

# Cyberspace's Constitution

Lawrence Lessig  
Draft 1.1

Lecture given at the American Academy,  
Berlin, Germany  
February 10, 2000

[cc] Lessig 2000

America has an extraordinary constitutional tradition. We have done a poor job in understanding why. For most Americans, even American lawyers, the strength of our constitutional tradition is drawn from its text. Its wisdom comes from its text. Its power is inscribed in the words of its text.

It follows from this text based understanding of a constitution that to carry the American constitution to another political regime, one need do nothing more than simply effect a good translation of American text. And thus, after 1989, as nations in the east struggled to adopt new constitutions, there were many in my country who were confused about what others found to be so difficult. Simply translate the American constitution, these theorists said, and let them adopt it.

Our tradition, however, was not always so obtuse. Indeed, the first great constitutional scholar in America — Francis Lieber, a Berliner — took it as obvious that “a written constitution of any value always presupposes the existence of an unwritten one.” To understand a written constitution, it would follow, requires an understanding of the unwritten constitution, just as the writing of a constitution must take into account the character of the unwritten constitution.

In Lieber’s view, this unwritten constitution was a set of norms, or understandings, latent within a political culture. They were constituted by practices, and by a history, that formed the ordinary ways of a people. There were constructed, but not plastic; describable, but not expressed. Without these “unwritten” norms, a written constitution was, “worthless.”

Relatively unplastic.

If we understand a constitution as a set of relatively unplastic constraints — understandings, or ways of living, practices or in-built institutions — then cyberspace has a constitution. It has, of course, no legal text that grounds its existence. But it does have a set of institutions, and practices, and an even richer set of understandings among its users, that together are relatively unplastic, and constitute life in that space. And more importantly, cyberspace has an architecture, which itself embeds values and practices that constitute life in that space.

An architecture.

We all understand how laws regulate behavior. Attention to an unwritten constitution reminds us of how norms regulate behavior. Insistence by the Chicago School of Law and Economics teaches us how markets regulate behavior. But to understand cyberspace — to understand what is distinctive about this space — we must begin to understand how architectures regulate: How the character of “how a space is designed” constitutes and regulates behavior within that space. This is the essence of what a law in cyberspace is about. And hence it is here we must begin if we are to understand what a constitution in cyberspace is about.

An architecture that regulates.

The idea that architecture might regulate is not new. It is certainly not new with cyberspace. David Hackett Fisher describes the founders of New England meticulously laying out the towns they would found so that the relationship of the buildings to each other, and to the town square, would assure that behavior within the town would be properly regulated.

Bentham famously described the design of a prison so that all cells would be viewable from one central position, so that prisoners would never know whether they were being watched, but that they always could be being watched, and so, they would be properly regulated.

Madison defended a large federal republic as superior to smaller, more compact republics, on the ground that distance and separation would better cabin the passions of faction, and so that democracy would be properly regulated.

Napoleon the III had Paris rebuilt so that the boulevards would be broad, making it hard for revolutionaries to blockade the city, so that Parisians would be properly regulated.

Robert Moses built highway bridges along the roads to the beaches in Long Island so that busses could not pass under the bridges, thereby assuring that only those with cars (mainly white people) would use certain public beaches, and that those without cars (largely African Americans) would be driven to use other beaches, so that social relations would be properly regulated.

In all these cases, we see how space regulates. And I want to draw upon that sense in getting you to see the sense in which cy-

berspace has a constitution, and a sense of how cyberspace is regulated.

---

### Cyberspace.

Most of you have probably heard enough about this space to know that this is not something you can ignore. This is not the CB-radio of the 21st century, or the fad of bungee jumping. This space will touch everything. You can no more escape the effects of cyberspace on real space life than you can escape the effects of American culture on Europe — and there is a deep and obvious connection there. Cyberspace is *here* and its effects, whatever those are, are here to stay.

### Cyber-space.

Cyberspace is a place. People live there. They experience all the sorts of things that they experience in real space, there. For some, they experience more. They experience this not as isolated individuals, playing some high tech computer game; they experience it in groups, in communities, among strangers, among people they come to know, and sometimes like.

But while they are in that place, cyberspace, they are also here. They are at a terminal screen, eating chips, ignoring the phone. They are downstairs on the computer, late at night, while their husbands are asleep. They are at work, or at cyber cafes, or in a computer lab. They live this life there, while here, and then at some point in the day, they jack out, and are only here. They step up from the machine, in a bit of a daze; they turn around. They have returned.

