:

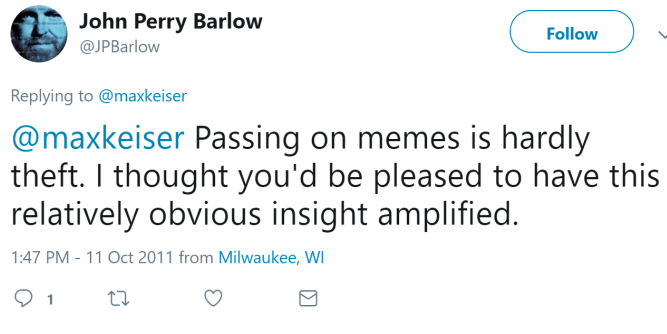
⁵⁵ Arwa Haider, *How the GIF Won the Internet*, BBC (Aug. 29, 2017), <http://www.bbc.com/culture/story/20170825-how-the-gif-won-the-internet>.

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ Lauren Michelle Jackson, *We Need to Talk About Digital Blackface in Reaction GIFs*, TEEN VOGUE (Aug. 2, 2017), <https://www.teenvogue.com/story/digital-blackface-reaction-gifs>.

⁵⁹ See GIPHY, <https://giphy.com> (last visited Mar. 27, 2019).



Not only is sharing a meme unlikely to constitute copyright infringement (the sharing is implicitly licensed), the meme itself is likely to qualify as a fair use of the underlying copyrighted work.

Yet, we have not seen a deluge of litigation challenging these uses, even when the copyright owners are Hollywood studios with a history of asserting their intellectual property claims against infringement. Indeed, we can identify no case bringing a copyright infringement or other legal claim against either a GIF or a meme. This is because most GIFs and memes are likely protected as fair use, thereby protected from copyright infringement claims.

GIFs and memes are likely protected as fair use largely because users make a transformative use of the original work. GIFs and memes take an original gesture and allow others to utilize it to communicate their own emotions or thoughts. Transformative works “lie at the heart of the fair use doctrine’s guarantee of breathing space within the confines of copyright.”⁶¹ This is true even though most memes do not take aim at the original work but employ it for critical analysis of contemporary phenomena. Copyright law clearly privileges critique and parody that makes fun of the original work, but the most popular uses of GIFs and memes do not fall squarely into that realm. Because of the highly transformative nature of GIFs and memes, however, we believe that most GIFs and memes would find legal protection from copyright infringement claims as fair use.

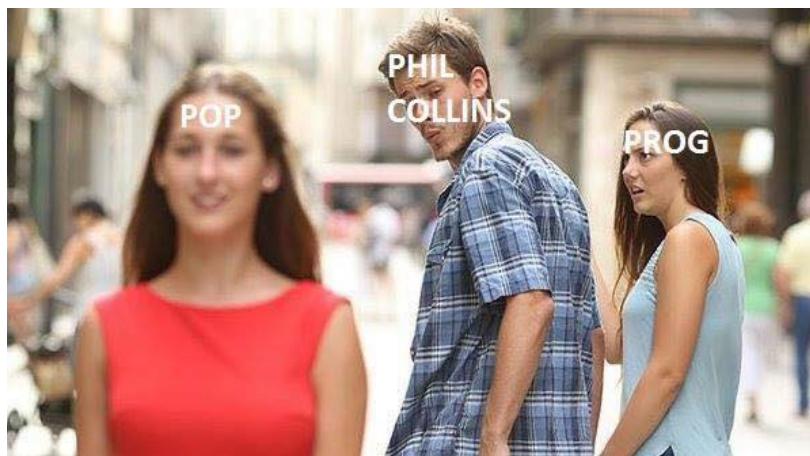
Take the American Chopper meme. In its most common format, it consists in a set of five stills from a Discovery Channel reality

⁶⁰ John Perry Barlow (@JPBarlow), TWITTER (Oct. 11, 2011, 10:47 AM), <https://twitter.com/JPBarlow/status/123816905608929281>.

⁶¹ *Campbell v. Acuff-Rose Music Inc.*, 510 U.S. 569, 579 (1994).

television show that depicted tensions between a father and son.⁶² Fingers are pointed, and, in the fourth panel, a chair gets thrown—all of which makes for a dramatic backdrop to an otherwise pointy-headed, back-and-forth intellectual argument. Meme creators offer captions that offer point and counterpoint on a variety of subjects. As one writer notes, “What makes American Chopper truly unique in the meme world is that it gives equal weight to both sides of an argument.”⁶³ The original television show and memes based on these five stills are worlds apart. They discuss different subjects in a different form for a different purpose.

Another popular meme, the Distracted Boyfriend meme, uses the original photo and repurposes it entirely as social commentary. The meme borrowed stock photos showing three individuals engaged in a complicated relationship, but captions allow each of the individuals to become a stand-in for another person or concept. The Distracted Boyfriend meme seems to have originated in a Turkish Facebook group, deployed to comment on musician Phil Collins’ move from progressive rock to pop.⁶⁴



⁶² See Opheli Garcia Lawler, *The Star of the 'American Chopper' Meme Didn't Know What a Meme Was*, VICE (Apr. 12, 2018), https://www.vice.com/en_us/article/7xddj4/the-star-of-the-american-chopper-meme-didnt-know-what-a-meme-was.

⁶³ David Britton, *What the American Chopper Meme Taught Us in 2018*, DAILY DOT (Dec. 17, 2018), <https://www.dailydot.com/unclick/american-chopper-argument-2018-meme/>.

⁶⁴ See Tiffany Kelly, *Why 'Distracted Boyfriend' is the Meme of 2017*, DAILY DOT (last updated Dec. 30, 2017), <https://www.dailydot.com/unclick/distracted-boyfriend-meme-2017/>.

David Britton observes, “If you use Distracted Boyfriend, you’re commenting on how you’re ignoring something you should be paying attention to in favor of something you find more captivating.”⁶⁵ The meme also reveals how readily susceptible to repurposing memes often are: as Tiffany Kelly notes, “The distracted boyfriend meme is a modern version of a caption contest. Who is the distracted boyfriend? Who is the woman distracting the boyfriend? Who is the offended girlfriend? Just fill in the blanks!”⁶⁶ The Distracted Boyfriend meme also shows how memes cross global boundaries of culture.

