

The excess of control

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“Innovation makes enemies of all those who prospered under the old regime, and only lukewarm support is forthcoming from those who would prosper under the new.” Niccolò Machiavelli (1469-1527)

In *The Future of Ideas* Lawrence Lessig, a professor at the Stanford Law School, conveys a bleak message: We are destroying the conditions of freedom and creativity on the Internet. Right at the moment when the Internet has begun to show its full potential for increasing growth and innovation globally, a counterrevolution is threatening, if not already succeeding, to undermine this potential.

There are two reasons for this: one is timeless, already understood by Machiavelli: radical change threatens those who profit from the status quo but offers only uncertain prospects to others. The second reason, and the main focus of the book, is this: A sensible premise - markets and private ownership can be efficient ways to allocate resources and promote growth - has hardened into an orthodoxy that postulates that all resources are always managed best when divided among private owners. This view is propagated by a lethally effective cohort of organized interests, politicians subservient to campaign contributors, and ignorant judges. Together, they are in the process of turning the open and dynamic world of the Internet into something that might well end-up resembling the controlled and static world of Television where corporate decision makers control what the public can see or do.

Lessig makes a passionate argument that we need to preserve the Internet as an open, creative environment. Even though the orthodoxy has difficulty seeing it, this openness is socially beneficial and fully consistent with our legal and political traditions. In the first part of the book Lessig analyzes the conditions for openness online and the creativity that they engender. He then describes how these characteristics are being destroyed and, finally, proposes alternative approaches to regulation to preserve the openness of Internet.

The Internet has allowed creativity to burgeon because many of its resources have been free. As Lessig writes, “free resources have been crucial to innovation and creativity; without them, creativity is crippled” (p.14). But what does “free”

mean? Richard Stallman, founder of the Free Software Foundation, famously reminded us to think of “free speech, not free beer.” [1] This approach has led to a great deal of confusion, particularly outside the US, where free speech is less of a beacon.

Lessig’s definition is more pragmatic, and more useful: “a resource is ‘free’ if (1) one can use it without permission of anyone else; or (2) the permission one needs is granted neutrally” (p.12). Our roads, for example, are free in Lessig’s sense. This is the case even if a toll charge is levied because the charge is imposed neutrally. Everyone pays the same price independent of the purpose of driving on the road. A road would no longer be free if, say, Coke had sponsored its construction and therefore could prohibit Pepsi trucks from using it.

Free resources are a “commons”. A commons is defined not by ownership but by access rights. A road can be privately or publicly owned, as long as everyone has the same access rights, it’s part of the commons. The crucial distinction here is between control and openness. A commons is a resource open to everyone within a community, whereas private property is controlled exclusively by the owner. In this context it doesn’t matter if the owner is a private entity, the state, or a co-op.

The openness of the Internet was not the result of its somehow inherent nature, as many of the early pundits thought, but a consequence of specific design decisions. Perhaps the most important technical decision was to follow the “end-to-end” (e2e) principle [2]. The e2e principle says that the network itself is kept simple and “stupid” while the “intelligence” is pushed towards the edges, i.e. the individual machines plugged into the network and the applications running on them. The Internet, in its original conception, was simple in the sense that it handled all packets equally, without regard to content or ownership. The early engineers took this approach deliberately because they had the humility to understand that they could not foresee the future uses of network. In order not to artificially limit future innovation, they designed the network to treat all applications equally. This e2e principle, and the fact that the protocols were released into the public domain, created a “commons of the wires.” Anyone could run an application on the Internet without being discriminated against. The network worked the same for everyone: it simply forwarded all packets without further ado.

This is changing rapidly. “Intelligence” is relocated back into the network and the edges are dumbed down. The “Internet appliance” reduces the machine plugged into the network to the status of an enhanced TV set. ISPs, particularly cable companies, have an increasing arsenal of technologies at their disposal to differentiate among packets, and, say, slow down access to certain sites and restrict what users can and cannot do on the network.

Regulation plays an important role in this change. As long as much of the Internet’s infrastructure was provided by telecom companies, regulation, at least in the US, mandated that these companies would not control the traffic on their wires and, furthermore, that the wires had to open to third party businesses. This created an enormously competitive ISP market by regulating the network to be neutral, “free” under Lessig’s definition.

As Internet access shifts to broadband, cable companies are becoming the dominant ISPs. Cable companies, however, are subject to a different regulatory

regime, one that allows them to tightly control the traffic that runs over their wires. Network equipment manufacturers such as Cisco and Nortel are only too willing to develop new “intelligent” routers that can discriminate packages based on content and ownership. In the developed world, this is used to control the user experience and to structurally disadvantage competitors and certain types of services. In China [3] and other countries, however, the same technology can monitor Internet traffic for political reasons and secure the “great firewall”. The effect in both contexts is the same. Power, i.e. the ability to control the uses of the network, moves from the users to the owners, from the many to the few.