This is because though people speak about *going* to cyberspace, in fact no one ever goes to cyberspace and leaves real space. When one is *in* cyberspace, one is also here. The effects of life there will be felt, always, here.

This is a feature of its constitution. Cyberspace has no geography in the sense that real space has a geography. It has no necessary local space. At least it had no necessary local space in its first design — in the first generation of its design. As originally designed, when you were in cyberspace, you had access to people in any place, which means you could be influenced by behavior from

any place. The norms governing that behavior were not necessarily the norms of your local community. They could be different.

That's one feature of the space. Let's consider some others.

If a child walked into a shop that sold erotic material, he'd probably be sent away. He'd probably be sent away because the shop seller has no desire really to sell to kids; or because the law requires the shop seller have no desire to sell to kids; or because, being a kid, the kid probably doesn't have enough to buy anything, which is enough reason for any shop keeper to send someone away. Thus either norms, or law, or the market itself would zone the kid from pornographic speech.

But notice an essential feature of real space that makes each of these zonings possible — it is hard, in real space, for a kid to hide that he is a kid. He can don a mustache, and walk on stilts, but unless he is very good, none will be fooled. In real space — given the architecture of real space — age is relatively self-authenticating.

In cyberspace the story is different. If our real space erotic shop opens a store online, even if the owner wants to be sure that he doesn't serve kids, and even if the law requires it, in cyberspace age is not self-authenticating. In cyberspace, one customer appears to the server just like another — or at least appears just like another with respect to age. The server on a web site therefore can't automatically tell whether the user is a kid. And hence an erotic site can't easily zone kids from porn.

Let's think about this example in a bit more detail — a bit more technically. What does it mean to say that a web site "knows."

A web site is a page on the world wide web; the page sits on a "server." You access the page through a browser, called a client. When the browser tries to connect to the web site, there is a negotiation between the server and the client. The client tells the server a bunch of things about it — in the current specifications, it reveals what kind of browser it is using; it reveals what kind of computer it is; what version of the operating system it is running, etc. It tells the server all this, and then the server serves the client the page requested. All this is done instantaneously without the user knowing anything.

The client doesn't reveal, however, the age of the user because, given the existing architecture of browsers, the age of the user isn't known. Thus the server is blind to the users age, even though the server knows lots of facts about the computer or browser the user uses.

This blindness, then, is a feature of the architecture of web browsing. Like the lack of geography, it is a feature built into the web's design. It has consequences. It is *coded* into the web's design — coded by software and hardware that sets the protocols of the web's design. Coded — rules imposed through software.

Code.

When I speak of the architecture of real space, I am collapsing a lot of reality into a single term. I've spoke of architecture in the sense of geography — a dispersed republic; I've spoken of architecture in the sense of the design of a city — Napoleon the III's design for Paris; I've spoken of architecture in the sense of the design of a road — Robert Moses and the segregation of Long Island beaches. These are effects brought about through very different means — and I've tried to describe them all under this label, architecture.

But in cyberspace, this collapsing is easier. Because in cyberspace, the architecture I've been describing is all achieved through code — through the rules imposed through the software and hardware that makes cyberspace as it is. The space that cyberspace defines is space imposed through code. And the experience that cyberspace permits is the experience imposed by this code. The code of cyberspace constitutes that space. It functions as a regulator of that it space. The freedoms the space permits; the control the space allows — these things depend upon the code of the space. And obviously — isn't this obvious — obviously the code can change.

---

Take an example: Before the internet, there was an online service provider that didn't like the fact that is users were chatting and emailing rather than buying the good that its was advertising; so it put a limit on the number of emails a customer could send in one month; customer complained, in a public bulletin board space; and the service provider then told customers, that its board was not to be used to complain; complainers would kicked out of the

community; but this was to throw fuel on the fire, and outraged subscribers accused the service of censorship and a violation of the first amendment. A few were removed, but then after very bad press, the service provider backed down; free speech was again permitted.

Now if you stand back from this event and ask, why did it occur — what was the mistake that led to this protest — one answer is that the provider imposed unpopular rule. But there's another mistake we might identify — from the perspective of the executive, or from the perspective of someone who wants to regulate behavior in this space. That is the mistake of permitting places where riots could be incited.

