

Peer to peer: from technology to politics to a new civilisation?

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A specter is haunting the world: the specter of peer to peer. The existing economic system is trying to co-opt it, but it is also a harbinger of a new type of human relationship, and may in the end be incompatible with informational capitalism.

I. TECHNOLOGY

1. Peer to peer as technological paradigm

Business and technology watchers would have a hard time of avoiding it, as peer to peer is everywhere these days.

Peer to peer is first of all a new technological paradigm for the organisation of the information and communication infrastructure that is the very basis of our postindustrial economy. The internet itself, as network of networks, is an expression of this paradigm. As 'end to end' or 'point to point' network, it has replaced both the earlier hierarchical mainframe form, but also the client-server form, which posited a central server with associated dependent computers, associated in a network. Instead, in a peer to peer network, intelligence is distributed everywhere. Every node is capable of receiving and sending data. The first discussion note below explains why this peer to peer mode makes eminent sense in terms of efficiency, as compared to the older models.

Distributed computing is now considered to be the next step for the worldwide computing infrastructure, in the form of grid computing, which allows every computer to use its spare cycles to contribute to the functioning of the whole, thereby obviating the need for servers altogether. The telecommunication infrastructure itself is in the process of being converted to the Internet Protocol and the time is not all too far away where even voice will transit over such P2P networks. In the recent weeks, telecom experts have been able to read about developments such as Mesh Networks or Ad Hoc Networks, described in The Economist:

The mesh-networking approach, which is being pursued by several firms, does this in a particularly clever way. First, the neighbourhood is "seeded" by the installation of a "neighbourhood access point" (NAP)—a radio base-station connected to the Internet via a high-speed connection. Homes and offices within range of this NAP install antennas of their own, enabling them to access the Internet at high speed.

Then comes the clever part. Each of those homes and offices can also act as a relay for other homes and offices beyond the range of the original NAP. As the mesh grows, each node communicates only with its neighbours, which pass Internet traffic back and forth from the NAP. It is thus possible to cover a large area quickly and cheaply.

(http://www.economist.com/printedition/displayStory.cfm?Story_ID=1176136)

Moreover, there is the worldwide development of Wireless LAN networks, by corporations on the one hand, but also by citizens installing such networks themselves, at very low cost.

Here's a description of what is happening in Hawaii, where a peer to peer wireless network is covering more than 300 square miles:

Now people all over the island are tapping into Wiecking's [wireless links](#), surfing the Web at speeds as much as 100 times greater than standard modems permit. High school teachers use the network to leapfrog a plodding state effort to wire schools. Wildlife regulators use it to track poachers. And it's all free. Wiecking has built his network through a coalition of educators,

researchers, and nonprofit organizations; with the right equipment and passwords, anyone who wants to tap in can do so, at no charge..”

(<http://www.business2.com/articles/mag/0,1640,38492,00.html>)

A recent in Fortune magazine uncovered yet another aspect of the coming peer to peer age in technology, by pointing out that the current 'central server based' methods for interactive TV are woefully inadequate to match supply and demand:

“Essentially, file-served television describes an Internet for video content. Anyone--from movie company to homeowner--could store video on his own hard disk and make it available for a price. Movie and television companies would have tons of hard disks with huge capacities, since they can afford to store everything they produce. Cable operators and satellite companies might have some hard disks to store the most popular content, since they can charge a premium for such stuff. And homeowners might have hard disks (possibly in the form of PVRs) that can be used as temporary storage for content that takes time to get or that they only want to rent--or permanent storage for what they've bought.”

(http://www.fortune.com/indexw.jhtml?channel=artcol.jhtml&doc_id=208364)

In general one could say that the main attractiveness of peer to peer is that it will seamlessly marry the world of the internet and the world of PC's. Originally, ordinary PC users who wanted to post content or services needed access to a server, which created inequality in access, but with true peer to peer file sharing technologies, any PC user is enabled to do this.

2. Peer to peer as distribution mechanism

The last story points to yet another aspect of peer to peer: its incredible force as distribution mechanism. Indeed, the users of Personal Video Recorders such as TiVo are already using file sharing methods that allow them to exchange programs via the internet. But this is of course dwarfed by what is currently happening in the music world.

Again the advantage here should be obvious, as in this mode of distribution, no centralising force can play a role of command and control, and every node can have access to the totality of the distributed information.

The latest estimates say that:

.” Worldwide annual downloads, according to estimates from places like Webnoize, would indicate that the number of downloads -- if you assume there are 10 songs on a CD -- is something like five times the total number of CDs sold in the U.S. in a year, and one-and-a-half times the worldwide sales.”

(<http://www.salon.com/tech/feature/2002/06/13/liebowitz/index.html>) .

The original file sharing systems, such as Napster, AudioGalaxy, and Kazaa, still used central servers or directories which could be tracked down and identified, and thus attacked in court, as indeed happened, thereby destroying these systems one by one. But today, the new wave of P2P systems avoid such central servers altogether. The most popular current system, an expression of the free software community, i.e. Gnutella, had over 10 million users in mid-2002, and as they are indeed distributed and untraceable, have been immune to legal challenge.

3. Peer to peer as production method

P2P is not just the form of technology itself, but increasingly, it is a 'process of production', a way of organising the way that immaterial products are produced (and distributed and 'consumed'). The first expression of this was the Free Software movement launched by Richard Stallman. Expressed in the production of software such as GNU and its kernel Linux, tens of thousands of programmers are cooperative producing the most valuable knowledge capital of the day, i.e. software. They are doing this in small groups that are seamlessly coordinated in the greater worldwide project, in true peer groups that have no traditional hierarchy. Eric Raymond's seminal essay/book "The Cathedral and The Bazaar", has explained in detail why such a mode of production is superior to its commercial variants.

Richard Stallman's Free Software movement is furthermore quite radical in its values and aims, and has developed legal devices such as Copyleft and the General Public License, which uses commercial law itself to prohibit any commercial and private usage of the software.

"`Free software" is a matter of liberty, not price. To understand the concept, you should think of `free" as in `free speech," not as in `free beer."

Free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it refers to four kinds of freedom, for the users of the software:

- *The freedom to run the program, for any purpose (freedom 0).*
- *The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.*
- *The freedom to redistribute copies so you can help your neighbour (freedom 2).*
- *The freedom to improve the program, and release your improvements to the public, so that the whole community benefits. (freedom 3). Access to the source code is a precondition for this."* (2)

Less radical, and perhaps more widespread because of this, is the Open Source movement launched by the above-mentioned Eric Raymond, which stipulates that the code has to be open for consultation and usage, but where there are restrictive rules and the property remains corporate. Together, even in a situation where the software world is dominated by the Microsoft monopoly, these two types of software have taken the world by storm. The dominant server of the internet (Apache) is open source, but more and more governments and businesses are using it as well, including in mission-critical commercial applications. Most experts would agree that this software is in fact more efficient than its commercial counterparts. What is lacking today is the spread of user-friendly interfaces, though the first open source interfaces are coming into existence.

Please also remember that peer to peer is in fact the extension of the methodology of the sciences, which have been based since 300 years on 'peer review'. Scientific progress is indeed beholden to the fact that scientists are accountable, in terms of the scientific validity of their work, to their peers, and not to their funders or bureaucratic managers. And the early founders of the Free Software movement were scientists from MIT, who exported their methodology from knowledge exchange to the production of software. In fact, MIT has published data showing that since a lot of research has been privatised in the U.S., the pace of innovation has in fact slowed down. Or simply compare the fact of how Netscape evolved when it was using Open Source methods and was supported by the whole internet community, as compared to the almost static evolution of Internet Explorer, now that it is the property of Microsoft.

