# Information Doesn't Want to Be Free

Laws for the Internet Age

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# Information Doesn't Want to Be Free, People Do

Back in 1984, Stewart Brand—founder of the Whole Earth Catalog—had a public conversation with Apple cofounder Steve Wozniak at the first Hackers Conference. There, Brand uttered a few dozen famous words:

"On the one hand, information wants to be expensive, because it's so valuable. The right information in the right place just changes your life. On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time. So you have these two fighting against each other."

This is quite a good Zen koan, a compact meditation on the duality of information as an economic good and as a technical matter. But thirty years on, the phrase has gone from a useful way of provoking discussion about the philosophy of the information society to a trite slogan that obscures more than it illuminates.

It's time to kill it.

The "desires" of information are totally irrelevant to the destiny of the Internet, the creative industries, or equitable society. Information is an abstraction, and it doesn't "want" anything.

Information doesn't want to be free—people do.

That's my third law. That's what this book is about. What people want from computers and the Internet. What we stand to gain, and what we stand to lose.

# What the Copyfight Is About

I've spent the past ten years in the "copyfight," the often bizarre, multi-faceted political struggle over the destiny of the Internet and copyright. It's taken me to street marches, courtrooms, legislative bodies, treaty-making UN agencies, and special commissions, and I've met thousands and thousands of people from all walks of life who want a free and open Internet.

These people have devoted their lives to fighting against special protection for digital locks. They're fighting, too, against increased intermediary liability on the Internet.

Not one of them has done this because of what "information" wants. Rather, the fight is, and always has been, about people.

Copyfighters aren't in the streets because they worry about the fortunes of titanic technology companies or titanic entertainment companies. In truth, they're not even particularly exercised about the fortunes of people who want to earn a living in the creative arts. Ultimately, that stuff is of interest to a tiny fraction of the world's population.

But the open Internet—and efforts to close it—affects every one of us.

#### Beyond art

A common tactic in discussions about the Internet as a free-speech medium is to discount Internet discourse as inherently trivial. Who cares about blurry kitten pictures, illiterate YouTube trolling, and Facebook posts about what your toddler said on the way to day care? Do we really want to trade all the pleasure and economic activity generated

by the entertainment industry for *that*? The usual rebuttal is to point out all the "worthy" ways that we communicate online: the scholarly discussions, the terminally ill comforting one another, the distance education that lifts poor and excluded people out of their limited straits, the dissidents who post videos of secret police murdering street protesters.

All that stuff is important, but when it comes to interpersonal communications, trivial should be enough.

The reason nearly everything we put on the Internet seems "trivial" is because, seen in isolation, nearly everything we say and do is trivial. There is nothing of particular moment in the conversations I have with my wife over the breakfast table. There is nothing earthshaking in the stories I tell my daughter when we walk to daycare in the morning. This doesn't mean that it's sane, right, or even possible to regulate these interactions.

Taken together, these "meaningless" interactions make up nearly the whole of our lives. They are the invisible threads that bind us to our friends and families. When I am away from my family, it's these moments that I miss. Our social intercourse is built on subtext as much as it is on text—when you ask your wife how she slept last night, you aren't really interested in her sleep. You're interested in her knowing that you care about her. When you ask after a friend's kids, you don't really care about their potty-training progress—you and your friend are reinforcing your bond of mutual care.

If that's not enough reason to defend the trivial, consider this: the momentous arises only from the trivial.

When we rally around a friend with cancer, or celebrate the extraordinary achievements of a friend who does well, or commiserate over the death of a loved one, we do so only because we have an underlying layer of trivial interaction that makes our connection to these people meaningful. Weddings are a big deal, but every wedding is preceded by a long period of small, individually unimportant interactions. Without these "unimportant" moments, there would be no marriages.

The copyright wars are about all the things we care about on the Internet, and increasingly that encompasses just about everything in our lives. Every time we make it harder to put text, audio, video, and files on the web, we limit the kinds of things that people can say and do in this new, networked public sphere. Right now, the Internet teems with innumerable personal communications: Facebook updates, Twitter tweets, blog posts and comments. People from all walks of life have found a new way to converse on subjects trivial and grave. Some of it is serious, some of it is silly, but very little of it would exist if every time someone wanted to open their mouths online, she had to pay the cost of having her speech vetted by a process intended to catch copyright infringement.

