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# The Internet As Commons: A Tale of Enclosure

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The science of association, as Tocqueville called it, is currently in an extraordinary position. Questions of voluntary action, nonprofit participation and philanthropy are integral to no less than four of the most central questions of our times:

First, "the third sector" (or commons) is intimately involved in the dramatic reverses of communist totalitarianism and the world-wide renaissance of civil society. (Lohmann, 1992) This issue has, for our day-to-day political and community interests the most immediate and profound implications. Social commentators as diverse as Alexander Solzynitzen and John Le Carre have noted that all of us living in the west have also been profoundly affected by the cold war. It may take a generation to fully rediscover civil society in the West, just as we already know that it will in Central Europe and Asia. "The velvet revolution" of 1989-90 marks a remarkable and profound turning point in the history of the world. Havel, or some mute, inglorious Milton, may yet his place alongside Paine, Tocqueville or Burke in exploring its significance.

Second, association is also a central question in contemporary science in a most profound way. There is in the philosophy of science, along side continuing fascination with positivism, and the more recent misadventures with post-modern relativism, a long-established tradition which places the irreducible facts of plurality and sociality as central to the scientific process. The current lowly status of social science in the day-to-day world of public affairs should not blind us to John Dewey's essential insight that the open debate implicit in the scientific model bears great resemblance to the open and free exchange of democratic debate.

Thirdly, voluntary association and social movements are major practical and theoretical considerations in world-wide concern for the environment. There is also an intriguing, if unexplored, set of theoretical concerns buried here: Ask any biologist, naturalist or forester on your campus about Garrett Hardin and the tragedy of the commons and you will get introduced to some nuances of free-riding and the ecological implications of gift exchange which you probably hadn't considered.

Finally, and possibly most surprisingly of all, is the fact that electronic association is a central issue in current debate over the information superhighway as Howard Rheingold's book "The Virtual Community" suggests. Electronic interaction and association are even more basic than information in this extraordinary world-wide commons which has grown up

around the internet. It is out of electronic interaction and association that information arises on the internet.

My view of the future of the internet is decidedly medieval: It appears to be only a matter of time before the same rich and powerful information barons who already control such "fourth estate" communication industries as newspaper, magazine and book publishing, television networks and movie production facilities establish their toll-booths on the information superhighway as well.

Fortunately, within this electronic ocean of corporate and proprietary feudalism, there may also be room for an archipelago of *freistaaten*; "free city-states" functioning as autonomous and self-governing islands for the arts, sciences, humanities, social service and community. These islands of cooperation in the seas of control and competition of the future internet will, in all likelihood, take a form much like face to face groups and associations which make up the wider class of commons. They will be characterized by the five signature characteristics of commons: voluntary and uncoerced participation; sharing of software, ideas and other resources; identification and conduct of projects carrying out various mutually-agreed upon objectives or joint purposes; an emergent and evolving sense of mutuality, camaraderie and "civic friendship"; and group generated and enforced rules of conduct and norms of behavior expressing indigenous standards of justice.

These are not esoteric or unrelated notions in the context of the internet: No one should be coerced to join a discussion list, for example, or to create a WWW home page. Freeware and shareware often result in the same kind of recognitions and intangible rewards-in-themselves supplemented by recognition by a peer community which sustains more traditional artists, scientists and writers. For several years, writing the most awesome WWW server possible for a particular type of equipment or operating system has proven a common objective of significant numbers of programmers in world-wide electronic commons, whether they were writing for Windows, Macintosh, or VM-CMS. Each of these commons were self-defining as to purpose and standards for when the objective had been achieved and produced significantly different results. Text-oriented CMS Web clients, for example, embody considerably different standards than the GUI approaches of Mosaic, for reasons known and of interest only to members of these respective commons. Finally, through on-line gossip, "flaming", law suits and other informal and formal sanctions, each of these electronic commons is fully capable of making and enforcing agreed upon standards of justice and fair play. Has a developer borrowed others' ideas and concepts without suitable acknowledgment of their efforts? Should she be sued? Should he be shunned? Such topics are discussed and negotiated repeatedly in electronic commons just as they are in face to face commons.

Nor is this type of activity limited to programmers and software development. One of the first reactions to the Tien Ah Mein square massacre in China was the worldwide proliferation, via the internet of first-person accounts of events. Likewise, the recent earthquake in Japan resulted in the sudden posting by volunteers of Mosaic home pages listing casualties, calls for help and other disaster-associated communications to a world-wide community. Interested elementary school children in Europe and the United States could be directly in touch with volunteers on the scene, by-passing completely (but not eliminating) intermediary action of the traditional news media. Thus, it seems clear that the electronic environment has given rise to new but clearly recognizable forms of electronic association, voluntary action, nonprofit organization, philanthropy.

Whatever the future brings, the remarkable record of the unplanned, spontaneous manner in which international networks of scientists, *belle-lettrists*, adventurers simply grew up via communication by electronic mail and file transfer on the internet over the past two decades will endure in memory as a remarkable tribute to the power of the electronic commons. Moreover, with intelligent pricing strategies together with a modicum of public regulation, there is no reason that market practices on the internet in the future need be any more important in the future than telephone bills are for most of us today. Unlike governments, corporate shareholders can ordinarily be depended upon to show consistent indifference to anything but the corporate bottom line (together, perhaps, with occasional spasms of propriety and sentimentality as long as the latter aren't too hard on profits.)

