

INTERVIEW WITH MICHEL BAUWENS: PART ONE

P2P: A blueprint for the future?

One of the abiding debates about the Internet is the extent to which it represents a step change in the way that societies — and economies — will function in the future. What is undeniable is that the Web has sparked a growing number of "free" and "open" movements that challenge current economic models — including the [Free and Open Source Software](#) movements, the [Open Access Movement](#), [Open Source Journalism](#), and [Creative Commons](#). Many also believe that the peer-to-peer (P2P) phenomenon has significant implications for the traditional top-down model on which modern societies are based.

But what is it that all these movements have in common? And how revolutionary will they prove over time? Thailand-based [Michel Bauwens](#), creator of the [Foundation for P2P Alternatives](#), believes that they have a great deal in common. He also believes that they offer a potential new model for the future development of human society. However, he argues, since the free and open movements are all components of a more generalised revolution, advocates of these movements should combine forces with the larger P2P movement if they want to ensure the success of their individual objectives. Here, in the first of a two-part interview, Bauwens talks to Richard Poynder.



Michel Bauwens

RP: As I understand it, you started your career as an information analyst for the [United States Information Agency](#), and then became an information manager for BP Nutrition in Antwerp. At [BP](#) you created the first virtual library — for which you won a number of awards — and coined the term cybrarian.

MB: Certainly some credit me with the invention of the cybrarian concept, although I'm not sure that that is strictly correct — often new terms are independently coined by different people as and when new technology creates the need for them. But yes, I

created a virtual library at BP and I used the term cybrarianship to describe the way that library functions would be re-engineered for the electronic realm.

RP: Subsequently you have had a number of different careers, and in 2005 created The Foundation for P2P Alternatives. Talk me through the journey you took from European-based librarian (or information professional if you like) to creator of The P2P Foundation.

MB: Ok. After setting up the virtual library at BP, I became editor-in-chief of the Flemish cyberculture magazine *Wave*. Unfortunately, the magazine was ahead of its time and closed in 1994. I then went on to create two dotcoms: eCom, which was the first Belgian company to specialise in [intranets](#) and [extranets](#) and was eventually sold to [Alcatel](#); and Kyberco, a cyber-marketing company. Kyberco was sold to a Belgian holding company called Virtuology, which was later renamed [Tagora](#).

Kind of burnout

RP: You don't like standing still then?

MB: Right. I guess I'm more of a serial entrepreneur: as soon as a company reaches a 25-40 staff barrier, I tend to lose interest because of the increased management workload, and so move on to new projects.

Anyway in 1998, after selling the two companies I had founded, I had a kind of burnout. This was partly due to the fact that I had been combining my day job with the co-production of a three-hour TV documentary.

RP: What was the documentary about?

MB: It was called *TechnoCalyps, the Metaphysics of Technology and the End of Man*. It was an extensive meditation on the [transhuman](#) / [posthuman](#) impact of biotechnology, artificial intelligence, and nanotechnology.

RP: Can one still see it?

MB: It was originally shown on Belgian and Dutch television during the 1997-98 periods, and a [new version](#) directed by [Frank Theys](#) is slated for viewing this month. However, while I co-wrote the scenario, did the research, and conducted the 40 interviews for the original version, I wasn't involved in the new version.

RP: Thinking about a posthuman world would be enough to trigger a burnout in anyone I guess!

MB: Absolutely. If you want some background information on the topic, by the way, you should take a look at the special issue of [Cybersociology](#) that I edited. I also had an article about the topic published in [First Monday](#) in 1996.

RP: So how did you end up Thailand?

MB: After the burnout I took a job directing the ebusiness strategy of Belgium's

largest telecommunications company [Belgacom](#); but the experience just made me increasingly dissatisfied with the corporate world, and so open to alternatives. Then around that time I took an unplanned trip to Thailand and met my wife, who is Thai, and I stayed on. I guess you could consider me a refugee from western civilisation!

RP: What was it about the corporate world that dissatisfied you?

