

# The End of the Commons? A look at the Future of the Internet as a Creative Commons

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# The End of the Commons? A look at the Future of the Internet as a Creative Commons

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## 概 要

本稿では、先ず、過去と現在におけるインターネットの公共性を考え、法的ならび技術的な側面からインターネットの自由な使用を規制しようとする最近の動きを見ていく。次に、最近の法的な事例をいくつか取り上げ、インターネットの使用に関する法的拘束力ならびその影響を考察する。

インターネットの自由な使用に関して、法的な立場から疑問が投げかけられ、自らの利益を守ろうとする企業のみならず自分たちの政治情報を広めたいと思う政府機関までがインターネットの使用制限を考えるようになってきた。このような状況はインターネットの発展を妨げるものと思われるが、ネット上における緒規制がもたらす影響についても言及する。

技術の発展によりインターネットにおけるこれまでの1対1のコミュニケーションの形態は複雑になり、本来あったネット上におけるコミュニケーションの自由が制限されるような状況が生まれてきたが、最後に大手教育機関と小規模語学学校を比較しながら、ネット上でコミュニケーションの自由が規制されることにより、どのような影響が英語教育の分野に出てくるかを論じる。

## Introduction

In this paper I shall look at the nature of the internet as a commons, initially in the past and in the present, and then move on to consider the current movement to regulate and control the net through legal and technological methods. I evaluate several current legal cases, considering their scope of jurisdiction and impact on the Net. I will also look at the way the net is gradually being challenged legally not only by business keen to protect their entrenched interests, but also by several governments hoping to further their own agendas; I will look at how this civil and criminal legislation only serves to slow innovation on the net. I will then develop the discussion to include elements of control emerging through technological changes in the Net's End-to-End (e2) design, considering the effect this will bear upon language teaching, especially among small language schools hoping to compete with High Street education retailers who have experience at advertising through mass media and pursuing their interests through the law courts.

## Previous studies

*The Future of Ideas* by Lawrence Lessig takes a detailed look at the past communality of the net and demonstrates how this openness allowed creative experimentation, success and failure. Lessig's main polemic is that the internet is moving into new territory now that established commercial and governmental bodies have awakened to the threat unrestricted internet activity has on their entrenched interests. He looks at the structure of the internet, the end-to-end design decision which enabled rapid innovation to occur in the last two decades. He argues that these interest groups are and will continue to use legal and structural change to build control mechanisms into the net which will destroy its "commonality" and reduce its value as an innovative tool. I will summarize Lessig's thesis before moving on to explore in detail what implications his prophecy holds.

## The layer analogy

Lessig looks at the communicative behaviour (including the internet) as being composed of a stack of layers. *The Future of Ideas* talks about unravelling the differences between Speaker's Corner, Madison Square Garden, the Phone system and Cable TV. Using the metaphor of three layers he suggests there is a key difference between the content, code or logical and physical dimensions to these social behaviours and the difference between the four behaviours is derived from the degree to which the three layer dimensions are controlled or are freely accessible. Content layer refers to the substance, the actual ideas being expressed, whereas the physical layer represents the hardware used to express them. The middle layer, the code layer, signifies the form, the method of expression and is the hardest for humans to conceptualize, as are any consequences of tinkering with access.

Due to the End-to-End (e2e) design of the internet, much of the content and all of the code layers were freely accessible by anyone with the right hardware, and this mixture was responsible for the massive innovation. Lessig believes it is controlling the mixture of access/ control across the layers which regulates the pace of innovation. Both property and intellectual property law enable provide varying monopolistic mechanisms to stimulate the incentive to future production and innovation. Although his detractors find it specious to suggest otherwise, he never suggests giving everyone everywhere everything for free!