Even businesses now deploy GIFs and memes.⁶⁷ But the fact that their use is inevitably commercial does not necessarily defeat their fair use claim. The courts have upheld a variety of commercial acts as fair use. In *Campbell v. Acuff-Rose Music, Inc.*, the Supreme Court held that a rap group’s parody of a song could constitute fair use despite its commercial purpose: “the more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use.”⁶⁸

A meme may be protected even if the people depicted in the meme object to its politics. The Seventh Circuit held that a T-shirt using a significantly modified photo of a Wisconsin mayor to criticize that mayor was fair use because the copyright holder did not claim the modified version reduced demand for the mayor’s photograph and because it significantly modified the original.⁶⁹

Of course, borrowing from popular broadcast properties can violate copyright. When a company published a book of trivia questions about the television show *Seinfeld*, including many instances of actual dialogue from the show, the studio sued and won, prevailing over a defense of fair use.⁷⁰ A number of factors contributed to the court’s ruling that the trivia book did not constitute fair use. The trivia book had “slight to non-existent” transformative purpose.⁷¹ Furthermore, the

⁶⁵ Britton, *supra* note 63.

⁶⁶ Kelly, *supra* note 64.

⁶⁷ See Diana Bradley, *5 Brands Insert Themselves into the Viral ‘Distracted Boyfriend’ Stock Picture*, PRWEEK (Aug. 30, 2017), <https://www.prweek.com/article/1443244/5-brands-insert-themselves-viral-distracted-boyfriend-stock-picture> (displaying various company versions of the “Distracted Boyfriend” meme).

⁶⁸ *Campbell v. Acuff-Rose Music Inc.*, 510 U.S. 569, 579 (1994).

⁶⁹ *Kienitz v. Sconnie Nation L.L.C.*, 766 F.3d 756, 759 (7th Cir. 2014).

⁷⁰ *Castle Rock Entm’t Inc. v. Carol Publ’g Grp.*, 150 F.3d 132, 135 (2d Cir. 1998).

⁷¹ *Id.* at 142.

defendant's trivia book would be "likely to fill a market niche that Castle Rock would in general develop."⁷² These factors distinguish this case from the facts typical in the creation of GIFs and memes.

IV. LAW OR ETHICS?

There are certainly reasons to think that copyright and other forms of intellectual property are not the right weapons in battles over cultural appropriation. For starters, too many property rights in bits and memes will stifle innovation and the further development of culture. For this reason, Barlow seemed to think intellectual property was "OP," or overpowered—too high-powered and absolute to regulate a field as dynamic as culture. Barlow suggested that ethics, not law, were more suitable to assess privileges and obligations where, as here, Epic Games is making billions off the backs of predominantly black creators whose dances and style bring immense cultural and economic value to the game.

More recently the eminent philosopher Kwame Anthony Appiah has staked a claim in the cultural appropriation wars. "[W]hen an American pop star makes a mint from riffing on Mbaqanga music from South Africa, you can wonder if the rich American gave the much poorer Africans who taught it to him their fair share of the proceeds," Appiah contemplates.⁷³ "If he didn't, the problem is not cultural theft but exploitation. People who parse such transgressions in terms of ownership have accepted a commercial system that is alien to the traditions they aim to protect."⁷⁴ Appiah concludes that "[d]isrespect and exploitation are worthy targets of our disapproval, but the idea of cultural appropriation is ripe for the wastebasket. . . . The rhetoric of ownership is alluring and potent, but when we're describing the quicksilver complexities of culture, it just isn't appropriate."⁷⁵

It is understandable that Appiah, a scholar of identity, does not see property as a nimble enough tool for regulating cultural production and dissemination in a complex and unequal society on fair terms. But that is precisely the task of modern property and intellectual property law! In truth, the criticism of the property claims of black creators of

⁷² *Id.* at 145.

⁷³ Kwame Anthony Appiah, *Cultural Borrowing Is Great; The Problem Is Disrespect*, WALL STREET J. (Aug. 30, 2018), <https://www.wsj.com/articles/cultural-borrowing-is-great-the-problem-is-disrespect-1535639194?mod=e2fb&fbclid=IwAR2THbjvXRmRuZgTmFeU8irPXD75jcu7HwN8TWC7uT5RondNUj00O1kjikk>.

⁷⁴ *Id.*

⁷⁵ *Id.*

popular social dances can be applied to most intellectual property claims. Copyright protects works as mundane as calendars, coupons and competition cards, kitsch from ashtrays to lamps,⁷⁶ and useful articles such as the stripes and chevrons on cheerleading uniforms.⁷⁷ Copyright protects The Macarena and has Girl Scouts running scared to perform the social dance sans paying royalties for the music.⁷⁸ But copyright draws a line at popular dance moves created by African American artists?⁷⁹ In truth, very little in the way of copyright doctrine supports the Copyright Office Circular recommendations. Copyright protection requires a very low bar of originality⁸⁰ and self-consciously refuses to discriminate between high and low art.⁸¹ We must confront the reality that our copyright law is rife with inconsistencies, as best, and racial and cultural biases, at worst.

And then there is the question that if we are to regulate by ethics, whose ethics? Barlow imagined Cyberspace as an opportunity to return to the Western frontier (dubbing it, with Mitch Kapoor, the “electronic frontier”) where community norms, not law from above, would regulate modes of life.⁸² “Having come from a place where people leave their keys in their cars and don’t even have keys to their houses, I remain convinced that the best obstacle to crime is a society with its ethics

⁷⁶ See *Mazer v. Stein*, 347 U.S. 201, 221 (1954) (opening the door to copyright in everyday useful articles, from silverware to ashtrays).

⁷⁷ See *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 137 S.Ct. 1002, 1012 (2017) (“The [colors, shapes, stripes, and chevrons on the surface of the cheerleading uniforms] are therefore separable from the uniforms and eligible for copyright protection.”).

⁷⁸ Backlash from one California Girl Scout troupe’s performance of a “silent Macarena” for fear of copyright reprisals spurred Congress to pass the Fairness in Music Licensing Act of 1998, which increased the number of bars and restaurants exempt from royalties. See Fairness in Musical Licensing Act of 1998, Pub. L. No. 105-298, 112 Stat. 2827 (codified as amended in scattered sections of 17 U.S.C. (2012)).