MB: Well, the job I had with Belgacom really shocked me. After the dynamism of creating two companies with a bunch of hugely enthusiastic and collaborative youngsters, the inefficiency of such a traditional company was hard to bear.

Moving in the wrong direction

RP: There was back then a view that the Web — and the rash of dotcom companies — would force traditional companies to reinvent themselves or perish wasn't there?

MB: Sure, but it became clear to me that attempts to graft the Internet and the Web onto the corporate world had largely failed — as evidenced by the dotcom crash.

It was also clear that the belief that change would come from corporations — as envisaged by the [stakeholder concept](#) of the late seventies — had also proved wrong. Finally, it occurred to me that all the social and ecological indicators were moving in the wrong direction.

RP: How do you mean?

MB: I could see that despite the dotcom crash, the social dynamism of the Internet had not died, but had simply continued in the social sphere, in civil society. At the same time, corporations had become worse places to work in than they had ever been, and poverty and environmental destruction was growing at an unprecedented scale.

RP: So you had previously seen companies as being facilitators for social and political change then?

MB: I had. But I eventually realised that change would primarily have to come from civil society, and that corporations would adapt themselves to these new trends only indirectly — i.e. companies and other institutions would only change in response to outside pressure, rather than on their own initiative. That meant that if I wanted to contribute to the kind of change I wanted to see, I had to ask myself questions about strategy and tactics.

RP: And the answer to those questions was what?

MB: Well, the answers weren't obvious, because I didn't feel that I could find them in the old left, which was still state-focused and operating within the paradigms of industrial society. So I decided to take a two-year sabbatical: I spent one year reading, and one year writing, and the end result was the P2P Foundation.

RP: What is the aim of The P2P Foundation?

MB: To research, document and promote peer-to-peer principles.

Relational dynamic

***RP:** Presumably, then, you see P2P as a lever for the kind of changes you believe are necessary. I'm conscious that most people think of P2P as being synonymous with "illegal" file-sharing services like [Grokster](#), [Kazaa](#) and [Gnutella](#), although it's true that less controversial distributed technologies like [SETI@home](#) are also described as P2P, as indeed are some new business services. But you see P2P as a much broader phenomenon don't you? Your web site, for instance, describes P2P as "a new form of political organising and subjectivity, and an alternative for the current political/economic order." That's quite a leap isn't it?*

MB: Well, we define P2P as the "relational dynamic at work in distributed networks." That is, any situation in which autonomous agents can freely connect without coercion. And to the extent that distributed networks are increasingly being used as technological and organisational communication platforms, the P2P dynamic keeps growing.

***RP:** What you are talking about is decentralised co-operation over the Internet?*

MB: Not quite. With decentralised services you still have obligatory hubs. So you can have centralised hierarchical structures, and you can have structures that are decentralised and heterarchical (i.e. having many power centres rather than one). What is radically different about distributed P2P arrangements, however, is that they have diffused power structures.

And what is attractive about the peer-to-peer mode of organisation is that it combines both freedom, and what I call equipotentiality — which is a finer-grained vision of equality since it honours the differences between people.

***RP:** Equipotentiality?*

MB: In the context of P2P, equipotentiality is the assumption that the individual can self-select his contributions, which are then communally validated.

***RP:** Self selection here implies that individuals choose what, when, and how they contribute?*

MB: Exactly. Nobody but the individual concerned knows better the precise nature of the skills he can contribute; and his peers then validate his contribution. As such, it turns the old model on its head. There is no *a priori* selection, only 'after the fact'. It is the model you see in [citizen journalism](#) and in projects like [Wikipedia](#) for example: Not select, then publish; but publish, then select

[Jorge Ferrer](#) has [expressed](#) this well. In an equipotential relationship, he says, the various participants are "equals in the sense of their being both superior *and* inferior to themselves in varying skills and areas of endeavour (intellectually, emotionally, artistically, mechanically, interpersonally, and so forth), but with none of those skills being absolutely higher or better than others. It is important to experience human

equality from this perspective to avoid trivialising our encounter with others as being *merely* equal."