For why was it, one might ask, that there was a place on this service where rabble rousers, as the service would call them, could rally the troops? Why was it that there was a place where others could be excited out of their stupor into political action? Why was it so easy to build protests, to start a movement. What made it possible?

The answer is simple once you see it, and seeing it is the key to understanding the future of regulation in cyberspace. For the answer is the architecture of service itself. There was a place where public notices could be posted, and seen by the general public easily. There were rooms where many could gather. And because many could gather, protests could brew. Anger could translate into political action.

There is a lesson here, which others have learned. You've all heard of America Online. It is the worlds largest online service provider. Literally one half of the dial-up Internet customers in the world get their access from America Online. Millions are members of the AOL community.

Now on your own time, you should visit AOL, and try to start a riot. Try to rally AOL subscribers to some political cause — whether it is opposition to AOL's policy on open access, or opposition to its pricing policies. There are places you can go — chat rooms for example — but only 23 people can be in a chat room at anyone time. There are message boards that you can visit, though it is hard to find one devoted to AOL topics in general. Yesterday morning I tried to find one of these boards on AOL; twenty minutes later, I gave up. So the option for a revolutionary on AOL is to race around these 23 person chat rooms — a kind of Paul revere

of cyberspace — exciting people into revolution. Or opposition. Or whatever.

The point should be obvious. AOL has solved the problem of protest by architecting its space to eliminate public spaces, or places where many people can gather. And better, it has done this without people really noticing how it has changed its service. There is no place for public protest on AOL, but you aren't likely to notice it. AOL has been architected to keep protest down; it has used its architecture to regulate its speech.

---

There is a lesson here that is at the core of any understanding about the nature of cyberspace. AOL can regulate its members because the architecture of AOL permits it.

But the architecture of AOL is not given. The code of AOL was not written by god. The code of AOL was written by AOL coders — by software authors who were instructed by management about how best to architect the online community that is AOL. Because it is a closed service — because users get access only through AOL's software — the managers of the AOL town have extraordinary power to architect the town as they wish. They can build it to control how people behave. Not through rules that people feel as regulations; but through architectures that most experience as natural.

Now AOL is not the Internet — at least yet. And the architecture of the Internet, at least initially, was quite different. On AOL, the system knows who you are; you can tell it which accounts are children's accounts; it knows your purchasing habits, it knows what places you have visited; it knows who you email; it knows how often you check your email; it knows where you chat, and with whom you chat; in principle, it knows what you say in your "private chat" rooms.

The Internet, originally, was different. As I said, the architecture of the initial Internet did not reveal your identity; there was no single source that could monitor your actions; no one knew whether you were a kid; no one knew what web sites you visited; your email was yours; where you chatted was private; most of your behavior online was anonymous. The Internet, as originally designed, preserved your anonymity. This was its architecture. And this architecture came from its code.

Many celebrate this initial architecture of cyberspace. Many celebrate the freedoms it guarantees. Free speech is protected by this initial architecture, because no one is in a position to track you down and punish you for what you say. The initial architecture of the net thus protected freedom of action, because the initial architecture of the net made behavior hard to control.

And so too did many celebrate this initial architecture of cyberspace because of the innovation this space inspired. Anyone could set up a web site to sell whatever he or she wanted; anyone could set up a web site to offer a service across the net. Millions of businesses began to turn to the net to provide an extraordinary range of applications. Books from Amazon; CDs from CD Now; music from MP3.COM; auctions from eBay.

Now this innovation in commerce is a critical part of the story of cyberspace. And the point to see is that it too was made possible by the very same facts that made the initial architecture of liberty possible. So much innovation was enabled by cyberspace because so little control was possible over new ideas. If you had a new idea, you needed the permission of no one else to bring it to market. You could take your idea and run with it — and because the net connected millions in a potential market, any idea even have decent could take off.

Thus the inability to control — the unregulability of the space — these were the features of cyberspace at its birth; and these features explain, I suggest, both the liberty of the initial space, and its innovation.

---

I've described a bit the architecture of two computer networks — one the space called AOL; the other, the space I called the original Internet. And this description will suggest an obvious point — if AOL and the original Internet can be said to mark the extremes on a continuum, what's to stop the Internet from moving from extreme to the other. Why can't we imagine an Internet more like AOL than like the original Internet? What is there to stop it from becoming more like AOL?

This is a question that should answer itself — nothing stops the net from becoming more like AOL. Nothing guarantees that the existing unregulability of the net will remain. Nothing will stop the architecture of the net from changing from the way the

architecture was. Nothing yet *constitutionalizes* the original architecture of cyberspace.