The methodologies initiated by the Free Software and Open Source movements are rapidly expanding into other fields, witness the movements such as the royalty-free music movement, the Open Hardware project (and the Simputer project in India), OpenTV and many much more of these type of cooperative initiatives.

I would like to offer an important historical analogy here. When the labour movement arose as an expression of the new industrial working class, it invented a whole ristic of new social practices, such as mutual aid societies, unions, and new ideologies. Today, when the class of knowledge workers is socially dominant in the West, is it a wonder that they also create new and innovative practices that exemplify their values of cooperative intellectual work?

4. Peer to peer in manufacturing?

We would in fact there to go one step further and argue that peer to peer will probably become the dominant paradigm, not just in the production of immaterial goods such as software and music, but increasingly in the world of manufacturing as well.

Two recent examples should illustrate it. Lego Mindstorms is a new form of electronic Lego, which is not only produced by Lego, but where thousands of users are themselves creating new building blocks and software for it. The same happened with the Aibo, the artificial dog produced by Sony, which users started to hack, first opposed by Sony, but later with the agreement of the company. This makes a lot of sense, as indeed, it allows companies to externalise R&D costs and involve the community of consumers in the development of the product. This process is becoming generalised. Of course, work has always been cooperative (though also hierarchically organised), but in this case, what is remarkable is that the frontier between the inside and the outside is disappearing. This is in fact a general process of the internet age, where the industry is moving away from mass production to one to one production or 'mass customisation', but this is only possible when consumers become part and parcel of the real production process. If that is the case, then that of course gives rise to contradictions between the hierarchical control of the enterprise, vs. the desires of the community of users-producers.

5. Some preliminary considerations

One has of course to ask oneself, why is this happening, and I believe that the answer is clear. The complexity of the post-industrial age makes centralised command and control approaches, based on the centralised control, inoperable. Today, intelligence is indeed 'everywhere' and the organisation of technology and work has to acknowledge that.

And more and more, we are indeed forced to conclude that peer to peer is indeed a more productive technology and way of organising production than its hierarchical, commodity-based predecessors. This is of course most clear in the music industry, where the fluidity of music distribution via P2P is an order of magnitude greater, and at marginal cost, than the commodity-based physical distribution of CD's.

This situation leads to an interesting and first historical analogy: when capitalist methods of production emerged, the feudal system, the guilds and the craftsmen at first tried to oppose and stop them (up to the physical liquidation of machines by the Luddites in the UK), but they largely failed. It is not difficult to see a comparison with the struggle of the RIAA (Recording Industry Association of America) against Napster: they may have won legally, but the phenomenon is continuing to spread. In general, we can interpret many of the current conflicts as pitting against each other the old way of production, commodity-based production and its legal infrastructure of copyright, and the new technological and social practices undermining these existing processes. In the short term, the forces of the old try to increase their hold and faced with subverting influences, strengthen the legal and the repressive apparatus. But in the long term the question is: can they hold back these more productive processes?

In the second part, we see how the peer to peer paradigm of technological organisation, is paralleled by similar forms of organisation in human society, which are of course enabled by the technological substrate we have just been discussing. Indeed, it would be quite difficult to sustain a worldwide networked political movement, or the Free Software movement for that matter, without the enablement that the technology is providing.

II. SOCIAL ORGANISATION AND CULTURE

1. Peer to Peer in Politics

Our description of Free Software and Open Source has already described an important shift, from technology to a new and soon dominant form of social organisation. If we open our eyes, we can see the emergence of P2P as the new way of organising and conducting politics. The alterglobalisation movement is emblematic for these developments.

- they are indeed organised as a network of networks
- they intensively use the internet for information and mobilisation and mobile (including collective email) for direction on the ground
- their issues and concerns are global from the start
- they purposely choose global venues and heavily mediated world events to publicize their opposition and proposals.

Here is a quote by Immanuel Wallerstein, 'world system' theorist and historian, on the historic importance of Porto Alegre and its network approach to political struggle:

"Sept. 11 seems to have slowed down the movement only momentarily. Secondly, the coalition has demonstrated that the new antisystemic strategy is feasible. What is this new strategy? To understand this clearly, one must remember what was the old strategy. The world's left in its multiple forms - Communist parties, social-democratic parties, national liberation movements - had argued for at least a hundred years (circa 1870-1970) that the only feasible strategy involved two key elements - creating a centralized organizational structure, and making the prime objective that of arriving at state power in one way or another. The movements promised that, once in state power, they could then change the world.

*This strategy seemed to be very successful, in the sense that, by the 1960s, one or another of these three kinds of movements had managed to arrive at state power in most countries of the world. However, they manifestly had not been able to transform the world. This is what the world revolution of 1968 was about - the failure of the Old Left to transform the world. **It led to 30 years of debate and experimentation about alternatives to the state-oriented strategy that seemed now to have been a failure. Porto Alegre is the enactment of the alternative. There is no centralized structure. Quite the contrary. Porto Alegre is a loose coalition of transnational, national, and local movements, with multiple priorities, who are united primarily in their opposition to the neoliberal world order. And these movements, for the most part, are not seeking state power, or if they are, they do not regard it as more than one tactic among others, and not the most important.**"* (source: <http://fbc.binghamton.edu/commentr.htm>)

This analysis is confirmed by Michael Hardt, co-author of *Empire*, the already classic analysis of globalisation that is very influential in the more radical streams of the anti-globalisation movement:

*"The traditional parties and centralized organizations have spokespeople who represent them and conduct their battles, but no one speaks for a network. How do you argue with a network? The movements organized within them do exert their power, but they do not proceed through oppositions. **One of the basic characteristics of the network form is that no two nodes face each other in contradiction; rather, they are always triangulated by a third, and then a fourth, and then by an indefinite number of others in the web. This is one of the characteristics of the Seattle events that we have had the most trouble understanding: groups which we thought in objective contradiction to one another—environmentalists and trade unions, church groups and anarchists—were suddenly able to work together, in the context of the network of the multitude.** The movements, to take a slightly different perspective, function something like a public sphere, in the sense that they can allow full expression of differences within the common context of open exchange. But that does not mean that networks are passive. They displace contradictions and operate instead a kind of alchemy, or rather a sea change, the flow of the movements transforming the traditional fixed positions; networks imposing their force through a kind of irresistible undertow."* (<http://www.newleftreview.net/NLR24806.shtml>)

Here is also a description by Miguel Benasayag of the type of new organisational forms exemplified in Argentina:

"Les gens étaient dans la rue partout, mais il faut savoir quand même qu'il y a une spontanéité «travaillée», pour dire ce concept là. Une spontanéité travaillée, cela ne veut pas dire qu'il y avait des groupes qui dirigeaient ou qui orchestraient ça, bien au contraire. Quand arrivaient des gens avec des bannières ou des drapeaux de groupes politiques, ils étaient très mal reçus à chaque coin de rue. Mais en revanche, une spontanéité «travaillée» en ce sens que l'Argentine est «lézardée» par des organisations de base, des organisations de quartier, de troc..."

C.A. : Lézardée, c'est un maillage?