RP: *The connection here with the open and free movements is that when, say, Open Source developers co-operate over the Web to produce software they adopt this P2P model. By, for instance, self-selecting what they contribute?*

MB: Exactly. Whenever people can connect freely and engage in common projects without coercion you have a peer-to-peer dynamic. So it applies to computers, as in file sharing, and, crucially, it also applies to people. However, while small groups of people can physically connect in a peer-to-peer arrangement, the use of technology is vital for larger groups.

The point about the Internet/Web, then, is that it enables the creation of global microstructures that consist of many small cyber collectives. These are autonomous, but they can co-ordinate on a global scale. That is the power and the transformative potential of P2P.

Three new social processes

RP: *So what are the implications of this P2P dynamic in terms of enabling the social and political changes that you want to see?*

MB: The P2P phenomenon gives rise to three new social processes: peer production (which is best explained by Yochai Benkler in his book [The Wealth of Networks](#)); peer governance (i.e. how these groups [manage themselves](#)) and peer property (i.e. commonly-owned property).

RP: *What is it that is new and distinctive about these three new social processes?*

MB: Well, the interesting thing about peer production is that while it is embedded in the market, it is managed by neither pricing nor corporate hierarchies. As Benkler points out, it has therefore introduced a third mode of production, one organised by neither markets nor the state.

Similarly, non-hierarchical governance represents a third mode of governance, one based on civil society rather than on representational democracy; in other words, non-representational democracy.

Finally, P2P gives rise to non-exclusionary property forms. These are based on both free and open access, and they seek to prevent the private appropriation of commonly produced work arising from peer production.

RP: *Which has given rise to the notion of [copyleft](#) for instance?*

MB: Indeed. It has given rise to things like the [GNU General Public Licence](#) (GPL) and some of the [Creative Commons](#) licences. While there are many variants, what these licenses all have in common is that, although they honour individual contributions, they insist that participants agree to a 'share-alike' principle that commits them to only using commonly-produced work if they are prepared to abide

by the principle of common ownership themselves.

This ensures that peer property spreads in a viral fashion, in a process that we call the '[circulation of the common](#).' This is a new phenomenon, and it operates in parallel with the 'circulation of commodities' process of the traditional market system.

RP: So the peer-to-peer dynamic introduces new ways of doing things, and new share-alike property relationships. And it is these things that have given rise to the rash of free and open movements?

MB: Yes. When we use the term P2P we are referring to a number of new developments and phenomena. And one of the new phenomena that P2P creates is a new public domain — an information commons — which people are expected to protect and extend, especially in the domain of common knowledge creation.

New egalitarian digital culture

RP: Let's go back to your assertion that P2P creates a new form of political organising and subjectivity. Can you expand on that for me?

MB: Sure. What we believe is that the networked format, expressed in the specific manner of these new peer-to-peer relations, encourages an alternative to the current political and economic order.

I should add that we are not saying that it offers solutions *per se*, but that it points the way to a variety of [dialogical](#) and self-organising formats for devising different processes to arrive at such solutions.

It reconnects, for instance, with older traditions, and attempts to create a more co-operative social order. This time, however, it obviates the need for authoritarianism and centralisation — so it has the potential of creating a new egalitarian digital culture.

We also believe that P2P technology reflects a change of consciousness towards participation, and in turn strengthens that desire for participation. Indeed, participatory and self-creating habits seem already to have reached a tipping point. That at least appears to be the implication of recent reports from the [Pew Institute](#) and [Edelman](#).

RP: You are referring to the various surveys suggesting that people now attach as much authority to web-based information sources — such as blogs — as they do to so-called "experts", and one-directional, top-down news sources?

MB: Indeed. So what we now need to do is to develop adequate institutional formats to encompass these changes.

RP: What sorts of alternative political and economic order do you envisage?