⁷⁹ Cole, *supra* note 41.

⁸⁰ See *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 352 (1991) (“The standard of originality is low, but it does exist.”).

⁸¹ See *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) (articulating the now famous “non-discrimination principle” in copyright law, warning that judges are not suited to evaluate the artist or aesthetic merit of art).

⁸² Barlow, *supra* note 1, at 24 (romantically yearning for the early frontier days when “order was established according to an unwritten Code of the West which had the fluidity of etiquette rather than the rigidity of law. Ethics were more important than rules. Understandings were preferred over laws, which were, in any event, largely unenforceable”).

intact,” Barlow mused.⁸³ But Barlow’s “ethics” derive from a homogeneous, well-to-do community—or one that forcefully created homogeneity by routing out Native Americans, Mexican Americans and other non-whites from the settlers’ “frontier.” Can black or indigenous creators rely on frontier “ethics”? Should we allow conflicts over contested resources to be determined by the ethics of those in power in Cyberspace—the “brogrammers” of Silicon Valley?

We must always be attendant to the ethical implications of law. But our ethical inquiry should start by asking, how does law affect real people on the ground, including the weakest and the poorest? How does our diversity affect our sense of trust in “community norms”? Our discussions of the future role of intellectual property laws—in cyberspace and real space—need to account for historical and ongoing racial, class, and gender exploitation in the production and dissemination of culture.⁸⁴ Miley Cyrus twerking at the Video Music Awards (VMAs) in 2013 caused international outrage. As one critic memorably put it, “the effect was not of a homage but of a minstrel show, with a young wealthy woman from the [S]outh doing a garish imitation of black music and reducing black dancers to background fodder and black women to exaggerated sex objects.”⁸⁵ What are the implications of an intellectual property law that would allow for the appropriation of the creative works of black bodies and minds through the erasure of the human authorship embedded in those works? Intellectual property is a tool for power, and that includes the ability to name a resource as property or public domain. We must confront the violence of the law, which is not neutral, but beset by implicit racial, cultural, gendered and class biases.

Memes, like genes, travel and evolve. They are the building blocks of culture, just as genes are the building blocks of life. At the same time, we must be ever cognizant of the social context in which culture is produced. Cultural production and the laws that regulate it are deeply imbricated in the construction of society and economy, including the creation and maintenance of colonial power and unequal distributions

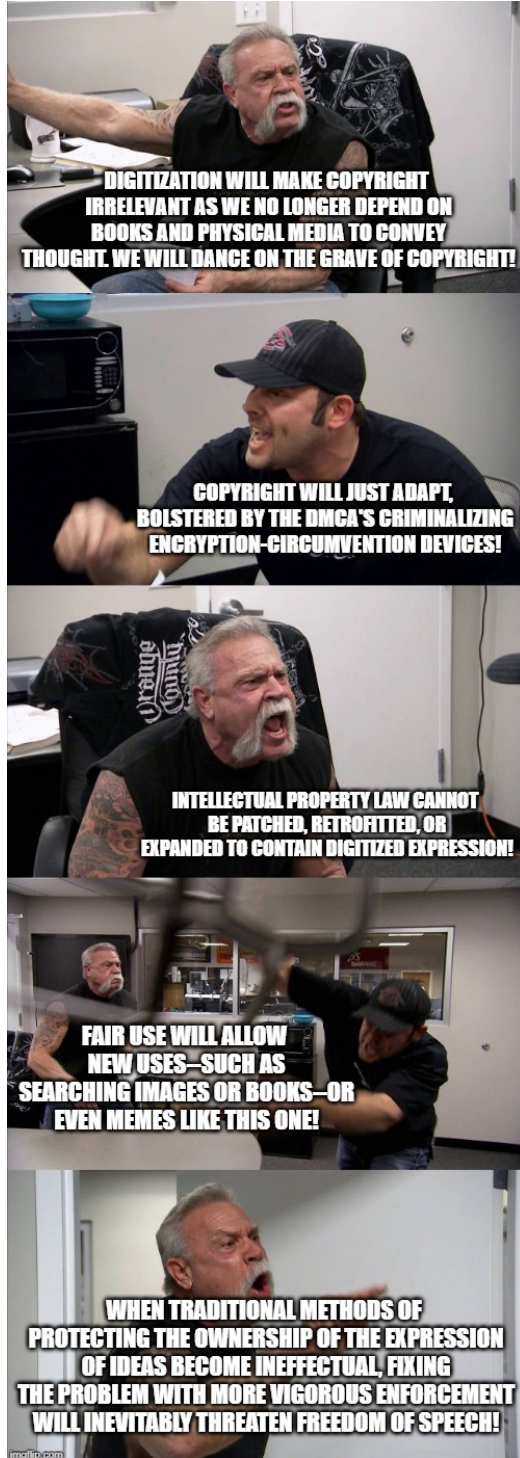
⁸³ *Id.*

⁸⁴ See, e.g., KYRA D. GAUNT, *THE GAMES BLACK GIRLS PLAY: LEARNING THE ROPES FROM DOUBLE-DUTCH TO HIP-HOP* 94–97 (2006) (recounting how everyday musical games of black girls becomes a bedrock inspiration of “black popular music making” in popular male centered hip-hop, including Nelly’s “Down, Down Baby”).

⁸⁵ Hadley Freeman, *Miley Cyrus’s Twerking Routine was Cultural Appropriation at its Worst*, *GUARDIAN* (Aug. 27, 2013), <https://www.theguardian.com/commentisfree/2013/aug/27/miley-cyrus-twerking-cultural-appropriation>.

of wealth and knowledge. This truth should not lead us to throw up our hands, letting ethics but not law play a role in the difficult questions of our time. To the contrary, intellectual property law must confront its own role in apportioning respect, power, and wealth in our worlds, and be resolved to do better.