#### What proportion of YouTube is "copyrighted material"?

Oh sure, the entertainment industry says, YouTube could be used for anything, but in practice it's used to rip us off. But what this ignores is that YouTube holds a lot of video. A hundred hours of new

material are uploaded every minute. Multiply every entry in the Internet Movie Database (which also includes broadcast TV shows) by an average of ninety minutes per program (low for

movies, high for TV shows) and you get about twenty-eight days' worth of YouTube uploads. Simple math tells us that only a fraction of YouTube can possibly consist of directly infringing clips, uploaded for the sole purpose of helping people see and hear otherwise expensive things for free.

Google doesn't publish statistics about who watches what on YouTube, but network analysis performed in other online media would suggest that the material on YouTube follows a "long tail" curve, in which most of the page views accrue to a small fraction

of super-popular material, and the rest go to material that is so obscure as to be invisible in traditional media. That would be kitten videos, heartfelt outpourings by adolescents, political rants, independently produced music and video, and other examples from the whole wide world of human expression. Even if you assume that the popular stuff on YouTube is just ripped-off commercial material (it certainly isn't, but this is just for the sake of argument), then that still leaves a huge quantity of YouTube content that has nothing to do with the entertainment industry.

# Two Kinds of Regulation

THERE'S NOTHING WRONG with the idea of a big, high-stakes industry having some legally enforceable rules—hell, I'd be delighted if the finance industry could get some meaningful regulatory oversight! But if banking regulations started to creep into everyday life, even their staunchest defenders would be dismayed.

Most of us are comfortable with the idea that banks that loan lots of money to one another should have to document their actions carefully and disclose their liabilities to regulators on demand. On the other hand, we would all find it a little tedious if these same rules were applied every time you decided to pick up the tab for lunch with a friend.

Industrial regulations should apply to industries, not individuals, families, and private groups. Every industrial regulation includes some kind of test to help you figure out whether your activity falls into the regulated realm or can be considered a private matter. We say that loans below a certain dollar value are excluded from banking disclosures. But if the U.S. was hit by hyperinflation and a sandwich suddenly cost a million dollars, you'd expect the loan threshold to be revised to match. If it wasn't, you'd get into a situation where loaning a friend enough money for lunch was suddenly subject to SEC oversight.

The Internet has given us hyperinflation for copying. Copyright's test for industrial activity—are you making or handling a copy?—is no longer a good way to sort entertainment-industry transactions from personal, cultural, private activity. Insisting that normal people, doing normal things, should be able to navigate a system designed for a big, sophisticated industry is a fool's errand.

As a system of regulation for the entertainment industry, individual copyright laws can be good or bad. I like the part of copyright that says my publisher can't print this book without getting my permission,

because I won't give them that permission unless they pay me. I don't like the part of copyright that says that I, the author, can't authorize you to break digital locks that are put on my works by an intermediary.

But disagreeing with some rules doesn't mean you disagree with rules altogether. Wanting a different copyright isn't the same as not wanting copyright at all.

# Anti-Tank Mines and Land Mines

BEYOND QUIBBLES OVER which copyright rules we should have, there is the even more pressing question of whom those rules should apply to.

The rule of thumb that copyright uses to figure out if you're part of the copyright industry is whether you are making copies. This made perfect sense in the last century. Anyone who was pressing a record probably had a million-dollar record factory. Anyone printing a book probably had a printing press, a bunch of skilled printers to keep it running, and a building to house it all.

Equating copying with industrial activity made sense when copying was hard. The legal scholar James Boyle describes this as designing copyright the way you design an anti-tank mine—anti-tank mines are designed to detonate only when you drive over them with a multi-ton tank. Anything lighter than that—a civilian car, or a civilian on foot—is ignored by the tank's detonation mechanism. Anti-tank mines don't always work perfectly, but when they do, you can (in theory) put them all over the place, even in playgrounds, and the only time they'll blow up is when someone shows up in a tank.

The problem is that over time, computers have made copying exponentially easier and cheaper. It's as though we planted a bunch of anti-tank mines around the playground, and fifty years later new manufacturing techniques have put safe, innocent, actual-size toy tanks within reach of every ten-year-old. Suddenly, the anti-tank mine becomes an anti-personnel mine, and a system that was supposed to interact only with instruments of war starts going off indiscriminately, with a bunch of non-combatants inside the blast radius.

Put it this way: it makes perfect sense that the lawyers at Universal Studios should have to talk to the lawyers at Warner Bros. when Universal decides to build a Harry Potter ride. But when a twelve-year-old

wants to post her Harry Potter fan fiction or the Harry Potter drawings she made in art class on the Internet, it makes *no* sense for her to negotiate with Warner's lawyers. She can't afford to pay a lawyer to advise her, and even if she could, no one at Warner's would find it worth their while to talk to her, anyway.