MB: I think we are looking at an era of 'non-representational democracy', where an increasing number of people will be able to manage their social and productive life

through the use of a variety of networks and peer circles.

One consequence of this is that P2P extends non-representational democracy from politics to production and culture. And that is really a new step in the history of civilisation.

[John Heron](#) expressed this evolution very well in a letter he sent to me recently. As he put it, "There seem to be at least four degrees of cultural development, rooted in degrees of moral insight:

- autocratic cultures which define rights in a limited and oppressive way and there are no rights of political participation;
- narrow democratic cultures which practise political participation through representation, but have no or very limited participation of people in decision-making in all other realms, such as research, religion, education, industry etc.;
- wider democratic cultures which practise both political participation and varying degree of wider kinds of participation;
- commons P2P cultures in a libertarian and abundance-oriented global network with equipotential rights of participation of everyone in every field of human endeavour."

Unrealistically utopian?

RP: As you say, P2P doesn't offer any solutions per se. In fact, what you are describing sounds like a kind of democratic overlay over the existing economic and political system. Indeed, you could argue that this democratic overlay is not rooted in any real-world economic or political system? Critics might accuse you of being unrealistically utopian might they not?

MB: I disagree. As a description of existing social trends, there is nothing utopian about it. P2P theory does not seek an ideal world, but rather seeks to strengthen positive trends that are already occurring. As a vision of how things should be, therefore, it is a concrete utopia, which strives to change daily life in the context of an ethical position.

RP: Ok, so you are simply describing what you see happening out there. You also think that it is a good thing right?

MB: Yes. The normative position is: are we ready to treat each other as subjects and as peers, rather than as masters and slaves? That part is utopian, and no doubt cannot be fully realised in our imperfect world, but it is an inspiring vision, and such concrete utopians as [Jesus](#), [King](#), [Mandela](#) and [Gandhi](#), have changed lives and societies in the past though their concrete utopian visions.

The difference today, of course, is that we are no longer waiting for great leaders, since it is the collective intelligence of humankind that needs to rise to the level of its global challenges.

So, yes, I think it is a good thing. As I say, the task today is to develop new tools and techniques to arrive at solutions through a common democratic process.

What I expect to see, by the way, is that peer governance within peer communities will co-exist with our current political democracies, and these in turn will be influenced by the P2P ethos, and so begin to adopt more and more multi-stakeholder forms of governance themselves. I would also point out that it is no longer realistic for any political group to claim that it has easy solutions to complex problems.

Common initiative

RP: So what are the specific objectives of The P2P Foundation?

MB: There are a number of things we want to do. Today P2P exists in a variety of discrete and separate movements and projects, and these different movements are often unaware of the common P2P ethos that binds them. While these different social movements would doubtless continue to exist regardless of the existence of the P2P Foundation, they can gain strength from interconnecting, and understanding their common ground.

For that reason we believe there is a need for a common initiative to bring information about P2P together, to connect people, and to mutually inform them. In this way they will be able to develop integrative insights culled from their different perspectives and experiences, and organise events for reflection, action and education. They can also develop the critical and creative tools needed to drive P2P forward.

So we see the Foundation as a matrix, or womb, to inspire the development and linking of the different nodes active in the P2P field, and to organise people around common interests and geographic localities, or indeed any other type of identity that they wish to organise around.

RP: How are you going about this?

MB: The first thing I did was simply to put a stake out in the virtual world, and ask: do you believe in these principles and values? If so, then why not join with me? And to support this I started a [newsletter](#), a [blog](#) and a [Wiki](#).

RP: What sort of feedback have you had?

MB: Growth so far has been primarily organic. Slowly, the number of emails I receive has grown from five a week, to five a day, to 25 a day. As I said, I started out by taking a year of study-time, and then a year of writing. It is only this year that I have started to devote my efforts to developing our online presence. Next year I hope to make our activities more physical — by organising events and meetings, and so on. And we are in the process of creating a legal structure for our activities as we speak.