And indeed, we are seeing just a radical change in the nature of cyberspace — both a change in the liberty that cyberspace protects, and a change in the free competition that cyberspace preserves. I want to describe both changes, but the second in my view is the less well known, so I will focus most of my argument on it.

---

Perfect liberty. The original net was an unregulable place. Behavior, if controlled, was controlled by the norms of the net. The architect made possible no greater control.

Why?

The unregulability of the original net hung upon a feature of that net. That identity, and location, were not self-authenticating. I described how the fact that one is child is not self-authenticating. But neither is who one is, or where one comes from self-authenticating. This means that it is relatively hard to track down who someone is; which means it is relatively hard to regulate how people behave.

This feature of the original net can change. The relative anonymity of the original net can change. Architectures of identity, for tracking and monitoring individuals, can be deployed. Technologies for certifying who people are can be layered onto the existing net. The existing net can be supplemented with technologies that change this original unregulability.

Can, and is.

For the defining feature of the transformation of cyberspace over the last 3 years has been development and deployment of technologies of identification — technologies that make it easier to identify and track individuals; technologies that make it easier to identify and block content; technologies that make it easier to regulate cyberspace.

These technologies have been developed not because government has mandated them. They have been developed because commerce has needed them. They are technologies for making commerce function more efficiently, and their byproduct is a more regulable net.

The code of cyberspace as it originally was made cyberspace unregulable; the code of cyberspace as it is becoming will make cyberspace highly regulable.

---

Now for most of us, this story of the loss of perfect liberty is not a story about a terrible loss. The net is filled with libertarian types; people who believe that this is the last great unregulated and unregulable space. They are disturbed by the story I tell. They have duped into believing the net necessarily preserves its freedom; and hence they have missed how the net is changing to permit regulation.

But even for those who are not perfect libertarians, this story of increasing regulability at some point should raise alarm. As commerce brings code to the net to better control copyright, we should be concerned about the extent to which this code will enable the perfect control of content — far more perfect than the law of copyright on its own would allow. Disabling fair use, disabling free access, undermining an economy of exchange in ideas.

As commerce perfects technologies for monitoring, legislation and calls for privacy notwithstanding, we should be concerned about the extent to which profiles construct us, and enable a segregation of society along lines otherwise invisible.

As society pushes for ways to zone kids from porn, we should be concerned about the other zonings these technologies of censorship will allow — enabling governments to filter based on the reigning ideology of the time.

And as nations prosecute “crimes” committed globally, but whose effects are felt locally — for example, the recent prosecutions in the united states of a Canadian firm called “iCraveTV”, which rebroadcasts television over the web — legal in Canada, but illegal in the united states — we should be concerned as pressure forces the adoption of technologies for fully zoning cyberspace into the separates states of real space.

Even those of us who don't oppose all regulation should be concerned as this architecture enables increasingly perfect regulation — better regulation, better control, than the architectures of real space.

---

But it is a second kind of change that I want to focus here — one much more troubling, in my view, and a trouble that is much more real. This second kind of change relates to a second kind of freedom in the original net — a freedom of competition, and hence creativity and innovation; and this change too is about reducing that freedom.

To see this change, however, we must begin in the dark ages — ancient times in net history; all the way back, say, to the 1970s. Put yourself in the 1970s, as ask what was the architectures of innovation or creativity then.

If you wanted to publish a book, you needed the permission of a publisher. Printing presses are expensive; access to printing presses was controlled by who owned them.

If you wanted to produce and distribute music, you needed the permission of a record company. Record presses are expensive; access to those presses and distribution channels was controlled by who owned them.

If you wanted to broadcast a movie, you needed the permission of the television station. Broadcasting equipment is expensive; spectrum is allocated only to a few; the right to broadcast depends upon the permission of broadcasters.

In each of these cases, there was constraint on creativity — a constraint on innovation that was created by these structures that required the permission of someone else. These structures were in an important sense necessary — they reflected real economic constraints that could not simply be imagined away. They were a necessary byproduct of the means of production in real space. They defined for us a particular architecture of creativity — controlled by large mainstream organizations, granting little, though some, access to others.

But if you want to understand the most significant feature of cyberspace; if you need a single picture to capture its magic; if there is one idea that reveals its potential to change society here, it is this — that the essence of cyberspace in its original design was to eliminate these constraints on innovation.