CONCLUSION IN FORM OF MEME



WHAT DIDN'T HAPPEN: AN ESSAY IN SPECULATION

PETER JASZI

Most of us held off celebrating the beginning of a renewed slow trickle of works into copyright's public domain until the first seconds of New Year's Day, 2019, but (if it hadn't been so early in the day), we would have been entitled to raise a glass at 4:04 PM on the preceding December 27th, when the last substantive business undertaken in 2018 by either house of Congress was concluded in the Senate. (Like the House, which wrapped up its business at 4:02, the World's Greatest Deliberative Body had convened that day at 4:00.) At that moment, a last-minute push to extend copyrights beyond the 20-year bonus terms awarded in the 1998 Sonny Bono Copyright Term Extension became a practical and mathematical impossibility. This was all the more true since no legislation to achieve that result had been introduced in either house during the 115th Congress.

Obviously, non-events matter, not only in the Holmesian heuristic sense (per the "curious incident" recited in *The Adventure of Silver Blaze*), but substantively as well. 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 1998,¹ 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.² 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

¹ As originally called for by a Clinton administration Commerce Department Task Force on Information Infrastructure. BRUCE A. LEHMAN, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995) [hereinafter WHITE PAPER]. In the event, the final version of the new Chapter 12 of U.S. Code Title 17, introduced in the Digital Millennium Copyright Act of 1998, constrained as it was by a workable mechanism for defining exceptions to the prohibitions against "circumvention," has proven inconvenient, expensive, and downright frustrating but not a measurable drag on innovation.

² For references to this still largely untold story, see INDRANATH GUPTA, FOOTPRINTS OF *FEIST* IN EUROPEAN DATABASE DIRECTIVE: A LEGAL ANALYSIS OF IP LAW-MAKING IN EUROPE (2017).

predictions proven wrong. I'm happy to say that in 1995 I told a Senate panel that a 20-year term extension would "represent[] a down payment on perpetual copyright on the installment plan."³ Obviously, and happily, it didn't work out that way. My main objective in what follows is to suggest what accounts for that particular negative result. In other words, how did the time-honored notion of periodic add-ons to copyright duration, so recently viewed as non-controversial, become politically toxic over less than two decades?⁴

In search of an explanation, you are invited to return with us now to those thrilling days of yesteryear to witness what is arguably the primal scene in which influence and ideology conceived the contemporary term extension movement. In May 1962, the stage was set in a House of Representatives Judiciary Committee hearing room. Congress recently had begun the process of devising comprehensive copyright reform legislation, and it was already clear that (among other things) it eventually would change the law in various ways. The most foreseeable and (then) least controversial of these would be to introduce a modest prospective extension of copyright term. It was just as easy to predict that any change in the formula would put the next generation of copyright owners at a durational advantage vis-à-vis the current one—so that transitional provisions to harmonize existing and new copyright terms would be politically necessary in the final legislative package. But because all of this was going to take some time (14 years, as it turned out!) there was a more immediate problem: If copyright terms calculated the old-fashioned way continued to run their course, some rightsholders would lose their existing protection before the new dispensation kicked in. A rough and ready solution would be to extend existing renewal terms while the new legislation was being considered, and this bill before the House was the first such "interim extension" to be proposed.⁵ The

³ *The Copyright Term Extension Act of 1995: Hearing on S. 483 Before the S. Judiciary Comm.*, 104th Cong., 72 (1995) (statement of Peter Jaszi, Professor of Law, American University). My near contemporary reflections on this richly demoralizing experience can be found in Peter Jaszi, *Goodbye to All That—A Reluctant (and Perhaps Premature) Adieu to a Constitutionally-Grounded Discourse of Public Interest in Copyright*, 29 VAND. J. TRANSNAT'L L. 595 (1996).

⁴ See Timothy B. Lee, *Why Mickey Mouse's Copyright Term Extension Probably Won't Happen Again*, ARS TECHNICA (Jan. 8, 2018, 8:00 AM), <https://arstechnica.com/tech-policy/2018/01/hollywood-says-its-not-planning-another-copyright-extension-push>.

⁵ See *Extending the Duration of Copyright Protection in Certain Cases: Hearing on H.J. Res. 627 Before Subcomm. No. 3 of the Committee on the Judiciary, House of Representatives*, 87th Cong. (1962) [hereinafter *Hearing on Extending the Duration of Copyright Protection*]. The 1961 Report of the Register of

Judiciary Committee had consulted with the Justice Department, which had expressed strong reservations, writing that it would be “unwise” to extend the term of copyright from the viewpoint of the public “which is interested in the early passing of copyrighted material into the public domain.”⁶

Then as now, it was unusual but not unheard of for a member of Congress to appear as a witness before a committee other than their own; it was even more unusual when that member was one of the most powerful members of the body. Nevertheless, the next voice you hear is that of Majority Whip Hale Boggs (D-LA) countering the administration’s stated position with remarks leading up to this old-fashioned stemwinder of a conclusion:

This startling statement is wholly inconsistent with reality. The public does not gain from the “early passing of copyrighted material into the public domain.” When a copyright passes into the public domain, the public is not the beneficiary. The right to make the profit passes from the creator or the original publisher to a person who has contributed nothing to the work. The cost of a ticket to a Bach, Beethoven, or Brahms concert is no less than to one which provides the music of contemporary composers. Listening to radio or watching television programs which use public domain material costs no less than programs utilizing copyrighted works. Copyrighted and public domain works are sold in books in same price ranges.

The public cannot have any real interest in depriving authors, composers, or artists of their incomes from the books or songs or plays which they have written, or from the picture which they create. What benefit can result to a society dedicated to free enterprise from depriving some of its citizens of the earnings of their productions during their lifetime. Are we to say to our young authors, playwrights, composers, and others that they may live by their talents provided they do not live too long? Are we to say to

Copyrights that kicked off the reform process made a relatively modest suggestion: retain the long-prevailing general approach based on a relatively short initial term of 28 years commencing at publication, but extend the additional “renewal” term potentially upon application from 28 to 48 years. *See* STAFF OF H. COMM. ON THE JUDICIARY, 87TH CONG., COPYRIGHT LAW REVISION, REPORT OF THE REGISTER OF COPYRIGHTS ON THE GENERAL REVISION OF THE U.S. COPYRIGHT LAW 50–51 (Comm. Print 1961), https://www.copyright.gov/history/1961_registers_report.pdf (proposing a maximum general term of “76 years from first dissemination” [20 years longer than the law then provided]).

