



The Proper Use of the Internet

Digital Private Property

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Prologue: I was recently given some articles on the Internet in the *Berlin Journal*, published by the American Academy in Berlin. This article was inspired by two of these.

Are the Internet Giants Evil?

One of the articles is a panel discussion in turn inspired by Andrew Keen's book *The Internet Is Not the Answer*. The discussion was titled "Can We Save the Internet?" Your first question, and mine, in response to the discussion title might be "from what?" The answer to our question isn't clear, because the Internet seems to be doing fine, thank you very much, despite many efforts to somehow control it. Fortunately, these efforts are made largely by bureaucrats who fail to understand the extremely distributed grassroots nature of basic Internet governance.¹

The panel discussion seemed to have concerns that varied with the panelists. This lack of clarity isn't surprising, because Keen's book seems a non-sequitur in itself. For example, Keen decries the loss of jobs by Kodak in Rochester, and attributes that economic loss to the robotic takeover of the film industry by a few privileged guys in Silicon Valley with good algorithms and exit strategies. Not only does he fail to consider the bad decisions by Kodak management, such as choosing to ignore the invention of the digital camera by one of their own engineers, but he fails to offer any constructive advice. I found the panel to mirror these deficiencies, alternatively lamenting this or that adverse effect on society while largely wrongly attributing the effect to Internet technologies and failing to offer a constructive solution. I'm not going to reference either the book or this panel discussion because I think my readers are smarter than that.

However, another article in this same journal gave me a clue about the real problem and

one possible solution – and maybe it will you, as well.

A More Clear and Present Danger

To belabor a tired analogy, the Internet is a revolutionary tool similar to the invention of the printing press. To be slightly more precise, the invention of easy ways for everyone to publish on the Web combined with apps on smartphones created the problems and fortunes we associate with "the Internet." Often it's said that we now have problems concentrating because of all of the multimedia we can access, but it's precisely the success of all this independent publishing that creates the so-called attention economy, in which many sites compete for our interest. The excesses of this success aren't such a huge problem.

The central problem of at least this decade's application of the Internet concerns ownership and control of data. This issue ranges from government surveillance to third-party selling of our data. Because the companies that have created this situation lay mostly within the radically free market capitalism society that is the modern US, the problem seems to be that we, the Internet hordes of eyeballs, are unhappy with the way that the data we create are used.

This is largely our own fault, especially in the US. No one forces us to provide this data. We don't have to accept the "shrinkwrap" agreements that no one reads, and that increasingly prevent us from pursuing a remedy by lawsuit after the fact. We don't have to participate. But it's so convenient and useful that we would suffer if we didn't.

Is there an alternative? There might not be, because it seems that the US-style free market capitalism, biased towards commerce rather than societal good, will always win – because in some sense it's the lowest common denominator. But then there's the vague-but-intriguing

proposition put forth in the article “Out of the Clouds.”²

With Evgeny Morozov’s permission, here I quote portions of the last two paragraphs of this article:

We should not just think of new ways to regulate Google and Facebook and the rest as they exist today; we must also rethink the very basic form in which the services that they currently provide are to be provided in the future.

... What’s needed is structural and institutionalized innovation that could reclaim data as a public good, place it outside of the market, and then promote entrepreneurial activities on top of it.

Morozov concludes by noting that otherwise we have the risk that companies, such as Google and Facebook, will end up controlling “both our identity and our access to basic infrastructure.”²

In case you think the risk unlikely, Airbnb now uses the number of friends you have on Facebook to verify your identity.³ To be fair, Facebook (as do other online entities) uses your phone number to verify your identity. But what you search for, what you buy, and how you’re linked to other people is increasingly your identity. This is sufficiently worrisome to the European Union (EU) that they’re looking at ways to control US high-tech giants.⁴

A New Beginning for User Data

Morozov thinks the direction of anti-trust suits is misguided. He hasn’t made a specific suggestion in his article, but the “innovation” he suggests is fairly obvious: a repository of individual data in trusted hands that could be licensed by companies to use under common rules.

This of course opens up entire racks of cans of worms. What would this trusted entity be? Would it be different in different countries? If

it’s governmental, which government, and could it be trusted? How would it be enforced? Under what laws? But these potential complications aren’t much worse than what the EU is trying, and failing, to do now.

I have a radical proposal. It’s somewhat at odds with the philosophy that most of us have that the Internet should be open and free, because my proposal requires government intervention. But the Internet increasingly requires some intervention: for example, for the preservation of net neutrality. And the intervention would be minimal, at the “shrinkwrap” level. It might also address other concerns of a deeper nature about identity. Let me mention some of those first.