The internet as it currently exists is many things. It has been --among other things-- a commons for many thousands (and now millions) of people in recent years. In fact, it is one of the specific venues I had in mind when I first presented the idea of the commons as a metaphor for voluntary association, nonprofit organization and philanthropy. (Lohmann, 1987) Regardless of the degree to which the existing internet is overwhelmed by future visions of the electronic superhighway as one vast mall, arcade and casino, the example set by the internet community will always remain one of the truly remarkable events in the history of voluntary action.

The Internet is also **not** many things. In its fundamental character, it is not, as some would wish, completely cost-free. But then it is also not, as we say, "for profit." So long as the NSF backbone remains in place (or until lobbyists for various private interests are successful in capturing control of this public good), commercial activity (e.g., advertising and marketing) and blatantly political activity (e.g., lobbying) may remain expressly forbidden.

The Internet is also not a community in the conventional senses of that much over-worked term. It is also not a place, although everyone typically has to go some place to connect to the internet. The internet itself is many places and it is no-place. Likewise, the internet is not an organization.

Although there are numerous nonprofit organizations involved, the reality of the internet is something quite apart from those organizations, however important they have been in creating and sustaining it.

The Internet is truly international. If you don't believe this, just try out some of the foreign language gopher servers listed under "All The Gophers In The World!" As such, it could emerge as one of the most powerful antidotes yet devised to the twentieth century scourge of rampant nationalism. The ARNOVA-L list server, as a small example, currently has participants from at least a dozen countries on four continents, and because of our policy of restricting membership and not publicizing the list widely, we remain a very small list.

Yet, for all its internationalism, the internet also has an amazing (and unprecedented) local quality to it, as quite literally thousands of "local" interests converge around bulletin boards, list servers, net news lists, WWW pages and all manner of topics of mutual interest. Beginners often ask for where the directory or the "card catalog" for the internet is and how to access "it". Only with time (and sufficient electronic migration) do they come to understand that "it" is them (or us) and the information we all give and get.

This internet culture of voluntary association has produced an impressive stock of software as freeware or low-cost shareware. The ready availability of Macintosh programs like Fetch, Turbogopher, Possibly the best piece of public domain software to come along yet (Mosaic) was developed in Switzerland and perfected in Illinois. Mosaic is an easy to use, all-in-one multimedia tool for easily migrating the internet, opening texts, pictures, sound and video recordings and activating FTP (file transfer protocols), telnet (logons to remote computers) and other operations in the bargain. Mosaic and other, similar "web browsers" make use of the URL (Universal Resource Locator) addressing schemes and other, underlying protocols of the World Wide Web (WWW), and an off-shoot of printer's Standard Graphical Markup Language (SGML) known as HTML (HyperText Markup Language). In this medium, any moderately sophisticated user can learn to create web documents or "pages" of HTML-formatted text and "link" them to any other URL-addressable document on the internet. (I decided to undertake learning HTML after reading that students in a third grade class in Minnesota were already creating their own pages.)

The phenomenon which is the internet demonstrates many of the characteristics, assumptions and limits of a commons. Before we explore those, however, a few definitions are necessary. In computerese or technospeak, a network -- whether local area (LAN), wide-area (WAN) or other -- is a set of processing units (mainframes, desktops, printers, scanners, etc.) and the wiring which ties them together for various purposes. **An** internet is simply a network of networks; a network whose nodes consist of networks rather than processors. By contrast, **the** internet is a label

describing a world-wide internet which grew up spontaneously from a variety of governmental, community, and mostly university, sources. The internet is a marvelous engineering achievement-- a world-wide system of machine-machine exchanges. The internet also offers a series of complex and interesting problems and solutions to various human-machine interface problems for human factors psychology. Most interesting of all, however, is the role of the internet in fostering space-independent (and to a lesser extent, time-independent) association, or social interaction on a world-wide basis.

## Functioning Anarchy

I wish to distinguish here between the internet as it has evolved and the proposed "information superhighway" as I expect it to emerge. The internet as it currently exists is, in my view, one of the purest actual examples ever seen of a functioning anarchy, in the fullest sense of that term suggested by those 19th century socialist-individualists associated with the term. It is also a strong counter-statement to those who suppose cooperating without authority and control to be impossible and lead inevitably to a Hobbesian war of all against all. Over at least decades of experience so far this has not happened. Although the "flame wars" phenomenon suggests periodic breakdowns of order, and an occasional hacker or kiddy-porn purveyor may be hauled into court, the internet as a whole is sufficiently possessed of decorum and lacking in authority to give real pause to those interested in social and political theory.

Anarchy, as a social order without authority, may be inherently unstable over the long haul, and as an anarchy, the internet is unlikely to continue in its present state for very much longer. It could dissolve into the chaos and disorder which most people since Hobbes associate with that term. Or, it could be transformed into some other form, most probably one vast, world-wide home shopping channel.