To publish, one didn't need the permission of a publisher; one's could simply post one's work on the web, and millions could have access.

To produce music, one doesn't need a record company; MP3 technologies make it possible to produce and distribute music directly across the net.

And to broadcast, one doesn't need a television station. For the cost of a fairly fast computer, one can buy servers that will stream audio or video to anyone who asks — an instant radio station, or television station, beamed across the Internet.

In each of these realms, a kind of creativity has been unleashed. And it has been released by the architecture of the net. A freedom to innovate or create and a practically free channel to distribute. That was the constitution of the original net. And it has produced an extraordinary amount of innovation in response.

*Features* of the original architecture of the net that made this innovation possible. We can describe them.

1. The net was built around a principle called end-to-end. End-to-end requires that the network be stupid, and that intelligence be placed at the ends, or users; and this means that the network has no ability to discriminate in the applications that can run on the network; and this means that regardless of whether a new application displaces a dominant or old application, the network will run it. The network can't discriminate; it is constitutionally committed to permit all competitors; which means competitors know there is a payoff if their innovation succeeds.
2. The web was built around a principle of open source — the source code for any web page was open, and free to take; content was easily shared; intellectual property protections were relatively weak. The data and content of the net lived in a virtual commons, free to take and share and use by anyone there.
3. And the content of the net was built around a principle of free access — that the data posted on the web was free for others to see, and use. Programs called bots could spider the web, gather the data of the web for search engines, or for other purposes; no systems for discriminating among these bots existed; no code to enable their control.

These principles of architecture made the free competition of the original net possible, but now this architecture is changing.

1. In the United States, the emerging network for the Internet is broadband cable; if a recent merger between AT&T and MediaOne goes through, then 80% of broadband cable will be under the influence of one organization, AT&T. AT&T is architecting that network to give it control over the kind of content that gets played on the network. It is architecting the network, that is, to be smart, not dumb; it is architecting the network to discriminate, not be neutral; it is architecting the network to violate the first principle of the Internet — its end-to-end design. To introduce a new application — say streaming video — requires the permission of someone else.
2. The architecture of limited intellectual property is changing as well. Code that controls intellectual property is becoming common; the attempt to circumvent that code is a felony; ideas and applications on the net are increasingly removed from a virtual commons by the explosion of patents in cyberspace — government granted monopolies for ways of doing business in cyberspace that lock up basic elements of the language of cyberspace. The one-click patent of Amazon.com is an example, but there are many more: pricelines patent of a reverse auction; the patent of linking from advertising; a patent for downloading software for sale. In each case, to use an idea requires the permission of someone else.
3. And the architecture of free access is changing. Bots are increasingly being regulated; no longer can they spider the web freely. If they gather data from a company called eBay, for example, they have to pay a license, eBay says. To get access without a license is trespassing; trespassing on a computer in cyberspace is a crime.

In each of these cases the trend is the same: through a combination of law and code, the net is moving from a commons where people can invent and create without the permission of someone else, to a place very much like the dark ages, the 1970s, where the use of the network, or the use of content, or the access to data, or the use of an idea all requires the permission of someone else. We are moving back to where we were — where the control over creativity is vested in relatively large organizations; where innovation proceeds only with a lawyer at hand; where invention isn't the key; where the key is a properly negotiated portfolio of rights.

We are moving back, in a word, to the 1970s. But now the constraints on creativity are not real economic constraints. The net wiped those constraints away; but just as nature abhors a vacuum, lawyers seem to abhor a world without legal constraints. And so we are reconstructing through trespass and intellectual property law, a world of artificial constraints.

Now in my view this change will fundamentally undermine the innovation and creativity the net now promises. It will normalize, and rationalize, and make boring again the creative potential that the net now has. It will corporatize creativity, and for no reason except that we make it so. We are building the legal infrastructure that then compels the construction of these constraints. To protect Hollywood, we turn the net into Disney World; to protect the extraordinary returns of the NASDAQ, we hand out monopoly rights left and right to sustain greater than competitive rates of return. We are building cyberspace to reflect the world of the 1970s. We are amending its original constitution, to restore the ancien regime.

---

If you ignore the architecture of the original network; if you think, as I was told by the NY Times, it is “too technical”; if you say, as a French legislator told me, “that is computer science, I am interested in law”; if you stick to the narrow perspective of what the verfassungsgericht said about article V — then you will miss what built the original liberty and free competition of the original net.