M.B. : Oui, c'est ça, il y a un maillage très serré des organisations qui ont créé beaucoup de lien social. Il y a des gens qui coupent les routes et qui font des assemblées permanentes pendant un mois, deux mois, des piqueteros. Il y a des gens qui occupent des terres... Donc cette insurrection générale qui émerge en quelques minutes dans tout le pays, effectivement elle émerge et elle cristallise des trucs qui étaient déjà là. Donc c'est une spontanéité travaillée ; c'est à dire que quand même il y a une conscience pratique, une conscience corporisée dans des organisations vraiment de base. C'est une rencontre du ras-le-bol, de l'indignation, de la colère populaire, une rencontre avec les organisations de base qui sont déjà sur le terrain. J'étais en Argentine quelques jours avant l'insurrection. et il y avait partout partout des coupures de routes, des mini insurrections. Et ce qui s'est passé, c'est qu'il y a eu vraiment comme on dirait un saut qualitatif: les gens en quantité sortent dans la rue et y rencontrent les gens qui étaient déjà dans la rue depuis très longtemps en train de faire des choses. Et cela cristallise et permet de faire quelque chose d'irréversible. »

(<http://oclibertaire.free.fr/ca117-f.html>)

What is significant is that the Argentinean demonstrators seemed to reject the whole political class, not just the established parties but also the left-wing radicals who wanted to speak for them and 'centralise their struggles', clearly opting for various forms of self-organisation! So here, the often decried anti-politics have a whole different context, not as a sign of apathy, but as a sign of rejection of hierarchical forms.

A report from **the Canadian Security Intelligence Service** has paid particular attention to the innovative organising methods of the alterglobalisation protesters, and to their use of technology: internet before and after the event and cell phones during the events. It concludes that with these innovations, established police powers have great difficulty to cope:

*" Cell phones constitute a basic means of communication and control, allowing protest organizers to employ the concepts of mobility and reserves and to move groups from place to place as needed. The mobility of demonstrators makes it difficult for law enforcement and security personnel to attempt to offset their opponents through the presence of overwhelming numbers. **It is now necessary for security to be equally mobile, capable of readily deploying reserves, monitoring the communications of protesters, and, whenever possible, anticipating the intentions of the demonstrators.**"*

Another example of P2P functioning is the network of independent journalists IndyMedia, which refuse to nominate 'spokespeople', and thus have been described in similar way: every node of the network is equally representative.

Of course, these networked forms of organising are not the sole preserve of the left, just as the forms of industrial organisation were avidly used by the Nazis, who ideologically wanted to revert to an earlier age, witness the intensive way that the Al Qaeda forces have used networked technologies, networked forms of organisation etc.. as I have described in an earlier French-language issue on that particular subject. (unpublished, available from mbauwens@skynet.be).

Here's an example of P2P organising at the extreme right, amongst the fastest growing radical religion today, the Odinists:

"Today, the number of white racist activists, Aryan revolutionaries, is far greater than you would know by simply looking at traditional organizations. Revolutionaries today do not become members of an organization. They won't participate in a demonstration or a rally or give out their identity to a group that keeps their name on file, because they know that all these organizations are heavily monitored. Since the late 1990s, there has been a general shift away from these groups on the far right.

*This has also helped Odinism thrive. Odinists took **the leaderless resistance concept** of [leading white supremacist ideologue] Louis Beam and worked on it, fleshed it out. They found a strategic position between the upper level of known leaders and propagandists, **and an***

underground of activists who do not affiliate as members, but engage instead in decentralized networking and small cells. They do not shave their heads like traditional Skinheads or openly display swastikas.”
(<http://www.splcenter.org/cgi-bin/goframe.pl?refname=/intelligenceproject/ip-4q9.html>)

This last development allows a smooth transition to the next, perhaps unexpected description of peer to peer as a new emerging concept in the field of spirituality.

2. Peer to Peer in Spirituality

Let us start with a revealing quote, from June Campbell, a female practitioner of Tibetan Buddhism, who has been the ‘secret consort’ (lover) of the well-known tulku Kali Rinpoche, as she describes in the very interesting testimonial book, ‘Traveler in Space’. It shows the tension between what are perhaps valuable psycho-technologies, which can bring new forms of human awareness, but also how they are embedded in hierarchical, even feudal, forms of organisation:

“Tricycle: How did misogyny help male monastic practice?

Campbell: In the very popular text of Milarepa’s life story—which all lay people and monastics read—there are many expressions of ambivalence about women: how women are polluting, how they are an obstacle to practice, that at best women can serve others and at worst they are a nuisance. At the same time, women are transcendentalized into goddesses, dakinis, female aspects of being that men must associate with in order to reach enlightenment. On the one hand, the monastic boys were cut off from women, from maternal care, from physical contact, from a daily life in which women played nurturing and essential roles, and this whole secular way of life was devalued in favor of a male-only society. And yet these boys grew into practitioners who needed women, either in symbolic form or real women as consorts, to fulfil their quest. So even misogyny, which was extensive in the monasteries, was used as a way of helping these young men in their practice. In order for patriarchy to survive, women had to be subjugated.”
(<http://www.theatlantic.com/unbound/interviews/int2002-02-08.htm>)

To make a long story short: June Campbell describes in her book how the Tibetan system puts woman in submissive positions, and because it does not honor their place in the spiritual system, and does not recognise the sexual needs of the male lama’s, it obliges women to enter into secret, hypocritical, and subordinate sexual relationships.

But this is just one example of what happened on a massive scale in the late sixties, seventies and eighties. There was a massive spiritual hunger in the West (the demand), a supply in the East, but which was embedded in hierarchical and feudal relationships. If at least in their own countries these spiritual leaders were beholden to the controlling influence of tradition and convention, this was not the case in the West, and many devotees willingly gave up their critical and independent thinking only to be exploited by a whole series of ‘scumbag guru’s’ (David Lane’s Neural Surfer website had a whole site on them, with extensive documentation of their misdeeds). Thus in the nineties arose a critical counter-movement, expressed in books such as “The Guru Papers” by the Kramers, and in a critique of the hierarchical assumptions of eastern spiritualities.

As a result, there has been the emergence of a great number of circles, which are based on peer to peer relationships, where a number of spiritual searchers, which consider themselves to be equals, collectively experiment and confront their experiences. This has been elaborated into a methodology by John Heron in his book “Cooperative Inquiry” and also in the important new book by Jorge N. Ferrer, Revisioning Transpersonal Theory: A Participatory Vision of Human Spirituality. (SUNY, 2001.)

*“Ferrer argues that spirituality must be emancipated from experientialism and perennialism. For Ferrer, the best way to do this is via his concept of a **"participatory turn"**; that is, to not limit spirituality as merely a personal, subjective experience, but to include interaction with others and the world at large. Finally, Ferrer posits that spirituality should not be universalized. That is, one should not strive to find the common thread that can link pluralism and universalism relationally.*

Instead, there should be emphasis on plurality and a dialectic between universalism and pluralism."
(<http://wilber.shambhala.com/html/watch/ferrer/index.cfm/xid,76105/yid,55463210>)

3. Global knowledge exchange and new cooperative social practices on the internet

"Left-leaning intellectuals have long worried about the way in which our public space - shopping malls, city centres, urban parks, etc. - have become increasingly private. Other liberals, like writer Mickey Kaus, have emphasised the dangers to civic life of pervasive economic inequality. But the web has provided small answers to both these conundrums. As our public life has shrunk in reality, it has expanded exponentially online. Acting as a critical counter-ballast to market culture, the web has made interactions between random, equal citizens, far more possible than ever before."
(http://www.andrewsullivan.com/text/hits_article.html?9,culture)

The internet is a real revolution in human affairs. Isn't it indeed amazing that millions of people are freely producing and exchanging information and knowledge on the web? We are not talking of the thousands of companies that are doing it out of marketing viewpoints, but on the amazing emergence of this new form of intellectual cooperation that we are witnessing on such a massive scale.