⁶ Hearing on Extending the Duration of Copyright Protection, *supra* note 5, at 30 (statement of Rep. Cramer, referring to a letter from the Attorney General).

them that no matter how great their skills, despite their talents, and irrespective of the dedication to their work, if they commence writing too young and live too long, there is no place for them in our free enterprise society? Are we to tell them that the only property of value which can be transmitted to their dependents must be in the form of stocks, bonds, cash, or real property and that intellectual property must be valueless to them?

There is no benefit to the public from the “early passage of works into the public domain.” That is a foreign philosophy—on which is the very anthesis of the standards by which we live. In our society the creator of intellectual property cannot be the forgotten man, or we shall become a forgotten society.⁷

Why Rep. Boggs chose to insert himself into this debate on the side of interim copyright extension remains (at least to me) unclear. But for present purposes the politics of his intervention is less interesting than its rhetoric. Most notably (in addition to summoning the spirit of capitalism and darkly denouncing foreign influence), he models an approach to assessing (and denigrating) the value of the public domain which would dominate discussion for decades to come. In effect, Boggs suggests, allowing works to exit copyright would confer a public benefit only if it had a measurable effect on conventional measures of consumer welfare such as the unit price of a book or a concert ticket—and advocates of the term limitation have failed to meet their burden on that point. In the absence of such a showing—Boggs asserts—there is no reason to resist creators’ “natural” property claims.⁸

⁷ Hearing on Extending the Duration of Copyright Protection, *supra* note 5, at 6 (statement of Rep. Hale Boggs).

⁸ The proposed interim extension was enacted, and was the first of nine similar bills passed over years to preserve copyrights already in their renewal terms, ultimately qualifying them for the 20-year extension provided in the Copyright Act of 1976. Where prospective protection was concerned, however, the 1976 Act departed dramatically from the approach proposed back in 1961; following general international practice, it abolished the two-term scheme in favor of a basic unitary term consisting of the life of the author plus fifty years. In retrospect, we can see that the elimination of the renewal formality represented the single most dramatic extension of copyright term in U.S. history, since under the old dispensation the vast majority of copyrights wound up at the end of the initial term. See generally Jamie Carlstone et al., *Copyright Renewal of U.S. Books Published in 1932: Re-analyzing Ringer's Study to Determine a More Accurate Renewal Rate for Books*, 79 COLLEGE & RES. LIBRARIES 697 (2018), available at <https://doi.org/10.5860/crl.79.5.697>. But that’s another story.

So is the one that follows, but I can’t resist. The specific claim that Boggs understands as deriving from the frictionless operation of authors’ rights is, at least, relatively modest in scope, i.e., “creators should be able to live by their

talents,” as well as to pass along something (unspecified in extent) to their “descendants.” More than a half century earlier, that hot-and-cold champion of creative entitlement, Samuel Langhorne Clemens, had been more explicit in his testimony on what would become the Copyright Act of 1909: “I like that extension of copyright life to the author’s life and fifty years afterward. I think that would satisfy any reasonable author, because it would take care of his children. Let the grand-children take care of themselves. That would take care of my daughters, and after that I am not particular. I shall then have long been out of this struggle, independent of it, indifferent to it.” *To Amend and Consolidate the Acts Respecting Copyright: Arguments Before the Committees on Patents of the Senate and House of Representatives, Conjointly, on the Bills S. 6330 and H.R. 19853*, 59th Cong. 196–201 (1906) (statement of Mr. Samuel L. Clemens); *Mark Twain in White Amuses Congressmen*, N.Y. TIMES, Dec. 8, 1906, at 5, <https://timesmachine.nytimes.com/timesmachine/1906/12/08/101852379.pdf>. Did he mean the last, or was the joke just too good to let pass? Either way, we can recognize in Twain’s main discourse a version of the argument from generational succession that would gain traction in years to follow. Consider, for example, the actuarially dubious congressional rationale for the CTEA memorialized by Justice Ginsberg in *Eldred v. Ashcroft*:

Members of Congress expressed the view that, as a result of increases in human longevity and in parents’ average age when their children are born, the pre-CTEA term did not adequately secure the right to profit from licensing one’s work during one’s lifetime and to take pride and comfort in knowing that one’s children—and perhaps their children—might also benefit from one’s posthumous popularity. 141 Cong. Rec. 6553 (1995) (statement of Sen. Feinstein); *see* 144 Cong. Rec. S12377 (daily ed. Oct. 12, 1998) (statement of Sen. Hatch) (“Among the main developments [compelling reconsideration of the 1976 Act’s term] is the effect of demographic trends . . . on the effectiveness of the life-plus-50 term to provide adequate protection for American creators and their heirs.”).

537 U.S. 186, 207, n.14 (2003).

Indeed, in her 1995 congressional testimony, Register of Copyrights Mary Beth Peters had recited that “[p]rotection of two succeeding generations is the standard goal recognized in [the] Berne [Convention]” citing various authorities including recitals of the 1994 EU Directive on Copyright Term. *Copyright Term, Film Labeling, And Film Preservation Legislation: Hearings on H.R. 989, H.R. 1248, and H.R. 1734 Before the Subcomm. on Courts and Intellectual Property of the Committee on the Judiciary of the House of Representatives*, 104th Cong. 175 n.39 (1995). Subsequently, defending the constitutionality of the CTEA before the Supreme Court, the U.S. government asserted that in 1908, the revision of the Berne Convention to provide for a basic term of “life-plus-50” years was designed “to provide compensation during authors’ lives and during the lives of any children or grandchildren”—and that, as a result, changes in life expectancy justified the 20-year add-on. Brief for Respondent at 25, *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (No. 01-618).

Viewed from an author-centric perspective, all this makes perfect sense. A copyright system that is author-directed, root and branch, could be expected to elevate considerations relating to the welfare of creators' survivors over, say, public access. Certainly, this explanation of the rationale for term extension provides relatively little room for weighing the consequences on pro and con. But there is a problem with this plausible-sounding explanation, which no one stopped to consider at the time: It is demonstrably untrue!