## The concept of Commonality

A working definition of a commons would be a way of allocating resources, which may or may not be limited in a way where rights of access are not decided by a gatekeeper. Lessig supplies many examples. The English Language is a commons, since anyone in society can use the words and grammar and no single country/authority has absolute power to inhibit access. New York waste land, however, is not a commons although for a while access to the land was unrestricted; when the dormant gatekeeper resumed control any temporary “rights” to use the land were withdrawn. Any academic research which places limits on the end user is usually not a commons (unless the restrictions are to prevent the end user inflicting restrictions on other users like a GPU license), but E-MC<sup>2</sup> is a commons, since it is a discovery falling outside the restrictions of intellectual property law. So, a commons is a resource which any and every individual has the right to access (albeit having to pay a nominal fee in some instances). There is no gatekeeper with arbitrary instructions to deny access to certain individuals. Lessig insists that not all resources benefit from being free, but that the debate should be whether a valuable resource gains in value by being exposed to the community as a commons. According to Lessig, unfortunately due to way many people fudge the difference between property and intellectual property, the current debate is not about whether free access enhances a resource, but rather, who ought to have the right to control access to it. As a resource becomes more complex, more parties have interest in the use of certain aspects of it and the issue of commonality becomes convoluted. Further complicating the issue is the concept of *rivalry*; there are rivalous and non-rivalous resources and the law and custom treat the two categories separately. Basically rivalous resources are finite, so one’s enjoyment of it negates someone else’s. If I eat a sandwich, no-one else can enjoy it. Non-rivalous can be enjoyed by any number of people simultaneously without being consumed. A poem. Rivalous resources are usually deemed to be *property* which need controlled access to prevent the “tragedy of the commons” (where the concept of commonality encourages people to hyperconsume). However, non-rivalous resources are limitless so are protected by intellectual property law. Both property law and intellectual property law provide varying monopolistic mechanisms to stimulate the incentive to future production. Regrettably, sometimes these monopoly rights are protected overzealously and this can be used as an instrument to stifle innovation which threatens to compete with the rightholder.

### **Constraining factors on innovation**

Lessig identifies four main constraining factors on innovation: law, architecture, social norms and market forces. These are the four main ways access to a resource are checked. By regulating access to the resource, innovation (and economic competition) can be stalled. Law signifies what behaviour is deemed acceptable in society, and what is not and provides sanctions against the latter. Social norms are similar to law in that they prescribe and proscribe behaviour. The punishment meted out for deviation is often more arbitrary (in that due process in the legal sense is absent) and less severe than a legal remedy. Market forces likewise prevent access; if you have no money you cannot buy bread. Unlike law and social norms, this force of constraint occurs at the time of the event, not subsequently. By “architecture” here Lessig refers to “nature”, the built environment, time, space and distance. I cannot be in London and New York simultaneously to enjoy the theatre. I have to choose between a show in London or one in New York. Likewise a wheelchair user cannot use a building with only steep steps. Changes in architecture are self-regulatory in the sense there need be no gatekeeper deciding on a case-by-case basis who has access to a resource and when. However, the absence of a gatekeeper does not stop access to the resource being denied.

In the real world, the architecture is constant, whereas social norms, law and market factors can and do change. In the virtual world of the internet however, even the architecture/ code (the basic rules of its nature) can be redesigned to program away perceived social problems. The extent to which this approach is desirable is disputed by Lessig. The e2e design is a design choice pure and simple, it is not immutable, he warns! It allows minimal control by established interest groups (commercial as well as political) and its strength lies in its simplicity. Any attempt to factor in control in the architecture level will have unintended consequences as well as the intended ones and the innovative engineer is most productive when he is dealing with predictable laws of nature. The architecture level is in itself a complex system and any minor change to complexity invariably leads to such unintended consequences. Additionally the engineer does not need anyone else’s permission to innovate (just the ability to use TCP/IP) and the network owners are unable to discriminate against certain users/ content.

Lessig looks at how changes in internet architecture (code) consolidated by changes to law are the basis of what he terms the “counter revolution”. This is where large corporations and governmental entities are fighting back against innovation to protect their own vested interests.

## Internet Revolution and counter-revolution

Many people would concur with Lessig when he accepts that big business has a moral and legal duty to make money for stockholders, and that it is natural and right that they will feel threatened and try to stifle competition, especially what they see as disruptive innovation. He sees large corporations reacting to the rapid innovative commons revolution through two main controls mentioned above, law and architecture. At every level he insists, additional control is being introduced. At the *content level*, legal redress is used to suppress filesharing (Napster, My.Mp3), to control how a viewer watches movie content (DeCSS) and so on. Very often the mere threat of legal action by an established interest is enough to cause an ISP to act against the individual user, since they see themselves as service providers rather than publishers representing the individual. The iCraveTV case demonstrates the way some established interest hope to break down the international characteristic of the net and introduce zones of control.