If you focus just on what government does to that original architecture; if you ignore how code writers are changing it, and miss who pays the code writers; if you overlook the values they embed in their code; if you ignore how those values change — then you will miss the change in that original liberty and free competition the net is seeing.

And if we, as citizens who live with the net, ignore that architecture very much longer, or narrow our focus to simply what the government does, then before the next American presidential election, this brief moment of something different will have passed. The liberties of this original net will have been coded away; its architecture will have been changed to fit old world demands. Innovation will have passed to the control of the large, bureaucratic and boring — these institutions now compete to claim this

space, and when they triumph, we will be convinced no other constitution was possible.

The constitution of the net will have been changed, as its architectures have been changed, and we will live life subject to this new constitution.

---

At a conference in Georgia — former Soviet Georgia, that is — sponsored by some western agency of democracy, an Irish lawyer was trying to explain to the Georgians just what was so great about a system of judicial review. “Judicial review,” this lawyer explained, “is wonderful. Whenever the court strikes down an act of parliament, the people naturally align themselves with the court, against the parliament. The parliament, people believe, is just political; the supreme court, they think, is principle.” A Georgian friend was puzzled by this, puppy-democrat that he is. “So why,” he asked, “is it that in a democracy, the people are loyal to a non-democratic institution, and repulsed by the democratic institution in the system?” “You just don’t understand democracy,” said the lawyer.

For about three years now, I have been racing around the world — quite literally — trying to describe this change in cyberspace’s constitution. I have tried to argue that we need to understand, and to respond to this change. That we need, as democracies, to decide whether the world that cyberspace is becoming is a world that we want. That we need, in a sense, governance — to be accountable for what this space is becoming, collectively, as free people.

Some have called this the problem of governance in cyberspace. But I think we have no problem of governance *in cyberspace*. We have a problem with governance. There isn’t a special set of dilemmas that cyberspace will present; there’s just the familiar dilemmas that modern governance confronts—familiar problems in a new place. Some things are different; the target of governance is different. But the difficulty doesn’t come from this different target; the difficulty comes from our problem with governance.

Our skepticism is not a point about principle. We are not, most of us libertarians. We may be anti-government, but for the most part we do believe that there are collective values that ought to regulate private action. We are, in the main committed to the idea

that collective values should regulate this emergingly technical world.

Our problem is that we don't know by whom. We Americans, like the Irish, are weary with governments. We are profoundly skeptical about the product of democratic processes. We believe, whether rightly or not, that democratic processes have been captured by special interests more concerned with individual, than collective value. So while we believe that there is a role for collective judgments, we are repulsed by the idea of placing the design of something as important as the internet into hands of governments.

The birth of ICANN is a perfect example of this point. ICANN is the new organization established to regulate the regulate policy for domain names — .com — world wide. It was established to be a non-profit corporation, devoted to the collective interest of the net as an international whole, with a board to be composed of representatives of stakeholders on the net. In exchange, the American government promised to give up continuing control over the domain name system, and support its transition to an autonomous, separate entity.

But think for a second about the kinds of questions my Georgian friend might ask. A “non-profit corporation devoted to the collective interest”? Isn't that, he might ask, just what government is suppose to be? A board composed of representatives of stakeholders? Isn't that what a parliament is? Indeed, if he thought about it, my Georgian friend might observe that this corporate structure differs from government in only one salient way — that there is no on-going requirement of elections. This is policy making, vested in what is in effect an independent agency, but an agency outside of any democratic process.

Isn't this a bit odd, for a democracy at least? That the idea that it was not even considered that a governmental body, whether American, or international, should set this policy — isn't this profoundly interesting about us.

This says something about us — about where we have come in this experiment with democracy. It reflects a pathetic resignation that most of us feel about the product ordinary government. And while I completely share the skepticism, and even disgust, I think it is important to notice how infectious it has become. We have lost the idea that ordinary government might work, and so deep is

this thought that even the government doesn't consider the idea that government might actually have role in governing cyberspace.

Good that it didn't, I say. I'm with the Irish people, and against the parliament. But we should not miss — we, who live our life using reason rather than power to persuade others, we should not miss — what this loss really means; what this says about our intuitions about governance.

In a critical sense, we Americans are not democrats anymore. Cyberspace has shown us this, our passivity in the face of its change confirms this. Both should push us to figure out why.