And moreover, there's nothing wrong or new with making Harry Potter fanfic or drawings. Kids have been doing this forever; every successful artist learns her trade by copying the things she admires. That's why the streets of Florence have a copy of Michelangelo's *David* on every corner—Florentine sculptors learn to sculpt by copying the acknowledged all-time city-wide champion sculptor.

Technically, copyright may have prohibited things like this before (although *David* is safely in the public domain). But before the Internet, it was much more difficult for a rightsholder to discover that an offense was taking place, and there was very little pressure on intermediaries to police copyright on the rightsholders' behalf. No one asked the companies that sold school notebooks to ensure that fanfic was never scribbled in their pages. No one asked art teachers to ensure their students were staying on the right side of copyright in their figure-drawing classes.

But all this changes in an era of Internet-scale intermediaries, networked communities, and automated Notice and Takedown procedures. Instagram or Twitter becomes the preferred way for kids to share their drawings with one another; Fanfic.net becomes the preferred place for fanfic authors to share their work with one another. Technically, the companies providing these services are "making money off copyright infringement," but no more than the mall food court near the local high school makes a few bucks off the students who gather there to show off their infringing art while eating lunch.

In truth, there has always been too much infringing material out there to expect it to all be policed by regulators. And as we've seen, that volume of unpoliced content has only grown with the advent of the Internet. The difference is that the regulation is becoming automated. The copyright-bots that YouTube now employs to evaluate its content don't make any distinction between industrial copyright infringement and what I think of as "cultural activity." Your fan video is caught in the remorseless, relentless, and fully automated enforcement systems set up by rightsholders and Google, and can be taken down by a process that is entirely untouched by human hands. No one working for the intermediary or the entertainment company has the time or money to look at every automatic match and make sure they're not being unreasonable—instead, they have an automated anti-tank system, and they can't figure out how to stop it being triggered by kids. Lacking any way to improve the trigger, they just leave it where it is, and catch tanks and toys alike.

Technically, copyright has always prohibited you from making your own copies of record albums and your own prints of feature films. My grandparents were legally enjoined from copying the 78 rpm records they collected. But for them—and nearly everyone else of their generation—a rule saying "You may not copy records" was about as superfluous as a rule that said "You may not carve your name into the face of the moon with an enormous laser." The main reason the music fans of the 1950s couldn't copy music was that they lacked access to a record press. The law was entirely beside the point.

Laws that are beside the point can say all kinds of silly things, and the silly things will be beside the point, too. The reality is that as soon as the capacity to copy music (and, later, video) for personal reasons reached the average person, the world's courts and legislators started creating a web of laws and rules that legalized this activity. They recognized that there was a difference between a music bootlegger setting up an illegal press to run off competing copies and an

individual who makes a mixtape for a friend or records something off the TV to watch later.

The Internet era has conjured forth mountains of nonsense about the death of copyright. Reformers have claimed that copyright is dead because the Internet makes it impossible to control who copies what; copyright supporters have said that the Internet itself must be contained, to head off that grim fate.

This is rubbish.

It's impossible to control who loans a friend lunch money, but that doesn't mean financial regulation is dead. It just means that financial regulation has to limit itself to the kinds of transactions that take place on an industrial scale, among industrial players. A copyright regulation that is sophisticated enough to handle all the nuanced business questions that the industry encounters can *never* be simple enough for the majority of Internet users to understand, much less obey. And a copyright that is simple enough for a twelve-year-old Harry Potter fan to understand will *never* be sophisticated enough to regulate the interactions of billion-dollar entertainment conglomerates and their suppliers and vendors.

The ease of copying in the modern world has nothing to do with whether Warner Bros. can sue Universal for creating unlicensed Harry Potter theme parks. It has nothing to do with whether authors can sue publishers who print their books without securing the rights. It has nothing to do with whether movie studios can sue online stores that sell their movies without authorization, or cinemas that screen them without paying for them.

Copyright is alive and well—as an industrial regulation. Copyright as a means of regulating cultural activities among private individuals isn't dead, because it's never been alive.

#### Is the entertainment industry dying?

The Internet era has been attended by a parade of new copyright laws and proposals, each one justified by the supposed near death of the entertainment industry. The stats behind these proclamations of imminent doom are not particularly reliable. The U.S. Government Accountability Office, as neutral a body of economic statisticians as you're likely to find, concluded that it is "difficult, if not impossible, to quantify the net effect of counterfeiting and piracy on the economy as a whole." Of the piracy-impact studies most often cited by the entertainment lobby, the GAO said, "[They] cannot be substantiated or traced back to an underlying data source or methodology."