RP: Who else is involved with the Foundation, and in what capacity?

MB: Currently we have a core of about ten to twelve people who contribute most

days, and another two dozen who contribute once or twice a week. We also have occasional contributors.

In terms of more active participation, our team consists of James Burke, a young Dutch entrepreneur and strategic designer who is developing the blog; Jeff Petry, a Chiang Mai-based anthropologist, who is responsible for spreading the P2P [meme](#); Adrian Chan, who contributes on [relationality](#) issues; Samuel Rose, who focuses on co-operation studies; Remi Sussan, who helps us with French-language material; Brice Leblevenec, a Belgian entrepreneur, who provides us with service space and technical support; Valentin Spirik, who monitors audiovisual developments; and Michael Pick, who is focused on open standards.

We also have a number of others working in additional areas; plus we have a network of people who help us by developing country pages. Right now we are active in around a dozen different countries.

RP: I get the feeling that interest in The Foundation is mainly coming from North America. Is that right?

MB: If you look at the [Frapp](#) map on our [home page](#) you will see that contributors mainly come from North America, Western Europe, and East Asia. A number of active contributors have also recently joined us from Brazil and Peru.

RP: How is the Foundation funded?

MB: Right now we are mostly funded through voluntary contributions from subscribers to [P2P News](#), although we also have a small grant from [W-S Networks](#) — which is a network of complexity consultants.

Information Commons

RP: Let's return to the question of the information commons you mentioned. Can you say more about this and why we need an information commons?

MB: The first point to make is that the cost of producing and distributing knowledge and other immaterial assets is near zero in a networked world, and the role of immaterial production is growing continuously in today's economy.

What this means is that the most natural and productive use of these immaterial assets is to create an open and free pool of information. Anyone can then take this material and freely remix and augment it. As I said, it allows for a process that we call the "circulation of the common."

RP: Where does the current debate about the role of intellectual property fit into a discussion about P2P?

MB: It's clear that since technology has brought the cost of reproducing immaterial assets down to near zero, we need to make some fundamental changes to the IP system. While it is acceptable to have a compromise in which authors and content producers are remunerated, this should be a minimal regime, not the totalitarian

regime that the content multinationals seek to impose on the world.

There are, in any case, a number of alternative schemes being developed that would be better for creative artists than the current regime. We envisage, for instance, hybrid P2P projects — which will sit between the market and the pure sphere of non-remunerated peer production.

***RP:** You mean devising ways in which knowledge and content producers can make a living by combining more traditional business models with new P2P models, in the hope of allowing a smoother transition to the new world?*

MB: Yes, and The Foundation is currently investigating such hybrid models.

***RP:** On your web site you say that the general principles behind movements like Open Source software and [Open Access](#) provide models that can be used in "other areas of social and productive life". Does this include material production in any way?*

MB: Sure. While these principles naturally apply to any form of immaterial production, we believe they also have relevance in the sphere of physical production. After all, although physical production requires large amounts of capital, the manufacturing process also includes an immaterial design phase.

***RP:** So while physical products like, say, washing machines and television sets, will always need to be sold at a price that reflects the cost of the raw material and the labour that went into producing them, the knowledge about how to produce and design them should be made freely available for anyone to make us of?*

MB: That's right. Essentially, P2P expands democracy from the political sphere, to all spheres of life. I would add that P2P's strength is that, as a mode of production, it is more efficient than the for-profit and state-centralised modes in many areas of production.

The other point to make is that in many cases the capital (be it financial or industrial) required to produce material products will also be distributed, and so P2P principles can be applied in the distribution of capital too.

***RP:** Can you explain that?*

MB: I mean that it would be wrong to think that material production will not be affected by the P2P paradigm, so we need methods whereby, instead of having one or several large investors, or shareholders interested in short-term profit, capital can be obtained in distributed ways, from the producing communities and their customers themselves for instance.