In fact, the records of the 1908 Diplomatic Conference (and that of 1967, where term was discussed again for good measure) are innocent of any mention of this author-centric rationale for term expansion. Sam Ricketson, the foremost historian of Berne, has stated that "in the debates that took place at various Berne revision conferences on the question of duration, one is hard pressed to find reasoned justifications for the move for longer terms of protection." Sam Ricketson, *The Copyright Term*, 23 INT'L REV. OF INDUS. PROP. & COPYRIGHT L. 753, 778 (1992). Indeed, a 1991 Memo on the project for what was then called the "Berne Protocol" (later rechristened the WIPO Treaty on Copyright) states (shades of Mark Twain) that the original intent had been to "make reasonably certain that at least the first generation of [heirs]" would benefit. Committee of Experts on a Possible Protocol to the Berne Convention, 1st Sess., Nov. 4–8, 1991, WIPO Doc. BCP/CE/I/3, ¶ 159, (Oct. 8, 1991). So where does this line of reasoning find its source? The answer may be found in Claude Masouyé's widely-read but authoritatively non-authoritative 1978 "Guide to the Berne Convention," a WIPO publication which recites that "It is not merely by chance that fifty years was chosen. Most countries have felt it fair and right that the average lifetime of an author and his direct descendants should be covered, i.e. three generations." CLAUDE MASOUYÉ, GUIDE TO THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS (PARIS ACT, 1971) 46 (1978). Of course, as then-WIPO Secretary General Árpád Bogsch made clear in his introduction, the Guide is not, in itself, "an authoritative interpretation." What was Masouyé's authority? None is cited, but the closest I can come is his own 1959 article, advocating for (without any identified source or precedent) the position later enshrined in the official-seeming volume. Claude Masouyé, *Vers une prolongation de la durée de la protection*, 24 REVUE INTERNATIONALE DU DROIT D'AUTEUR 93 (July 1959) (Fr.), <https://www.la-rida.com/fr/article-rida/3406>. There, the evidentiary trail ends, as does this digression. Or almost. I would be remiss to omit noting that Silke Von Lewinski's *Term of Protection in Copyright* repeats the rationale, although it adds no evidence for it. See Silke von Lewinski, *EC Proposal for a Council Directive Harmonizing the Term of Protection of Copyright and Certain Related Rights*, 23 INT'L REV. OF INDUS. PROP. & COPYRIGHT L. 753, 785 (1992).

So what, exactly, is demonstrated by this story of an all-too-plausible explanation that has—in fact—no visible means of support? On the one hand, perhaps, only that even the most distinguished scholars can, from time to time, get carried away with themselves. On the other, I'd suggest, is a different cautionary proposition: That the author-construct apparently enjoys, like the Shadow, the power to cloud human minds. It is not for nothing that at p. 3 of his statement, Rep. Boggs cites the century-old (and distinctly foreign) observation that "equally with the builder or the planter, the author's ownership of his work

There's nothing particularly remarkable in Boggs' framing. 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,⁹ 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.¹⁰ It's not a coincidence, therefore, that the "business model" of the exemplary named plaintiff in the ultimate court challenge to the constitutionality of the 1998 Sonny Bono Copyright Term

is, in (literary raconteur and presumably proud parent) Disraeli's famous words, "the most natural of all titles, because it is the most simple and least artificial. It is paramount and sovereign, because it is a tenure by creation." I ISAAC DISRAELI, *THE CALAMITIES AND QUARRELS OF AUTHORS: WITH SOME INQUIRIES RELATING TO THEIR MORAL AND LITERARY CHARACTER, AND SOME MEMOIRS FOR OUR LITERARY HISTORY* 30 (New York, W.J. Widdleton 1868), which the publisher describes as "edited by his son, the Hon. Benjamin Disraeli" ("silver-fork" novelist turned politician). Isaac Disraeli (b.1766) had died more than a decade before the first British printing of this posthumous collection, which is undated but may be as early as 1859.

⁹ In retrospect, my own 1995 comment that "discussions of the public domain which center on whether high quality reprints of classics cost more or less than cheaply produced mass market paperbacks trivialize the concept of the public domain by overlooking its more central function as the source to which the creative men and women of each generation turn for the materials they refashion into new and newly valuable works of imagination" may have been on the track, but read now it seems infuriatingly non-specific. Likewise, it is sobering to reread David Lange's beautiful 1981 article, *Recognizing the Public Domain*, 44 *LAW & CONTEMP. PROBS.* 147 (1981), which launched a thousand inquiries, and realize that it says almost nothing about the virtues of limited copyright as such (rather than the vices of supplementary pseudo-copyright in state law). *But see id.* at 150 n.16–19.

¹⁰ See Statement Of Copyright And Intellectual Property Law Professors In Opposition To H.R. 604, H.R. 2589, & S. 505, "The Copyright Term Extension Act," from Dennis S. Karjala, Professor of Law, Arizona State University, to Comms. on the Judiciary of S. & H.R. 12–13 (Jan. 28, 1998), <http://homepages.law.asu.edu/~dkarjala/OpposingCopyrightExtension/legmats/1998Statement.html>.

Extension Act was giving away physical exemplars of downloaded books (while encouraging others to follow suit).¹¹

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. Here's Bruce Lehman, the Clinton administration's "IP Czar," in comfortable colloquy with Senator Mike DeWine (R-Ohio) in the run up to the CTEA, comprehensively missing the point about Shakespeare and the public domain:

SEN. DEWINE: . . . Your contention . . . was that going into public domain is really not necessarily to the benefit of the consumer . . . How far do you take that? . . .

MR. LEHMAN: . . . I can give you probably an example. I think that sometimes you go to book stores, and you will see very old films that have fallen into the public domain . . . [S]ome of those films you will see in a book store have been reissued and sold very cheaply as, you know, video cassettes maybe for \$6 or \$7 or something like that. That would be an advantage. But you have to balance that off by the fact that there are probably a lot more films that have been lost to the public forever and never reissued at all [nor] made available because nobody had the economic incentive to do so.

SEN. DEWINE: To preserve them.