Lessig’s argues against this centralization of control because it stifles innovation that is likely to be beneficial to the public. Referring to the “Inventor’s Dilemma” [4], Lessig argues that large firms innovate differently than small firms and or non-commercial entities. Large firms are best at expanding, improving and controlling large existing markets, but are structurally handicapped to develop radically new ones. New markets tend to arise at the margins, while large companies concentrate on the center, i.e. the place where their large clients operate. Furthermore, because new markets cannot be analyzed, it is nearly impossible to invest in them rationally. The availability of venture capital mitigates this problem, but only to a limited extent. Finally, companies that control an existing market have no interest in innovations that threaten to make their markets obsolete.

The music industry is a case in point. It was very successful at managing the transition from analog vinyl to digital CDs because this innovation did not change the relationships among the market participants. CDs are what is called a “sustaining technology” because they sustain the “value chain” of the existing market. Napster’s peer-to-peer distribution, on the other hand, is a “disruptive technology” because it potentially disrupts the established market by creating new relationships among its participants and possibly removing some of them altogether. With billions in investment tied to the old value chain, record companies have very little to gain, but much to lose, from such innovation.

Should that give established institutions the right to effectively veto disruptive technologies? No, Lessig argues, because this would be a great loss to the dynamism of society. He points out that almost all of the groundbreaking applications of the Internet - email, the web, instant messaging, peer-to-peer transfers, to name but a few - were created by inventors far from the centers of industry. For all of these inventions, the openness of the Internet was crucial to enable them to grow and expand to their full potential which often not even their inventors knew. Without a commons, the Internet might have joined the fate of industry-controlled projects such as video-on-demand or videotext.

The effect of the dismantling of the e2e principle is exacerbated the expansion of the copyright and patent law, the other main areas covered in by Lessig. Together, these developments drive the enclosure of the Internet, granting the owners of the wires, patents, and copyrights ever more control over the future development of the Internet. This reduces the chances of radical innovations from the margins ever reaching mainstream. If only innovation that suits the interests of a small group of powerful owners is allowed onto the network, a tremendous potential for socially beneficial change is lost, without us ever knowing such potential existed.

This does not serve the interest of the public, neither in China or here, but only those of the old guard.

Lessig is a realist and a pragmatist. He does not argue for a “new economy” utopia where everything should be free, nor is he “against” the market. Lessig is very clear that his conception of the commons applies primarily to resources that are “nonrivalrous” which means that my use does not affect your use of the resource. To these resources, the “tragedy of the commons” [5] does not apply. Immaterial products cannot be depleted. All that is necessary is to assure that such resources are produced. What Lessig is arguing for is a balance between the rights of the owners to derive profit from their resources and the rights of the public to use these resources as raw material for further creation. Copyright and patent law were conceived with this balance in mind. Now they are being expanded in favour of control and ownership to such a degree that they no longer serve the only goal that legitimizes their existence: the promotion innovation and creativity. Lessig makes several concrete proposals on how to adapt the law to help restore this balance. These range from reducing the duration of patents and copyrights to their original length to the granting of compulsory licenses which allow owners to derive a profit from their property but not to control it against the public interest.

Lessig’s concerns are not really not legal but social. He develops two scenarios, one in which the tools of innovation are controlled by a few established interests, or one in which these tool are made accessible to everyone. He advocates the latter because only the latter is consistent with core values of a true, enlightened democracy: social welfare through the empowerment of individuals.

Lessig’s argument, though, exhibits a strange internal contradiction. One the one hand, it is a call to arms, a passionate warning about the loss of freedom and creativity, on the other hand, he declares the battle already lost. This contradiction, it seems, stems from the fact that he grounds what is essentially a (global) social argument in primarily (American) legal evidence. This leads to a distortion. For Lessig, the story of open file sharing ended with the defeat of Napster in a Californian court.

However, despite the demise of Napster as a company, the phenomenon of file sharing is still very significant. It is far from clear that the changes in the legal landscape will effectively determine user behaviour. One could make the argument that enforcing some aspects of the law might be so difficult, or come at such an expense to other rights or interests, that in practice it will be impossible to do so. If the DMCA limits security research in the US, but European provisions are not as strict, then pressure could amount on the US to revise its legislation on the grounds that it harms the industry’s competitiveness. A similar situation led to the easing of US export restrictions on strong cryptography.

Perhaps Lessig overestimates the ability of US law to determine social reality globally. He is certainly right to argue that it has become a powerful weapon of established interests trying to fend off the challenge of the new.

Lessig, Lawrence: (2001) *The Future of Ideas: The Fate of the Commons in a Connected World*. Random House, New York. ISBN 0-375-50578-4

References

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