There have of course been various explanations for this. Well-known has been the essay on cybercommunism by Richard Barbrook, which explains the phenomena as a 'gift economy', while most business or economy oriented analysts have stressed the notion of an attention economy, which basically states that in a context of abundance, which characterises the information environment that is the internet, the only way to gain influence, is to gather the attention, in fact the only scarce good in a networked environment, and that this requires the giving out of knowledge and expertise. Thus, Shumpei Kumon, the President of the Global Communications Institute in Tokyo, has introduced the notion of the Wisdom Game. In short, he explains the changing nature of the rules used to distribute power in a society. In tribal and agricultural societies and feudal societies, whose nature was tributary (the social surplus was extracted by the permanent threat of force), social power depended on military strength, which allowed the dominant to extract a tribute. With capitalism, it was wealth itself that became the vehicle of power. Rome was rich because it was strong, but America is strong because it is rich. But in the Information Society we have a twist: paramount becomes the role of 'influence'. First of all, influence through the mass media (where of course private ownership plays a role in who can afford these type of massive investments), and it can be said that the Vietnam War was not lost by the U.S. due to inferior military force, but because it lost the propaganda wars. But of course, increasingly this influence will be wielded through the internet, and an often-cited early example of this was the use of the medium by the Zapatistas

In a knowledge-based economy, he says, there are emergent powers that are based on influence and brain power. Again, this struggle for influence (or reputation) can only be a result of giving out information. There are thus strong incentives to share.

In his own words:

"The new social game that begins to prevail in the era of informatization is the game of wisdom, in which the goal is to acquire and exercise wisdom or intellectual influence by disseminating and sharing information and knowledge. Some people call this the game of "reputation." This contrasts with old games of wealth and prestige." (4)

David Ronfeldt and John Arquila, have also stressed the changing nature of power dynamics. In the print age, where information is still a scarce physical good, power is based on the control of those information streams, and it gives rise to the bureaucratic form of organisation. In a networked environment, characterised by overabundant streams of information, which are potentially accessible to everybody, power is the result of access and participation in the network itself, and it gives rise to a 'cyberocracy'.

Ronfeldt and Arquila have developed the notion of a new kinds of politics, noopolitics, based on these 'immaterial' struggles for the hearts and minds. A probably similar interpretation, which I have yet to read as I write this essay, is Alexander Barden's "Netocracy".

But one author goes in fact much further than this, Stephan Merten of Oekonux.de, a site that wants to promote the Free Software paradigm as the example for other social practices, and eventually, as the central paradigm of a new type of society. He, in my opinion, correctly argues that the internet is not an exchange economy at all, because in fact, each produces according to his capabilities and desires, and each takes according to his needs, which is the very definition of communism by Karl Marx. He also notes that the original gift economy was also a form of oppression, because these gifts created obligations for those who received them, something that is not the case on the internet.

Two important aspects of these new social practices on the internet, which involve millions of users, and not just the thousands of programmers active around Free Software, is that the process is cooperative, and free.

Dutch academic Kim Veltman introduced the important and increasing role of cooperation as basic to the unfolding of civilisational forms:

"Major advances in civilization typically entail a change in medium, which increases greatly the scope of what can be shared. Havelock noted that the shift from oral to written culture entailed a dramatic increase in the amount of knowledge shared and led to a re-organization of knowledge. McLuhan and Giesecke explored what happened when Gutenberg introduced print culture in Europe. The development of printing went hand in hand with the rise of early modern science. In the sixteenth century, the rise of vernacular printing helped spread new knowledge. From the mid-seventeenth century onwards this again increased as learned correspondence became the basis for a new category of learned journals (Journal des savants, Journal of the Royal Society, Göttinger Gelehrten Anzeiger etc.), whence expressions such as the "world of letters. The advent of Internet marks a radical increase in this trend towards sharing. "<http://erste.oekonux-konferenz.de/dokumentation/texte/veltman.html>)"

A similar assessment of the evolution of cooperation, by scientist and evolutionary psychologist John Stewart, who actively states that cooperation is an evolutionary factor and that the next step for humanity should logically be a cooperative planetary organism:

"Evolution's Arrow also argues that evolution itself has evolved. Evolution has progressively improved the ability of evolutionary mechanisms to discover the best adaptations. And it has discovered new and better mechanisms. The book looks at the evolution of pre-genetic, genetic, cultural, and supra-individual evolutionary mechanisms. And it shows that the genetic mechanism is not entirely blind and random.

Evolution's Arrow goes on to use an understanding of the direction of evolution and of the mechanisms that drive it to identify the next great steps in the evolution of life on earth - the steps that humanity must take if we are to continue to be successful in evolutionary terms. It shows how we must change our societies to increase their scale and evolvability, and how we must change ourselves psychologically to become self-evolving organisms - organisms that are able to adapt in whatever ways are necessary for future evolutionary success, unfettered by their biological or social past. Two critical steps will be the emergence of a highly evolvable, unified and cooperative planetary organisation that is able to adapt as a coherent whole, and the emergence of evolutionary warriors - individuals who are conscious of the direction of evolution, and who use their evolutionary consciousness to promote and enhance the evolutionary success of humanity." (at http://pespmc1.vub.ac.be/Papers/Review_Complexity.pdf)

If cooperation is part of evolution's arrow and of the unfolding of the civilisational process, cannot the same can be said about the notion of free availability of goods and services? This has been explained in a underestimated book by a French philosopher, **Jean-Louis Sagot-Duvaouroux**, who wrote the book, "Pour la Gratuite".

The author stresses that many spheres of life are not dominated by state or capital, that these are all based on free and equal exchange, and that the extension of these spheres is synonymous with civilisation-building.

Here's a quote:

Le rapport gratuit est quand même très différent du rapport marchand, même si le rapport marchand aboutit toujours à un rapport non marchand, à l'usage: quand vous achetez un abricot, il n'est qu'une pure marchandise au moment où vous hésitez entre lui, la pêche ou la grappe de raisins, mais une fois que vous l'avez acheté et que vous le mangez, c'est votre capacité à apprécier son goût qui entre en jeu. La gratuité, c'est un saut de civilisation. A un moment donné, notre problème n'est plus de savoir si, oui ou non, notre enfant va aller à l'école, mais bien comment on va définir le rôle de l'éducation, assurer la réussite scolaire de chacun... Les interrogations gagnent en qualité, en ambition, elles créent du lien social.