It is probably true that some companies' and some creators' fortunes are affected by piracy, and by the expansion of the pool of entertainment choices that audiences can make when they spend their money. But in January 2012, a thoroughly documented Computer and Communications Industry Association study called "The Sky Is Rising" found that more creators are creating more media, and that larger audiences are spending more money, than ever before. There's now more music, more movies, more video, and more books being created than at any other time in history, and they're bringing in a larger pool of money than ever.

However, the money is a lot less "lumpy" than it has been in the past, especially in the recent past. Since the creation of communications technology,

entertainment has been a winner-takes-all kind of business, with the most successful creators outperforming the least successful by huge margins. Think of how, before the record player, local singers could always find work playing the popular songs of the day. But after the invention of records, local audiences could buy recordings of the most popular performers performing the most popular songs, and the local second choices were no longer in demand.

After seventy or eighty years of this, the pendulum is swinging back again. The dramatically lowered barriers to producing and distributing media and the new, easy tools for discovering new artists mean that audiences are fragmenting—buying more overall, but less from any one publisher. The number of self-published works on Amazon is orders of magnitude larger than the number of books published by the traditional Big Five. There are thousands of times more hours of video being produced by indie creators for direct sale or ad revenue (or both) on YouTube and Vimeo than the big media companies could ever hope to generate. Kickstarter, meanwhile, has totally changed the world of games publishing, and webcomics offer homes to far more cartoonists than ever found a place in syndicated newspaper funny pages.

The condemnations of this new age of accessibility often focus on the "low quality" of the material that the new players produce. It isn't as glibly written, as skillfully edited, or as expertly recorded

as the material we're used to from the traditional entertainment industry.

But "quality" isn't the same as "production values." As the old saying goes, "You can't polish a turd." Every zero-star movie from a major studio is "high quality" in that it has been produced by skilled craftspeople who ensured that the turd was as shiny as possible.

A badly shot video of someone you care about has merits that can never be matched by a skillful video of a stranger. Heartfelt personal messages from people you love—or people you

identify with—have virtues that can't be matched by scripted banter. Desperate outpourings smuggled out of dictatorships and tyrannies have an immediacy and authenticity that dry newspaper reportage can't match.

We don't have to choose, of course. The reports of the entertainment industry's imminent demise are vastly exaggerated. But as we debate the future of communications and free speech, let's not discount as worthless the personal, homely, handcrafted messages that speak straight to our hearts just because they lack artifice.

## Hollywood versus Google

The future of the Internet should not be a fight over whether Google (or Apple or Microsoft) gets to be in charge or whether Hollywood gets to be in charge.

Left to their own devices, Big Tech and Big Content are perfectly capable of coming up with a position that keeps both "sides" happy at the expense of everyone else.

Take YouTube, for example: now that it's impossible to start an effective competitor to YouTube—because you'd need an army of copyright lawyers and a database of all the copyrighted video ever made in order to run your own Content ID system—YouTube and the major labels have cut deals to run a music-streaming service that perfectly suits the labels' needs.

But some indie labels have not opted in to this system. In mid-2014, Google announced that any indie label that didn't make its music available

for the streaming service would no longer be allowed to use YouTube to promote its catalog. And because running a YouTube-like service is so legally fraught, there's nowhere else for the indies to turn for the same vital promotional value.

If you're worried about tech companies converging on any given business model—advertising, surveillance, "native" advertising in which companies get to design art—the best way to fight back is to be sure that a few companies from tech or entertainment don't end up running the show.

There's nothing inherent to being a tech startup or an entertainment startup that makes you treat artists like shit. It's about scale: once a company is big enough that it can boss everyone around, it does, and that bossing is only ever to the benefit of that company and its shareholders.

#### 3.4

# Who's Talking?

IN THE LAST chapter, i talked about how existing systems like Notice and Takedown, for all their flaws, at least attempt to provide "balance" through some sort of dispute-resolution mechanism. Under Notice and Takedown, users whose online material has been removed can file formal objections explaining why they deserve to have it reinstated. SOPA and PIPA included provisions allowing users to unfreeze financial accounts and reinstate websites by filing legal papers with the appropriate intermediaries.

If we were talking about competing businesses, these procedures would make a certain amount of sense. (Not much, though.) If you can figure out how to start a company, run a payroll, and file your corporate taxes, you can presumably ask a lawyer to help you sort out a bit of trouble with your website.