At the *Code/Logical level*, user authentication protocols control who can do what, and cable companies moving into broadband technologies are exploring ways to control content by prioritizing some types of data packets over others. Lessig doubts that a cable company with an entrenched interest in selling cable channels (and advertising) will allow unmoderated streaming movie content to flow swiftly down their lines. Some search engines in particular have been accused of pandering to authoritarian regimes and carefully selecting which links they present to the user. At the *physical level*, cable companies have a different attitude to the telephone networks which preceded them and spawned the early innovation of the internet; AT&T was legally obliged to allow ISPs access by antitrust legislation. This impacts Peer-to-Peer technologies since cable broadband allows you to download quickly but inhibits your upload speed. There is no obligation (or reason) for broadband providers to encourage open e2e architectures. In some authoritarian regimes, the government controls access to the internet by only allowing individuals to subscribe to a state-approved ISP, which is closely monitored. He looks at a representative range of cases and looks at how the issues are fought. He also suggests that the threat of legal action alone is enough to deter the average small business/ individual who does not have the deep pockets required to fight a multinational corporation.

## Analysis

Much of Lessig's thesis is uncontroversial, especially his argument that the important thing about resources (especially ideas) is not who owns/ controls them but whether they should be free or not. However, many of his predictions have failed to come about. I feel that Lessig is a victim of his own success. By warning people not to surrender their common rights in the law courts, he is helping to slow the pace of this counter-revolution and raising awareness of this issue. Since he wrote this book the Open Source software movement has taken off and is a considerable threat to established corporations. He has been shown to be half right most of the time, such as the way AOL-Time Warner merger has come to be seen by analysts as creating a monster corporation with no single direction nor focus. The executives from an established media content provider simply have a different outlook to those from an upstart innovative ISP and they have failed to do business together satisfactorily. This shows why an established business would want to keep newer competitors out of the game, but ironically the failure of AOL Time Warner to date has meant that they have been unable to impact the internet through architectural and legal reform to the degree Lessig would have had us believe. I do not believe that big companies have an out and out legal veto of internet innovation once the case gets to court, but I accept his point that the threat of legislation is often enough to cause most individuals and small companies to cease and desist for the sake of peace. Lessig's work is undoubtedly a polemic written by a lawyer disaffected with the way legal process was moving in the early 1990s, but fortunately many large companies seem to have come to the same conclusion as Lessig that young people have an appetite to download music and the best way to deal with it is to turn them into customers rather than criminals (O'Reilly 2002).

Regrettably some companies use the threat of crime to enforce sanctions against unprofitable yet popular net activities. Recently Microsoft cited the threat of pedophilic grooming as a justification for closing its unmonitored chatrooms, moving instead to subscription-based monitored systems. Cyber-rights.net makes the point that true online anonymity is impossible anyhow due to the legal framework which has appeared post-911, so it is a simple matter to exclude certain individuals or to instigate legal sanctions against users who break decency or libel laws, for example. Service providers in the UK are obliged to retain data about their customers which the police can access with minimal judicial oversight. A

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user's clickstream may be accessed in the UK without a judge's order, for instance. So the criminal threat is largely overstated to my way of thinking.

However, this move to monitored chatrooms by the large players such as Microsoft opens up a new market especially for education providers. When free chatrooms exist it is hard to persuade customers to move to monitored subscription sites even when they offer educational content. After all, such a service was already available for free. But as unmonitored rooms move to the fringe, small educational providers can create a niche- especially since the criminal threat is overstated, many parents are prepared to subscribe to monitored foreign language chats on behalf of their children. The subscription service destroys much of what core enthusiasts believe to be the essence of the net- the freedom to reinvent oneself anonymously. A shy girl can pretend to be a middle aged businessman, so her ideas are not dismissed out of hand due to her age/ gender, but stand up to criticism on their own merit. They argue that though the odd flaming occurs, it is a relatively safe way to exchange passionately held ideas. The act of typing one's ideas imposes an extra layer of consciousness, so these chatrooms give people the opportunity to express themselves in a calmer reflected way. The balance of anonymity is what makes it an exciting place to chatter. The key business strategy would seem to be to create an online atmosphere where there is supervision at a distance: the moderator can step in to offer advice on technical linguistic issues, set topics for debate and that is all. When debate overheats, a good referee can step in to cool people down, but there is no need to censor.