La société a montré qu'elle savait étendre le champ de la gratuité à des domaines qui n'étaient pas donnés au départ, qui n'étaient pas donnés par la nature, par exemple avec l'école publique ou la Sécurité sociale. Dès lors, il m'a semblé que faire reculer la frontière, identifier les lieux où on peut repousser la limite de ce qui est dominé par le marché et libérer des espaces du rapport marchand, c'était une possibilité très importante, très concrète, très immédiate. Cela ne renvoie pas à des lendemains ou des surlendemains qui chantent; ça peut se faire tout de suite et permettre ainsi d'expérimenter déjà une autre forme de rapport aux personnes et aux choses. La gratuité, rappelons-le, un bien vaut avant tout par son usage et n'a qu'accidentellement une valeur d'échange. « (<http://www.peripheries.net/g-sagot1.htm>) »

4. A new culture of work and being

Pekka Himanen has examined another cultural aspect of peer to peer, based on his analysis of the work culture of the free software and hacker communities, in his book about "The Hacker Ethic". In this book, he compares the protestant work ethic defined by Max Weber in his classic "The Protestant Ethic and the Spirit of Capitalism", with the new mentality of hackers. A quote from the blurb:

"Nearly a century ago, Max Weber articulated the animating spirit of the industrial age, the Protestant ethic. Now, Pekka Himanen - together with Linus Torvalds and Manuel Castells - articulates how hackers' represent a new, opposing ethos for the information age. Underlying hackers' technical creations - such as the Internet and the personal computer, which have become symbols of our time - are the hacker values that produced them and that challenge us all. These values promoted passionate and freely rhythmmed work; the belief that individuals can create great things by joining forces in imaginative ways; and the need to maintain our existing ethical ideals, such as privacy and equality, in our new, increasingly technologized society.

This same aspect is discussed in a discussion note below by Kris Roose, who distinguishes the 'secondary culture', described originally by Max Weber, where one works, many times unpleasantly, to make a living and buy oneself pleasures, and the tertiary culture, where the work itself becomes an expression of oneself (the 'self-unfolding' process described by Stephan Merten of Oekonux, see below) and a source of direct pleasure.

Richard Barbrook and other writers of a Manifesto for 'Digital Artisans' had already described some of the elements of this culture as well:

4. We will shape the new information technologies in our own interests. Although they were originally developed to reinforce hierarchical power, the full potential of the Net and computing can only be realised through our autonomous and creative labour. We will transform the machines of domination into the technologies of liberation.

9. For those of us who want to be truly creative in hypermedia and computing, the only practical solution is to become digital artisans. The rapid spread of personal computing and now the Net are the technological expressions of this desire for autonomous work. Escaping from the petty controls of the shopfloor and the office, we can rediscover the individual independence enjoyed by craftspeople during proto-industrialism. We rejoice in the privilege of becoming digital artisans.

10. We create virtual artefacts for money and for fun. We work both in the money-commodity economy and in the gift economy of the Net. When we take a contract, we are happy to earn enough to pay for our necessities and luxuries through our labours as digital artisans. At the same time, we also enjoy exercising our abilities for our own amusement and for the wider community. Whether working for money or for fun, we always take pride in our craft skills. We take pleasure in pushing the cultural and technical limits as far forward as possible. We are the pioneers of the modern."

(<http://www.hrc.wmin.ac.uk/hrc/theory/digitalArtisans/t.1.1.1>)

But hackers are not in fact the only one's exemplifying those values of working for passion, based on self-unfolding of one's creativity and desires, and in the context of peer-based relationships. A whole new generation of youngsters have shown to be ready for such social practices, as shown in a book like "The Industrialisation of Bohemia" and exemplified for a short number of years in the dynamism of the internet start-ups, before they were destroyed by the shorttermism of their venture capital backers. We are in fact talking about new ways of feeling and being!

In our previous paragraph of peer to peer-based forms of political organising, we quoted Miguel Benasayag, who is the philosopher who is going furthest in identifying a new cultural substrata that makes P2P practices possible. (He has of course been influenced by the paradigmatic work of what we could call the 'founding P2P philosophers', Gilles Deleuze and Felix Guattari, whose first chapter of their classic "Milles Plateaux" is dedicated to a description of the 'Rhizome', a complete peer-based network...)

*"C'est pourquoi nous pensons que toute lutte contre le capitalisme qui se prétend globale et totalisante reste piégée dans la structure même du capitalisme qui est, justement, la globalité. La résistance doit partir de et développer les multiplicités, mais en aucun cas selon une direction ou une structure qui globalise, qui centralise les luttes. Un réseau de résistance qui respecte la multiplicité est un cercle qui possède, paradoxalement, son centre dans toutes les parties. **Nous pouvons rapprocher cela de la définition du rhizome de Gilles Deleuze : « Dans un rhizome on entre par n'importe quel côté, chaque point se connecte avec n'importe quel autre, il est composé de directions mobiles, sans dehors ni fin, seulement un milieu, par où il croît et déborde, sans jamais relever d'une unité ou en dériver ; sans sujet ni objet. »***

"La nouvelle radicalité, ou le contre-pouvoir, ce sont bien sûr des associations, des sigles comme ATTAC, comme Act Up, comme le DAL. Mais ce sont surtout - et avant tout - une subjectivité et des modes de vie différents. Il y a des jeunes qui vivent dans des squats - et c'est une minorité de jeunes -, mais il y a plein de jeunes qui pratiquent des solidarités dans leurs vies, qui n'ordonnent pas du tout leur vie en fonction de l'argent. Cela, c'est la nouvelle radicalité, c'est cette émergence d'une sociabilité nouvelle qui, tantôt, a des modes d'organisation plus ou moins classiques, tantôt non. Je pense qu'en France, ça s'est développé très fortement. Le niveau d'engagement existentiel des gens est énorme. »
<http://www.peripheries.net/g-bensg.htm>

This is clearly a description of a new existential positioning, a radical refusal of power-based relationships and a clear departure from the old oppositional politics, where the protesters were using the same authoritarian principles in their midst, than those of the forces they were denouncing. Here are some further quotes, which highlight the new 'radical subjectivities'

"Contrairement aux militants classiques, je pense que les choses qui existent ont une raison d'être, aussi moches soient elles..."

"Rien n'existe par accident et tout à coup, nous, malins comme nous sommes, nous nous disons qu'il n'y a vraiment qu'à décider de changer. Les militants n'aiment pas cette difficulté; ils aiment se fâcher avec le monde et attendre ce qui va le changer."

"C'est toujours très surprenant: la plupart des gens ont un tas d'informations sur leurs vies, mais "savoir", ça veut dire, en termes philosophiques, "connaître par les causes", et donc pouvoir modifier le cours des choses."

"Oui, l'anti-utilitarisme est fondamental. Parce que la vie ne sert à rien. Parce qu'aimer ne sert à rien, parce que rien ne sert à rien. "

"On voit bien cette militance un peu feignante qui se définit "contre": on est gentil parce qu'on est contre. Non! ça ne suffit pas d'être contre les méchants pour être gentil. Après tout, Staline était contre Hitler! "

<http://www.peripheries.net/g-bensg.htm>

III. NEW ZONES OF CONFLICTS, NEW ALTERNATIVES

1. Peer to peer in a hierarchical world: conflict within individuals

New subjectivities are arising, that desire self-unfolding of their creativity and peer-based working relationships.

New cooperative production and distribution methods and P2P organisation forms are arising, often based on the free exchange of knowledge.

But is the world ready for it?

Here is a quote that expresses what happens when a new P2P soul enters an existing organisation, giving voice to the dehumanising aspects of current forms of social organisation:

“Whether it is in response to us sensing that a new possibility exists for us on the horizons of our current ways of being, or whether it is to do with us sensing an increasing lack, is difficult to say. But, which ever it is, there is no doubt that there is an increasing recognition that the administrative and organization systems, within which we have long tried to relate ourselves to each other and our surroundings, are crippling us. Something is amiss. They have no place in them for us, for our humanness. While the information revolution bursts out around us, there is an emerging sense that those moments in which we are most truly alive and able to express our own unique creative reactions to the others and othernesses around us (and they to us), are being eliminated. In an over-populated world, there seems to be fewer and fewer people to talk to - and less and less time in which to do it.”