The participatory anarchy of the internet is simply one of several contending paradigms: Debate over the clipper chip, for example, shows that the authoritarianism and central control paradigms of mainframe computing is not dead by any means. (In that vein, I recently was told -- I swear -- by a mainframe programmer, "I just don't see what all the fuss is over desktop computing. It's simply a fad. You're always going to need your mainframes, assembly language programmers and DBMS to do real computing.") This statement is, of course, true on its face if you define "real" computing -- as she does -- in a sufficiently esoteric manner.

For some, the future is an internet in which someone is clearly and visibly put back "in charge" of computing on the internet and in each and every organization, and must approve permissible actions. There are, of course, also still plenty of strong-monarchists, fascists and authoritarians of other stripes in the general republic of the internet.

There is also plenty of real -- albeit local -- authority behind the surface anarchy of the internet. People in most organizations require some measure of approval, for example, of expenditures for all equipment, wiring, software, metering and downloading costs associated with internet use. Public laws of all sorts apply to internet communications, even if the law is sometimes faced with unprecedented situations and difficult-to-apply precedents. (Educom Review articles)

Overall, one very optimistic vision of the future is an internet operating under the watchful, but limited eye of the "nightwatchman state" of liberal theory: Sufficient authority to protect persons and property, together with a continued full flowering of free and creative expression of which we have seen much already.

## Dungeons and Dragons

A second and more disturbing vision for the information superhighway comes directly from the nihilistic nightmares of the sci-fi world. Life on the internet from this vantage largely involves endless cycles of aggressive violence as the principal mode of interaction in "cyberspace." Originally, this vision is one of games and passive entertainment; the more violent and destructive the better. It has been easy in the halls of higher education to dismiss this vision entirely. Unfortunately, the dark visions of computer games (and those movies which pursue the same aesthetic) comes to look more and more like real urban inner-city landscapes of despair and hopelessness. We must ask, however, is this the necessary end of anarchy? Life in this milieu is portrayed in purely Hobbsean terms as "mean, nasty, brutish and short."

One need only compare the multiple pages of computer catalogs devoted to games like "Darkseed", "The Chaos Continuum" and "Lunicus", the rash of movies like Bladerunner and the endless hours of MTV nightmare sequences to the handful of offerings of a genuine educational offerings in any Multimedia Catalog to get a sense of who's presently ahead in that face off! This is also the vision of the antisocial world of the virus writers: "I wrote this really neat virus! It completely trashes hard disks and could destroy the work of thousands of people who will never know what hit them! Yes!" This, too, is incorporated into the vision of the internet.

Unfortunately, the full reality of the internet includes attempts at wanton vandalism, sexual harassment, pornography, sexual solicitation of small children and the mob boss who was recently arrested after transmitting records of gambling receipts via e-mail. Together, these events suggest the intrusion of the full range of modern realities into the peaceable kingdom which has been the internet commons. The question is how to encourage more peace and cooperation and less aggression and crime?

## The Mall of the Universe

The third, and in the long run most likely, vision for the information superhighway is as an enormous shopping venue. Fortunately (or unfortunately), the motives of its adherents mean that this vision carries with it potential for an inherent compromise with each of the future visions noted above. The commercial attitude is much like that of a property owner in a buyers' market toward brothel operators and labor organizers seeking to rent rooms on the floors above main street: "As long as you pay the rent, and the boys don't break the place up, I don't give a damn what goes on up there." Thus, given the radically greater abundance of available channels for information flow, it is not inevitable that commercial development of the internet must lead to the vacuity of commercial television. Both the quality competition of public television and the expanded access offered by cable should be instructive here.

Yet, commons on the internet, are vulnerable in many ways. They are vulnerable both to free-riding and to the siren call of profit. Many a distributor of shareware has found that the number of free-riding users far exceeds the number of payers, for example. This is not a unique problem for the commons, however. As the "illegal copying" of software demonstrates, commercial vendors unable to control distribution of their product also have their problems with free riders. Indeed, the information paradigm of the internet shows every sign of potential for overturning a broad variety of "materialist" economic and legal doctrines premised on national boundaries and tangible goods.

It is understandable when the developer of a good product with strong market appeal takes the product out of the commons of shareware and into the marketplace. But such action may not pose a particular threat to the internet as a commons, in part because of the non-exclusive character of information. The developers of Mosaic (developed at a publicly funded supercomputer site and in the public domain) are attempting to show an important principle for the network community: Public subsidy of adequate public domain versions of software with minimal feature sets may be able to widely redistribute information resources even as they create markets for consumers willing to pay for additional features. Of course, this may be especially true when those minimal features create a veritable revolution like Mosaic has done. There is, it would appear precedent for this also in the word processing revolution, where today's feature-rich software was preceded by both public domain and commercial text editors.

In important respects, the "public domain" of the internet is not really a public goods issue yet because of political, economic, social class and other restrictions on access: You have to have access to a computer and know how to use it, and to pay for a connection or work for someone who pays for a connection before you can "get on" the internet. And you have to want to go

there and expect to find something of value when you do. Such limits on access are as true for poor communities and poor countries as they are for poor people.