MR. LEHMAN: That is right, to preserve them and to put them out. And I would also just say, if you think of your own behavior, if you go into a book store, there are lots of books—you know, Shakespeare is not under copyright anymore. Do you really see a big difference in price between the public domain stuff and the nonpublic domain stuff? Does that even enter into your consciousness as a consumer?¹²

Representations of the public domain as a limbo of the unowned still pop up from time to time, but—as the political collapse of copyright

¹¹ For more on programmer/provocateur Eric Eldred and his Eldritch Press, see generally *Eric Eldred*, WIKIPEDIA, https://en.wikipedia.org/wiki/Eric_Eldred (last visited on May 19, 2019).

¹² *The Copyright Term Extension Act of 1995: Hearing on S. 483 Before the S. Judiciary Comm.*, 104th Cong., 38 (1995) (testimony of Hon. Bruce Lehman, Commissioner of Patents and Trademarks, U.S. Patent and Trademark Office); but see MARIE HALL ETS, JUST ME 12 (1965) (“‘Rabbit,’ I said. [He didn’t have any name because nobody owned him.]”).

term extension demonstrates, they no longer dominate. So what changed? My speculative sketch of a tentative answer follows.

Material objectification characterized not only millennial discussions of the public domain; it also marked emerging discourse about what came to be known as Internet policy—although we hadn't yet even settled on a name for the thing itself. It was “cyberspace” to those like John Perry Barlow, who were committed to its disembodied potentialities, and “the information superhighway” or (worse) the “National Information Infrastructure” to its would-be regulators. Although Barlow insisted in 1996 that “increasingly obsolete information industries would perpetuate themselves by proposing laws, in America and elsewhere, that claim to own speech itself throughout the world . . . [that] would declare ideas to be another industrial product, no more noble than pig iron.”¹³ (Or—he might have added—printed books.) Nevertheless, in the political debates of 1994–98, toward which he gestures here, the Internet was figured primarily as a complicated near-frictionless system of virtual conduits for the distribution (or misappropriation) of finished content.¹⁴ Indeed, this portrayal continued to hold rhetorical sway when the Internet found itself under close judicial scrutiny for the first time in connection with the file-sharing wars of the

¹³ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, 18 DUKE L. & TECH. REV. 5, 6 (2019).

¹⁴ Consider this, from the opening pages of the government report that started the trouble:

The NII of tomorrow . . . will be much more than these separate communications networks; it will integrate them into an advanced high-speed, interactive, broadband, digital communications system. Computers, telephones, televisions, radios, fax machines and more will be linked by the NII, and users will be able to communicate and interact with other computers, telephones, televisions, radios, fax machines and more—all in digital form. The NII has tremendous potential to improve and enhance our lives. It can increase access to a greater amount and variety of information and entertainment resources that can be delivered quickly and economically from and to virtually anywhere in the world in the blink of an eye. For instance, hundreds of channels of “television” programming, thousands of musical recordings, and literally millions of “magazines” and “books” can be made available to homes and businesses across the United States and around the world.

White Paper, *supra* note 1, at 8 (citations omitted). There are valuable near-contemporary discussions of such figures of speech. See RAYMOND GOZZI JR., *THE POWER OF METAPHOR IN THE AGE OF ELECTRONIC MEDIA* (1999); see also Annette N. Markham, *Metaphors Reflecting and Shaping the Reality of the Internet: Tool, Place, Way of Being* (2003) (unpublished paper) (<https://annetmarkham.com/writing/MarkhamTPW.pdf>).

early 2000's. Both foes and friends of Napster and its sequelae celebrated in, effect, the technology's potency as a mode of distribution, rather than confronting its potential to build disembodied communities of interest(s).¹⁵

Soon thereafter, the grip of this rhetoric on the public imagination began to loosen. 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.¹⁶ 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.¹⁷ 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.¹⁸ 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. Either way, the trends

¹⁵ Copyright scholars did this discussion no favors by generally conceding the issue of end-user infringement and focusing instead on the metes and bounds of secondary liability. In retrospect, there was more space than we were then aware to discuss the application of fair use to at least some peer-to-peer sharing practices.

¹⁶ Not an "Internet of Things" but the Internet as Thing. See Cory Doctorow, *Sen. Stevens' Hilariously Awful Explanation of the Internet*, BOING BOING (July 2, 2006, 11:45 PM), <https://boingboing.net/2006/07/02/sen-stevens-hilariou.html>.

¹⁷ And, giving credit where credit is due, that of Howard Rheingold. Oxyronically clashing title and sub-title notwithstanding, his book gave many of us a first glimpse of the future. See generally HOWARD RHEINGOLD, *THE VIRTUAL COMMUNITY: HOMESTEADING ON THE ELECTRONIC FRONTIER* (1993).

¹⁸ Not that the old rhetoric ever vanished entirely from the scene. In 2014, a New York Times article carried the following lead:

They show up in discount DVD bins, or more often today online, sometimes looking a little worse for the wear. A general pall of darkness might cloud the image; the dialogue might be a bit tinnier than you remembered. Often the quality is not too shabby, though in the case of the web, it can be a surprise that they're online at all. They're films that have fallen out of copyright for one reason or another and must weather the wilds of the public domain.

Nicolas Rapold, *Even Good Films May Go to Purgatory*, N.Y. TIMES (Feb. 14, 2014), <https://www.nytimes.com/2014/02/16/movies/old-films-fall-into-public-domain-under-copyright-law.html>.

thus set in motion led directly to the Great Legislative Nonevent of 2018.¹⁹

This broad and consequential shift began, I would suggest, with the availability of Web browsers and search engines, along with increased opportunities to cut, paste, and modify digital files using a growing host of applications and programs. Before the early 1990s, taking creative advantage of the public domain entailed scouring physical collections in search of old information objects, investing time and money in transcribing them, and recasting them using skilled techniques that hadn't changed dramatically in decades (if not centuries). But 1993 alone saw AOL offering access to the whole Internet to its users for the first time, the introduction of both the Mosaic browser and Photoshop 2.5; although flatbed scanner and OCR technology had been around since 1978, they became practically available to individual users only in the early 90s. In addition to a proliferation of tools that enabled increasingly convenient exchange of digital files, the following decade would see accelerated progress in public access to information online. The Internet Archive, with its ever-expanding storehouse of material (including rich collections of public domain works) became searchable by the public in 2001, and catalogues of other digitized records followed; in 2003, both "Open WorldCat" and an online index of public domain titles digitized by Project Gutenberg were launched. Within a few years of the CTEA's enactment, the world in which this provision (and the rest of copyright law) had altered materially and irreversibly—just as Barlow had called it.