(<http://pubpages.unh.edu/~jds/>)

In fact, the current form of enterprises are of course still thoroughly hierarchic and authoritarian despite the many changes to networked and team-based forms of work, which stand in tension with the hierarchical format. This was described in the 1988 classic by Robert Jackall, “Moral Mazes”, in fact a in-depth anthropological study of the modern enterprise format:

“When managers describe their work to an outsider, they almost always first say: ‘I work for [Bill James]’ or ‘I report to [Harry Mills].’ and only then proceed to describe their actual work functions. . . The key interlocking mechanism of [modern corporate culture] is its reporting system. Each manager . . . formulates his commitments to his boss; this boss takes these commitments and those of his other subordinates, and in turn makes a commitment to his boss . . . This ‘management-by-objective’ system, as it is usually called, creates a chain of commitments from the CEO down to the lowliest product manager or account executive. In practice, it also shapes a patrimonial authority arrangement that is crucial to defining both the immediate experiences and the long-run career chances of individual managers. In this world, a subordinate owes fealty principally to his immediate boss.”

*Moral Mazes goes on to describe how bosses use ambiguity with their subordinates (and other more-or-less unconscious subterfuges) in order to preserve the power to claim credit and deflect blame, which tends to perpetuate the personalization of authority. **Unlike a straight, Max Weber style bureaucracy, which is procedure-bound and rule-driven, a patrimonial bureaucracy is a set of hierarchical fiefdoms defined by personal power and patronage.**”*

Here David Isen’s describes the crucial shortcoming of the present system:

“When there is good news, credit flows up -- so the boss, personifying the organization, looks good to superiors. Then credit flows up again.

When there is bad news, it is the boss’s prerogative to push blame onto subordinates to keep it from escalating. Bad news that can’t be contained threatens a boss’s position; if bad news rises up, blame will come down. This is why they shoot messengers.

So it's easier to ignore bad news. Thus, Jackall's chemical company studiously ignored a \$6 million maintenance item until it exploded (literally) into a \$150 Million problem. "To make a decision ahead of [its] time risks political catastrophe," said one manager, justifying the deferred maintenance. Then, once the mess had been made, "The decision [to clean up] made itself," said another relieved manager.
(<http://isen.com/archives/990601.html>)

Or here is French sociologist Philippe Zafirian who describes a more general unease with the current system.

"Depuis plusieurs années, les enquêtes nationales ne cessent de nous indiquer une nette dégradation des conditions de travail, telle que les salariés la vivent et la déclarent.

Les enquêtes sociologique de terrain le confirment : c'est à un phénomène de vaste ampleur que nous avons affaire. Les individus au travail souffrent et ils l'expriment. On pourrait certes débattre des moteurs internes de cette souffrance : tous les chercheurs ne sont pas d'accord sur ce point. Mais il me semble qu'une réalité s'impose, par son évidence et son importance : les salariés plient sous la pression, elle les écrase. La pression n'est pas simple contrainte. Toute personne se développe en permanence, dans sa vie personnelle, dans un réseau de contraintes.

Les indicateurs de cette pression, nous les connaissons bien : débit, rendement, délais clients, challenges, pression des résultats à atteindre, précarité de la situation, organisation de la concurrence entre salariés, salaire individuel variable... On y relève à la fois la reprise de vieilles recettes tayloriennes, mais aussi quelque chose de nouveau, de plus insidieux : la pression sur la subjectivité même de l'individu au travail, une force qui s'exerce sur son esprit, qui l'opprime de l'intérieur de lui-même, qui l'aliène.

Mais il existe une autre facette de la situation actuelle : la montée de la révolte. Celle-ci transparait beaucoup moins dans les statistiques ; elle s'extériorise moins en termes de conflits ouverts. Toutefois, pour un sociologue qui mène en permanence des enquêtes de terrain, le fait est peu contestable. On peut pressentir l'explosion d'une révolte d'une portée équivalente à celle qui a secoué la France à la fin des années 60, début des années 70, lors des grandes insurrections des O.S (red : 'Ouvriers Specialises'),., quelles que soit les formes d'extériorisation qu'elle prendra. La révolte n'est pas simple réaction à la pression. Elle a des causes plus profondes. Elle renvoie d'abord à une évolution profonde, irréversible, de la libre individualité dans une société moderne.

Elle touche enfin à ce phénomène important : à force de devoir se confronter à des performances, à des indicateurs de gestion, à une responsabilité quant au service rendu à l'utilisateur ou au client, les salariés ont développé une intelligence des questions de stratégie d'entreprise. Ils jugent, et d'une certaine manière comprennent les politiques de leurs directions, voire en situent les contradictions et insuffisances. Mais il leur est d'autant plus insupportable d'être traités comme de purs exécutants, des machines sans âme et sans pensée propre, d'être en permanence mis devant le fait accompli.

Je pense que notre époque connaît un véritable renversement : bien des salariés de base deviennent plus intelligents que leurs directions et que les actionnaires, au sens d'une pensée plus riche, plus complexe, plus subtile, plus compréhensive, plus profondément innovante. »

The citation from Zaifian also points out the opposite problem from the one we introduced at the beginning of this section, and is thus not only about the pain of P2P souls entering old-style procedural or patrimonial hierarchies, but also the opposite, the pain of the more traditional sectors of the population faced with the new demands of a hypercompetitive entreprise. These changes have been described in the already classic "Le Nouvel Esprit du Capitalisme" by Luc Boltanski and Ève Chiapello and show how a system has moved from a use of bodies to the demand for the engagement of the 'whole 'being' of the new knowledge workers, an internalising of the priorities of the entreprise. But at the very moment that, since the eighties, the priorities of companies have shrunk to the generation of only profits for the shareholders, this creates a tension with the value systems of the individuals.

The new forms of peer to peer based work will of course have to accommodate the many different wishes and needs of various sectors of workers, and honor their differences. Worth exploring are the different systems that indeed honour the different value systems, as pioneered by Clare Graves, the different schools of Spiral Dynamics, Temenos from Ray Harris, and other integrative systems.

2. Collective Conflicts and the new enclosures

Two dominant spheres (we will not discuss the surviving pre-capitalist forms of social organisation) presently co-exist. The dominant sphere of commodity-based capitalism, and the new sphere of cooperative exchange. As they are driven by different logics, it is clear that this is an emerging and important conflict zone.

There are in fact three hypotheses of their co-existence, conflict, or dominance:

- 1) will the cooperative sphere swallow the competitive sphere (thesis of Stephan Merten);
- 2) will they co-exist (Richard Barbrook, Eric Raymond)
- 3) will the competitive sphere completely eat the cooperative sphere. The latter is the thesis of Jeremy Rifkin's Age of Access which is an attempt to describe the ways in which the economy is trying to swallow the cognitive and cultural spheres.

2.1 Extending the cooperative sphere and replacing informational capitalism

Since peer to peer is functioning so well in the sphere of producing software, the pre-eminent form of social capital, and since our whole economy is becoming dominated by 'immaterial processes', what could be expected is that practices arising out of this new cooperative sphere would 'infect' the total economy. This thesis is the most radically expressed by Stephan Merten of Oekonux, who calls for a GPL Society, where the principles behind the General Public License would gradually be extended to the whole society. Here's an extensive quote:

As I tried to explain Free Software is not based on exchange so neither is a GPL Society. How a GPL Society may look like concretely can't be determined fully today. However, at present there are many developments, which already point in that direction.