You do need a way to have a specific online identity, and maybe establish a degree of anonymity. We can argue about the basis of this, but imagine that you want to allow access to your age for certain purposes. Should you be able to set your age? That is, you may set some of your various attributes, such as your favorite color – but your physical attributes, and the degree to which they’re shared, should perhaps come from or be verified by some trusted source, not you. Perhaps you should be able to set these for your avatar, though, for different purposes. There are deep questions about access and control, but for practical purposes, many of these have been addressed inside enterprise systems of authorizations. That is, these are solvable problems.

And what’s identity? Our lack of DNA-based identity will look quaint to our grandchildren (a birth certificate with a DNA chip has already been patented.) In the US, we often confuse a license to drive a car on public roads with proof of nationality, which of course it isn’t. And we refuse in the US to have a national identity card. But even our passports aren’t really trustworthy.

Just because I have a birth certificate in my possession with my purported name on it certainly doesn’t mean I was born with that name at that time. With a birth certificate and, say a school identity card, you can get a US Social Security card. Then you can get a driver’s license and then a passport. And of course, anyone can get any birth certificate. Birth certificate fraud is widespread.

We get by, largely because it doesn’t matter as long as we have a consistent identity for various purposes. Unless we have ideological differences with a political leader, we usually trust the piece of paper that’s the birth certificate. These issues will get resolved in the future, perhaps in ways we’ll regret. But the point is, right now, we have no formal way of identifying anyone for certain.

Distributing the Repository among the Owners

Now back to the idea of a repository. This can be a distributed repository. Consider the idea that we espoused previously⁵ – that everyone can manage their own email address in a local, findable, and accessible repository. Other applications on the Internet find you and use whatever email you designate (perhaps multiple ones for multiple purposes). You’re found by your set of attributes, some of which are set by you and some set by sources (such as your salary for your company’s purposes) that we avoid – as we really do now – the idea of a formal identity, replacing it with a description-based identity that allows people to be whom they define themselves to be, and whom others, such as their employers, think they are.

In such a system, you own and manage your own data and identity descriptors. You allow external sources to add attributes to your identity. There may or may not be any ultimate identity beyond a

Uniform Resource Name (URN), but certainly links to descriptors such as passport numbers and the date of birth would be allowed. You might store this data (in a standardized format) on your own server, or you might use any one of a number of companies that compete to provide this identity management service.

This is analogous to password management systems that exist today, which could indeed be the precursor to this larger idea. Now your identity is tied to whatever means you're using to secure the identity you created and manage.

The key concept is that companies that want to use this distributed repository would need to use your individual terms and conditions. These terms and conditions could be various, ranging from no sharing of your application use to getting some percentage of the sale of your own data, although they would have to be standardized. Also, the companies using the repository would have to store there the results of transactions by the owner. The companies could of course have their own transaction databases, but would be able to use the data only according to the users' various terms and conditions. Meanwhile, the users would be able to see their own data.

Some people might not want to be bothered, especially in the US where convenience is much more important than privacy, although it could be much more convenient for users to maintain one set of data in one place than several. But it would be an option. What a company couldn't do is refuse this option, and that would require a change in law, which is the key implementation element.

A law would have to be passed, in each jurisdiction, that companies have to allow registration and application use with this distributed identity registry, using the terms and conditions specified (within some set of standards) by each user. Companies would also have to store

transaction results for each user on that user's repository.

An Exercise for the Reader

This half-baked idea of a distributed repository of data managed individually, which we might call "digital private property," has its own issues, including education, backup, and security. Certainly this isn't the only idea we can come up with collectively to solve the problems of individual versus company data ownership and privacy. And security is crucial. By putting all of the data in one place, we might be making the problem worse. Already it's astounding what you can find out about a consumer with just a few diverse pieces of data.⁶

There might be better ideas out there, and even ones that require no laws but only enforcement of new protocols – because that's how the Internet works. In fact, if you've read my previous discussion on this topic,¹ you know that no government or formal organization really controls the Internet. It's emergent from a highly distributed set of volunteers, the Internet Engineering Task Force (IETF; see www.ietf.org), who collectively agree on the protocols and their implementation.

I don't know if this problem needs to be or could be addressed at the level of Internet protocols, but I suspect so. So I would throw this out to my readers, and the IETF as a whole: What's the best way to allow users to control their data, across countries and applications? One caveat is that this should be done in a way that allows large companies to make use of (and profit from) that data, since that's the business model that gives us such a useful set of applications, a fact of which we shouldn't lose sight.

As you discuss solutions to this problem, please feel free to use the "Peering" column's Facebook page ([putingPeering\) as a forum – but I know you've got your own. Now get to work. □](http://www.facebook.com/InternetCom-</p></div><div data-bbox=)

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