Lessig also talks about copyright. This has always been a contentious point in non-academic TEFL, as many see copyright flaunted on a day-day business as pages are copied from textbooks or tapes are re-dubbed to save money for the small business scale teacher. With the free (in both senses) potential of the traditional net this process amplified. So with the traditional net you had two choices; offer the site as a free service out of pure altruism (and many such excellent sites exist) or publish a textbook/ teaching resource only on the hope people will pay, and expect it to be ripped off and bootlegged. With some degree of control factored in, such as identifiers, a textbook/ teaching resource can be distributed for a marginal fee. This makes the product profitable and stimulates innovation- the original idea of copyright law providing a limited monopoly over the expression of an idea. One should note how Open source software, Red Hat Linux and StarOffice have moved to a traditional business model now. Starting as



a free service set up inroads to the market, and then allows saturation and brand recognition. There is no reason why this cannot work in a TEFL startup. Other famous computing models of market saturation include the GIF and PDF formats. The GIF format was hugely popular, but the marketing strategy backfired when the copyright owners (Unisys and IBM) started enforcing their patents covering the LZW compression algorithm. They initially announced they would never enforce their software patent, which they then retracted in 1995. The web community's response was to invent a new standard PNG/MNG (<http://www.libpng.org/pub/png/index.html> under the GNU license, <http://www.gnu.org/philosophy/gif.html>). On the other hand PDF is astoundingly successful. PDF has become industry standard because the Adobe corporation does not prevent other organizations from using and creating files in this format. A cross-platform reader application is distributed for free, and so anyone can access data stored in PDF. More importantly, Adobe has been seen by the community to act in good faith, and so there has not been to date an effective challenge to PDF's dominance. PDF can enable control, in the Lessig sense, as an author can restrict access to printing through technical means and through legal instruments can limit distribution and republication. Yet this does not encumber innovation, as the popularity of the medium attests. Those to saturate the net with a TEFL brand need to bear this latter point particularly in mind.

The biggest issue with bringing TEFL business innovation to the net is competition. There are huge players in the TEFL market, particularly in Asia, who are in a position to market their web sites and use legal instruments to limit smaller corporate activity. Even internally the labour union activity is highly restricted and strike ballots are suppressed with cease and desist notices. Unless one is subcontracted under the umbrella of one of the huge multi-million dollar organizations it is hard to see how one can enter the market. The notable exception is of course academic sites, where the largest scope for innovation exists, only balanced by bandwidth constraints and the need for full-time moderators. Universities have their own pool of users, and brand recognition.

## Conclusion

The old net and the new net can sit comfortably side-by-side, just as open source software will never truly supplant paid for packages. Some control has become necessary, but as the two systems may sit comfortably alongside each other hopefully the end user will have the opportunity to choose between solutions coded using control and other solutions relying on pure e2e. The scary aspect of control is control to the architecture layer by ISPs, particularly cable companies who have a tradition of controlling a user's access to information. Such a net, where some packages of data are prioritized over others on an arbitrary basis decided by the ISP to consolidate its own perceived interest, is in my opinion the real threat to creativity, and will destroy the small TEFL teacher's innovation unless they are prepared to pay the gatekeeper big fees and compete with the giant high street Language Schools who have immensely deep pockets and experience at advertising over the mainstream media. Academia may present the best opportunity to a small or medium sized venture hoping to build a brand image on their TEFL product.

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A polemic discussion of the e2e nature of the old net

<http://www.cdt.org/privacy/guide/start/>

Center for Democracy and Technology, a US based think tank

<http://burnallgifs.org/>

An entertaining site vitriolic against GIF patents by Unisys and IBM. Contains the  
original 1995 "free use" declaration and the subsequent 1999 retraction by Unisys.

<http://www.mp3.com>

MP3.com

<http://www.2600.com>

Hacker 2600 Magazine

<http://creativecommons.org/>

A library of work released under GNU license

<http://slashdot.org>

Slashdot Webzine

<http://www.slate.msn.com>

Slate

<http://www.linuxjournal.com>

Linux Journal

[www.shirky.com](http://www.shirky.com)

Clay Shirky, internet journalist

<http://ptech.wsj.com>

Walt Mossberg's Personal Technology Column from the Wall Street Journal

<http://www.riaa.com>

Recording Industry Association of America (RIAA)

<http://www.openp2p.com/>

Advocates for an Open P2P network

[www.ietf.org](http://www.ietf.org)

IETF: The Internet Engineering Task Force, a community of engineers interested in and developing the physical architecture of the internet

<http://www.bodleian.ox.ac.uk>

Bodleian Library, Oxford: Main research library at Oxford University, copyright deposit library and academic resource.

<http://promo.net/pg>

Project Gutenberg: A comprehensive collection of non-proprietary classics in e-text

format for download.

<http://www.yale.edu/lawweb/avalon/diana/>

Project Diana: The online Human Rights Archive, Yale Law School

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