- *One development is the increasing obsolescence of human labor. The more production is done by machines the less human labor is needed in the production process. If freed from the chains of capitalism this development would mean freedom from more and more necessities, making room for more processes of self-unfolding - be it productive processes like Free Software or non-productive ones like many hobbies. So contrary to capitalism, in which increasing automation always destroys the work places for people and thus their means to live, in a GPL Society maximum automation would be an important aim of the whole society.*
- *In every society based on exchange - which includes the former Soviet bloc - making money is the dominant aim. Because a GPL Society would not be based on exchange, there would be no need for money anymore. Instead of the abstract goal of maximizing profit, the human oriented goal of fulfilling the needs of individuals as well as of mankind as a whole would be the focus of all activities.*
- *The increased communication possibilities of the Internet will become even more important than today. An ever-increasing part of production and development will take place on the Internet or will be based on it. The B2B (business to business) concept, which is about improving the information flow between businesses producing commodities, shows us that the integration of production in the field of information has just started. On the other hand the already visible phenomenon of people interested in a particular area finding each other on the Internet will become central for the development of self-unfolding groups.*
- ***The difference between consumers and producers will vanish more and more. Already today the user can configure complex commodities like cars or furniture to some degree, which makes virtually each product an individual one, fully customized to the needs of the consumer. This increasing configurability of products is a result of the always increasing flexibility of the production machines. If this is combined with good software you could initiate the production of highly customized material goods allowing a maximum of self-unfolding - from your web browser up to the point of delivery.***
- *Machines will become even more flexible. New type of machines available for some years now - fabbers are already more universal in some areas than modern industrial robots, not to mention stupid machines like a punch. The flexibility of the machines is a result of the fact that material*

production is increasingly based on information. At the same time the increasing flexibility of the machines gives the users more room for creativity and thus for self-unfolding.

- *In a GPL society there is no more reason for a competition beyond the type of competition we see in sports. Instead various kinds of fruitful cooperation will take place. You can see that today not only in Free Software but also (partly) in science and for instance in cooking recipes: Imagine your daily meal if cooking recipes would be proprietary and available only after paying a license fee instead of being the result of a world-wide cooperation of cooks. “*

The same type of ideas have been developed in great detail by Michael Albert and other proponents of 'participatory economics':

“The underlying values parecon seeks to implement are equity, solidarity, diversity, and participatory self management. The main institutions to attain these ends are council democracy, balanced job complexes, remuneration according to effort and sacrifice, and participatory planning. “ (<http://www.parecon.org>)

The key question is of course, how do we get from A to B?

If it is true that the current form of informational capitalism is already creating enough surpluses to sustain such cooperative practices, it is also clear that most of them are not making money by themselves. Currently, P2P programmers are often academics, students, or have other sources of income. Thus, the current weaknesses of the model are that:

- 1) the hacker themselves are a varied bunch of individuals, with many different political positions, they're only common point is their preference for the free flow of information and knowledge
- 2) peer to peer in the technological sense is the domain of technology-savvy hackers who have the same 'absorptive capacity' to collaborate on software projects; it is and remains a technological elite.

Nevertheless, the partisans of this approach are convinced that the nature of work in informational capitalism is already such that the 'cooperative work' of the knowledge workers is already expropriated, and that this situation can be reversed.

This issue is effectively be addressed by a group of social and economic thinkers, such as Yann Moulier Boutang of the magazine Multitudes, and other partisans of the universal social wage. They are strongly associated with the thinkers around Tony Negri, himself an offshoot of the Autonomous Marxism movement in Italy, and with participants such as Maurizio Lazzarato, who just wrote a new book on the French philosopher Gabriel Tarde (Title: "Puissances de l'invention: la psychologie économique de Gabriel Tarde contre l'économie politique"), one of the pioneering thinkers of the immaterial economy, writing at the end of the nineteenth century!!

*“the modes of production and communication of knowledge lead us beyond the economy. **We are beyond the necessity of socialising intellectual forces through exchange, division of labour, money or exclusive property.** This does not mean that the relations of power between social forces are neutralised - in fact, they show up as fertile matings or fatal shocks beyond the market and the exchange of wealth. This means that that unavowed ethical nature of economic forces resurfaces powerfully as a single mode of "economic regulation" at the very moment in which economic production is subordinated to intellectual production.”*

(<http://www.moneynations.ch/topics/euroland/text/lazzarato.htm>;
http://www.emery.archive.mcmill.com/public_html/immaterial/lazzarat.html)

In terms of strategies or tactics, these new schools of militancy no longer advocate revolution (or reform) but a diagonal approach. Negri himself often refers to the Roman Empire and the rise of a counter-empire in its midst. When the Christian movement arose, they were totally incomprehensible to the Roman establishment, and themselves did not fight the Empire ('give unto Caesar, etc..'), but instead, created a counter-society. When the Empire disbanded, they were simply ready and the sole counterforce to survive intact. Thus these new politics advocate a 'diagonal' and 'hic and nunc' approach of creating alternatives. 'Resister c'est creer'.

2.2 Resisting informational capitalism

Of course, not everybody believes in this optimistic scenario. For many others, it is simply a matter of resisting the encroachment of the private sphere and to defend these new commons. A good spokesman for this strategy seems to be Jeremy Rifkin.

According to Rifkin and others, the extensive method of capitalist expansion, based on the geographical extension of its influence, as in colonialism or imperialism, is indeed over, and we are entering an intensive epoch, where the system is going deeper inwards, incorporating and transforming culture as a commodity. Rifkin describes attempts such as leasing and other forms of paid access, and seems to describe the need for a defensive strategy, exemplified by the 'exception culturelle' in France, or movements such as Slow Food. His mantra is: defend the sphere of intimacy against the sphere of efficiency.

But one thing is clear, traditional commodity-based and industrial capitalism does not know yet how to fruitfully incorporate the new sphere, although it will continuously try, but so far, as illustrated by the dotcom collapse, it has failed, says John Perry Barlow, himself a libertarian, and if I'm not mistaken, at one time a member of the Republican Party:

"The whole dot-com thing was an effort to use 19th and 20th century concepts of economy in an environment where they didn't exist, and the Internet essentially shrugged them off. This was an assault by an alien force that was repelled by the natural forces of the Internet." (John Perry Barlow)

(<http://news.com.com/2008-1082-843349.html>)

Another example may be Lawrence Lessig, author of the War of Ideas. He situates the field of struggle in the following ways:

- 1) the very architecture of the internet. As it originally embodied the peer to peer values of its founders, it is precisely this end to end architecture that has to be preserved in order to protect the integrity of its common infrastructure
- 2) the freedom of speech and association of the internet could be endangered by the encroachment of private interests, who start to monopolise portals and media sites, and can use copyright to silence many voices

Thus, it is very important to defend the existence of the new digital commons that is the internet, against any attempts to privatise or disband it.

2.3 Integration in informational capitalism

Of course, this is still a very likely scenario, as the system has shown its extraordinary capacity to integrate any challenges to its hegemony. This is the process that is best described by Jeremy Rifkin's Age of Access, and that would entail a transformation of commodity-based capitalism towards a system based on 'access' to digital resources, and dominated by subscriptions, leasing systems, and the like.