The opening of the Internet did not, in itself, create or even first release the impulse to tinker with and recast found material for new purposes. Elite writers and artists had been at it since Classical times,²⁰ and in the late twentieth century Vidders²¹ and Ziners²² making creative

¹⁹ We might have known, had we been paying closer attention. In 2001, the Digital Future Coalition, of which I had been an organizer, secured a small grant from the MacArthur Foundation to study "messaging" strategies for public interest campaigns around copyright policy. The goal was to identify key words and concepts that might be deployed to counter the copyright industry's very effective communications campaign. We commissioned the Belden & Russonello strategic consulting firm to conduct a series of structured focus groups at sites across the U.S., and the results (never published nor, more's the pity, systematically implemented) were clear: the tropes of "freedom" and "choice" had the potential to trump "piracy" and "property."

²⁰ See, e.g., *Centos: Poetic Form*, POETS.ORG (Feb. 20, 2014), <https://poets.org/text/cento-poetic-form>.

²¹ See Morgan Dawn, *A History of Vidding*, VIDELICET, <https://vidders.github.io/articles/vidding/history.html> (last visited May 18, 2019) ("Vidding is communal poetry . . .").

(and painstaking) use of analog technology showed the way. Internet access did radically enlarge the population of people with the tools to express that impulse. In so doing, it also expanded practical appreciation for what could be done with diverse source material, including the rich trove that is the public domain.²³

Of course, there is more to the story. All honor goes to those who, in the dark years after the CTEA's enactment, kept the flame of the public domain alive. The *Eldred* litigation itself, however unlikely of conventional success, clearly raised levels of public awareness about the issue, particularly among Internet users. The attention, in turn, energized a powerful and persistent trope in which responsibility for term extension was laid squarely at the feet of the Mouse-You-Love-to-Hate; despite its tendency to obfuscate the real stakes and the forces actually at work,²⁴ the meme had enormous power as an organizing tool. Essential books like Laurence Lessig's *Free Culture* (2004) and *Remix* (2008), or James Boyle's *The Public Domain: Enclosing the Commons of the Mind* (2008), made indelible contributions, as has Duke University Law School's Center for the Study of the Public Domain (directed by Jennifer Jenkins). Beginning in 2005, campaigns to raise awareness of the "orphan works" problem that term extension did so much to exacerbate, although they ultimately brought no legislative relief, had the secondary effect of helping to refigure the public domain as a rich granary rather than a run-down Roach Motel.

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 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.

²² See *A Brief History of Zines*, DUKE UNIV. LIBRARIES, <https://library.duke.edu/rubenstein/findingdb/zines/timeline/> (last visited May 18, 2019).

²³ The ease with which information can be retrieved and repurposed online is not restricted to material that is out of copyright. In fact, the forces at work behind the markup in the cultural value of copyright-free material also helped to drive the transformation of the fair use doctrine from 1994 onwards. See generally, PATRICIA AUFDERHEIDE & PETER JASZI, *RECLAIMING FAIR USE: HOW TO PUT BALANCE BACK IN COPYRIGHT* (2d. ed. 2018).

²⁴ In fact, the music industry was more vocal and effective in pushing for the CTEA.

A DECLARATION OF THE MISSION OF UNIVERSITY IN BARLOWSPACE¹

CHARLES R. NESSON

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.

John Perry Barlow, in his *A Declaration of the Independence of Cyberspace*, spoke presciently of this very space—‘Cyberspace is the mind space.’ Barlow claimed self-sovereignty in mind space for himself and for all of us.

The exercise of free mind space requires trust. But trust 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.

The great universities and schools of the world supported by philanthropy made it their mission to build free mind space in the past. They must make it their mission to build and preserve this space for truth into the future. In Barlow’s vision, they must build “a civilization of the Mind in Cyberspace.”

Contrast Barlow’s vision with Lessig’s. Lessig’s cyberspace is exogenous, a universe of forces building an ever-tightening internet surrounding and constraining us. Lessig looks out into this dystopian world from the vantage of a ‘pathetic red dot,’ targeted and being crushed by forces of outside control. Lessig is not wrong to be worried. But his focus is the wide-open net.

Barlow’s cyberspace is interior to Lessig’s red dot. Within that space, we in the universities can create a free mind space for aspiring self sovereign individuals, students of law and the humanities. From the viewpoint of a university in pursuit of truth, we can envision the red dot as anything but pathetic. In classrooms, students can be insulated from and protected from the surveillance and distrust of the open net. They can speak their minds and experience themselves as self-sovereign.

¹ Also available as Charles R. Nesson, *A Declaration of the Dependence of BarlowSpace*, <https://cyber.harvard.edu/eon/BarlowSpace.html> (last visited July 31, 2019).

In our university setting, we come together to seek truth. We feel subjectively, individually, that we know what is true and good. We feel justice in our hearts but we are also aware that others differ. In our classrooms, we can subscribe to a common quest for the resolution of difference through free discussion. Our mission must become not just knowledge transfer but the experience of recognizing and transcending bias. Universities must evince and protect their faith in the search for truth through freedom of mind.

Until now, our universities' focus has been on the open net. Their research has created wealth in the marketplace and surveillance tools for government. Now is the time to balance concern for the crumbling hearsay truth of the open net by look inside, reframing the experiential learning process for students as they grow into the new cyber world.

Reification of free mindspace for student minds to grow is critical to preserving truth into the future. If we teach our children how to communicate with each other, they will accomplish more in solving the problems they address. The creation of Barlowspace lies within University domain. The development of framework and code-platform for intercommunication among students and faculty is and must be a university-led research-and-development construction project.

How can university intensify student learning experience so as to express and teach self-sovereignty? What is its spirit? How can it be maintained in the face of corrupting force? Answer: By creating Barlow space classrooms—spaces protected within a respected boundary of self-imposed constraint. Barlowspace classrooms will preserve freedom of mind.

Many who loved John Perry Barlow and put faith in his vision feel disappointingly overwhelmed by the Lessigian world. 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.

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