But everyday life doesn't have a business model. The messages that teenagers send to one another may be key to their emotional development and education, but that doesn't mean they have the organizational wherewithal to maneuver through dispute-resolution systems designed for corporations with conflicting interests. And this goes double for people who don't speak the language that the dispute-resolution system uses—dissidents in far-off lands, immigrants, and people who go crosseyed at the sight of legalese.

Think how many vital social activities have moved online, in whole or in part. Is there a politician who could get elected without the web, now? How many of us are there who found a job through the Internet, and now rely on it to help us perform our duties?

In 1991, George Holliday's video of Los Angeles Police Department officers delivering a savage beating to Rodney King was a shocking anomaly, something that most of the world had never seen. Now

police abuses are routinely recorded and posted online, where they become too big for traditional media to ignore. The same goes for camera-phone footage of ballot-stuffing in Belarus, official corruption in India, Molotov cocktails in Kiev's Maidan, and parental abuse all over the world.

We live in a highly mobile world, where increased migration has created vast diaspora populations. My family was part of an earlier diaspora: my grandparents fled the USSR after World War II and came to Canada, where they all but lost touch with their relatives back home. I saw my great-grandmother (who lived in Leningrad) only a small handful of times before she died. But today's diasporas remain tightly bound together, able to route around high long-distance tariffs with voice-over-IP calling, and they enjoy services that could exist only with the Internet, including video calling and video- and photo-sharing. This is particularly important for connecting preliterate children or illiterate adults with one another. My six-year-old daughter delights in her videoconferences with her grandparents and cousins in Toronto from our flat in London.

The point is: if you regulate the Internet as though it was a glorified system for delivering cable TV or listening to music, you'll miss the main event. There are huge populations who rely on the net to live as full-fledged members of society—their actions are the most important things happening on the Internet, and whatever else we do to help one industry or another weather the digital shift, we must protect these uses, too.

In 2009, the UK government's Champion for Digital Inclusion commissioned a PricewaterhouseCoopers study on the impact of Internet access on the lives of some of the poorest, most vulnerable people in the country. It compared outcomes for families living in the hardest-hit subsidized housing projects in northern England, where the collapse of heavy industry has sent unemployment skyrocketing.

The researchers controlled for obvious variables—education and background and so on—and looked at similar families with and without Internet access.

What they found was surprising, even for Internet advocates. Families with Internet access had a higher quality of life by practically every measure. They enjoyed better health and nutrition and more social mobility; their children got better grades and were more likely to go on to post-secondary education; the parents had better jobs and were able to save more money from those jobs; and the whole household was better informed about politics and more engaged with civic projects. A similar study conducted in the U.S. in 2013 drew similar conclusions. In short, net access moves the needle for social policy.

The consequences of losing Internet access, on the other hand, are getting graver and graver. Today, virtually everything we do involves the Internet, from grocery shopping to planning a potluck dinner. Tomorrow, virtually everything may well *require* it. And yet our policies about Internet access continue to lag behind that reality. It's a human-rights catastrophe in the offing.

### Is Internet access really a human right?

The UN, the EU, Finland, and many other governmental entities describe Internet access as a human right. But not everyone agrees. Vint Cerf, the distinguished computer scientist whose work was critical to the very invention of the Internet, published a 2012 op-ed in the *New York Times* saying that access to the Internet wasn't a human right in itself, but merely a conduit for *delivering* human rights.

I understand where he's coming from, but respectfully disagree. To understand why, consider the notion of a "free press." In the USA, the First Amendment guarantees a free press and bars government censorship. So imagine that the government sent police to a newspaper's printing press and seized all the presses on political grounds, and then said that the First Amendment was intact because the paper's owners could continue to "publish" by photocopier, or over the Internet, or by shouting their message through a bullhorn. Variations on this scenario have played out in U.S. jurisprudence, and the judges who've been called upon to consider the

question of whether censorship of some media is acceptable, so long as some other medium remains available, have decided that it is not.

It's clear to me today that the full spectrum of activities that compose free speech, a free press, and freedom of assembly cannot be realized without Internet access. Yes, it's still (barely) possible to organize a mass demonstration without the net, by running a phone tree, or sticking posters up on

phone poles, and getting the permits from one of the few remaining human clerks at city hall. But the hurdles faced by someone whom the state has deprived of network access are titanic, relative to the easy path her networked colleagues enjoy. A "free press" means more than "You are free to hand-write your message on scraps of paper and hand them to people"—it requires access to the full range of press technologies, and that includes the Internet.