But if they eventually succeed and this cultural sphere is indeed taken over completely, the consequences would be quite negative, says Rifkin, and with him Jordan Pollack: we will never own anything anymore, we will always be dependent on all kinds of licensing ..

"It seems to me that what we're seeing in the software area, and this is the scary part for human society, is the beginning of a kind of dispossession. People are talking about this as dispossession that only comes from piracy, like Napster and Gnutella where the rights of artists are being violated by people sharing their work. But there's another kind of dispossession, which is the inability to actually buy a product. The idea is here: you couldn't buy this piece of software, you could only licence it on a day by day, month by month, year by year basis; As this idea spreads from software to music, films, books, human civilization based on property fundamentally changes." (http://www.edge.org/documents/day/day_pollack.html)

This position is echoed by libertarian John Perry Barlow, co-founder of the Electronic Frontier Foundation:

“: I'm spending an enormous amount of my time stopping content industries from taking over the world--literally. I feel like we're in a condition where private totalitarianism is not out of the question because of the increasingly thickening matrix of channels of communication owned by the same companies that own content, that own Web properties, that own traditional media. In essence, they're in a position to own the human mind itself. The possibility of getting a dissident voice through their channels is increasingly scarce, and the use of copyright as a means of suppressing freedom of expression is becoming more and more fashionable. You've got these interlocking systems of technology and law, where merely quoting something from a copyrighted piece is enough to bring down the system on you.”
(<http://news.com.com/2008-1082-843349.html>)

Of course, this situation can also be described positively, in the sense that the hierarchical based forms of industrial capitalism, are being supplemented and partially replaced by the more humane peer to peer relationships. This is the position expressed by Eric Raymond, who advocates the use of Open Source software by the business community, and even by Richard Barbrook, who in his essay on cybercommunism stresses the co-existence and cooperation of the profit-driven system on the one hand, with the gift economy on the other hand and integrates it in his tenth paragraph of the Manifesto for Digital Artisans, cited above.

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DISCUSSION NOTES

- 1. Why P2P is a stronger model, both technologically and organisationally, than the hierarchical pyramidal modes – A contribution by Kris Roose**

DEFINITION

Each form of organization implies two information streams: from observation point towards decision point, and from decision point to execution point. Observation and execution most often coincide, and anyway are much closer -in informational distance- to each other, than each of them to the central decision point.

In an **hierarchic organization** model the first stream goes bottom-up, the second stream top-down. By gathering information at the top, only there we find a complete view of reality and decisions can be made more easily.

In a **Peer-to-Peer organization** information freely flows from point to point. At each point a global view can be attained. The decisions can be made in global discussion, without the need of a central node.

OTHER CONSIDERATIONS

1. On decision making

One can discern three ways of decision making, three ways of problem solving: (1) selection, (2) compromise and (3) integration. In **selection**, one alternative is selected out against the others, considered as "wrong" or "impossible". In **compromise** a rapprochement is made between the alternatives, basically for psychological reasons: each contributor has the feeling that, although not completely, his views were at least partially taken into account, and nobody is the winner. In **integration** every detail of the contributions is taken into account, and all apparently unreconcilable were transformed (reformulated, reduced to their essence) as to enable a peaceful and constructive combination of all elements. Every contributor feels happy and motivated --at least if he agrees to redefine some of his contributions--, and the result has a much higher probability for success than if just one of the options had been chosen.

Although hierarchical organization doesn't exclude integration in se, the distance between information source and decision level is so big, that view transformations and secondary motivations (hidden agendas) can be added to the decision making process. As the concerned themselves only participate very poorly to the decision process, the decisions can be taken without complying with the "bottom". E.g. every war is started against the will of the large majority of the concerned.

In P2P the conclusion is more likely an integration, because everybody has the same possibility of participation in the the decision making, and can protest when his contribution is not (enough) taken into account.

2. The intermediary agents / brokers

As well goods as informations very often are not produced or available where they are needed. This distance allows a host of intermediary agents to settle them in a profitable situation. By creating a lock they create a control situation, and take often enormous) profit without adding value to the products. Factors that enable lock creation include material and psychological distances, classified information (e.g. address lists), "licences", etc. It can easily be calculated that the most important part of the price includes profits of brokers, taxes, etc.

Building an hierarchy also is a kind of parasitism. P2P is a way to reduce this phenomenon to the minimum.

3. The capacitating technology

These high forms of communication are only possible with a technological substrate. Sociocultural progress in general always implies material substrates. This is often forgotten in politics. Noospheric conditions are only possible with the kind of technology Internet procured us.

4. Progress by hypes

Sociocultural evolution often makes progress by hypes. All of a sudden, a clear defined concept appears, and divulges at the velocity of light. Everybody gets the meaning at once, and those concepts are quickly integrated into the existing social culture.

So was, e.g., the notion of "participation" in the 1968 student revolts."Human resources" is another example, as were "evaluation", "functional evaluations" ('functioneringsgesprek'). "P2P" seems to be such a good sounding concept.

2. Peer to peer needs to be complemented by Integration technologies and integrative attitudes – a contribution by Kris Roose

Another application is the integrative communication style in an optimalke relation. This style, described --in Dutch-- on <http://psy.cc/9510.html> , is not only a communication technique, but rather a series of fundamental attitudes towards each other. These attitudes are trained during the communication training. In fact, by disuccing human relations and cooperative creativity, we leave the field of P2P. ALthough P2P is an essential paradigm for human interaction and organization, more profound considerations on the integration process should be useful here -- or at the begin of the text.

These integration philosophy stems form two starting-points:

1. **factual integration** (the integration of needs and desires). A dynamic system only can reach equilibrium when the need of the participating elements are maximally fulfilled. The non-fulfillment of any needs creates a source of disequilibrium (from demotiation to revolution) that will challenge the structure as long as needs stay unfulfilled. Integration is an advantage, not only for each element as such, but for the group as a whole. The whole cosmic evolution vcan be seen a one long journey towards global integration. The basic law, that in fact underpins all forms of moral and ethics, is: "each action must aim at a maximal integration of the needs of all concerned".

2. **conceptual integration** (the integration of ideas). The probability that a diverging idea holds some useful information and intuition is indefinitely higher than the probability that a diverging idea is completely wrong. Hence, to make decisions by choice is always erroneous, even if supported by wisdom or a majority. The probability that a thesis is right (“true”, although I prefer “plausible”) increases with the number of divergent contributions that are integrated.

3. The Wisdom Game – a contribution by Kris Roose

In my own work, I distinguish between secondary and tertiary culture and it seems clear that the concept of the Wisdom Game is typical of a tertiary culture. In a secondary culture, there is a non-integration (or just a low integration) between earning and feeling happiness. One has to do things, often not captivating in themselves, to earn money, and then we can use this money to purchase agreeable things. On the other hand, the internet offers immediate reward (creativity, proudness, the kick of interacting with great systems). This explains perhaps why so many people -from hobbyists to hackers- are prepared to work hours and hours on the net without any financial reward: just for the fun of it. But in the meanwhile they create a thesaurus of information, knowledge advancement and artworks. Their game starts growing horribly real.

Furthermore, if “influence” is defined as the global effect of non-hierarchical interactions, it is a good measure for synergetic processes.

I think that information (facts, knowledge, psychological skills) was also paramount in hierarchical organization. The strength of the managers is a function of their informational superiority. One can try to increase this superiority, but also to decrease the information and the feeling of a global view in the lower regions of the organization: top secret, control of media, limited education, prohibition of meetings, “divide et impera”, etc.