That means that we need 'distributed capital'. The UK-based [Limited Liability Partnerships](#) and other [Open Capital](#) schemes could be a step in that direction for instance. User-built networks and P2P-exchange projects like [Prosper](#) and [Zopa](#) also point in that direction.

RP: OK, I'd like to probe you a bit more on the practicalities of P2P, and the politics, and then look at the kind of threats it faces. But let's take a break for the moment.

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INTERVIEW WITH MICHEL BAUWENS: PART TWO

P2P: The very core of the world to come

In the [first part](#) of this interview [Michel Bauwens](#), the creator of [The Foundation for P2P Alternatives](#), explained why he believes the various free and open movements should be viewed as part of a larger P2P movement; and why this larger movement offers the potential for creating an alternative to the current political and economic order.

But do Bauwens's claims owe more to idealism than to a realistic analysis of current developments? And what are the politics that inform his vision? Moreover, even if he is right about its potential, how will the P2P movement resist the increasingly aggressive counter offensive now being waged by incumbents of the current economic and political system? In the second part of his interview with Richard Poynder, Bauwens addresses these and other questions.



Michel Bauwens

RP: There are, as we discussed last time, a growing number of open and free movements today — the [Free and Open Source Software](#) movements of course; but also [Open Data](#), [Open Access](#), [Open Source Biology](#), [Open Source Journalism](#), [Creative Commons](#), [Open Politics](#), and so on. You argue that these movements are all components of a larger P2P phenomenon — a phenomenon that arises from what you call the "relational dynamic" inherent in distributed networks.

MB: That's right. The P2P dynamic has created the three new social processes I mentioned: [peer production](#), [peer governance](#) and [peer property](#). And these social processes flow from the ability of networks to enable the highly efficient distribution of intellect, of the means of production (computers), and of co-ordination.

And the fact that this is happening in many areas of social life demonstrates that the three paradigms I talked about — the open and free production of immaterial culture, the extension of participation and democracy to all social fields, and the development of a Commons for intellectual creations — can be applied across the board, with the necessary adaptations of course. Today, for instance, we can even see things like [Open Reiki](#) and [Open Yoga](#) initiatives developing!

A little flakey?

RP: *Not everyone is convinced by your arguments. One critic I spoke to said that attempting to build a political and economic theory around P2P was "a little flakey." What is it that he is missing?*

MB: P2P theory is not a theory "of" everything, but just a theory "for" something. The aim is to understand what is going on, to generate meaning, and to offer a guide for action.

If you'd lived in the early part of the mid-19th century, and were witnessing the rapid growth of factories, would you not naturally strive to understand what was happening, and to build theories to explain it — as of course the political economists of that time did?

As happened then, today we can see new modes of production, governance, and property emerging. That surely warrants some effort to try and understand what it means. Would you call people like [Yochai Benkler](#) and [Lawrence Lessig](#) "flakey"?

RP: *No, personally I wouldn't. But of course they do have their [own critics](#).*

MB: Sure. I would add, by the way, that the difference between their work — which I greatly admire and respect — and The P2P Foundation, is that they operate within the horizon of the present market economy, while I choose to look beyond it. I do so because I don't believe in eternal social systems. After all, social systems have changed substantially in the past.

The central point here is that P2P is the natural paradigm for the new world we can see being built today. And that is what the P2P Foundation is trying to understand, and to encourage.

RP: *You are clearly right to argue that we should try to understand how all the new movements fit together, and what they portend. However, advocates of the individual movements themselves are generally more interested in stressing their differences rather than their similarities. Some even argue that treating them all as part of some larger movement creates more problems than solutions. [Steven Harnad](#), for instance, [strongly resists](#) any attempt to conflate the Open Access Movement (OA) with the Free and Open Source Software movements. Doing so, he says, ignores a "deep disanalogy" between them? How do you respond to that?*

MB: Yes, there are different meanings involved, but they are related, since both ensure access to raw material for cultural production.

RP: *I guess the point is that Harnad is focused on a very specific objective — that of ["freeing the refereed literature"](#). As such, he is very keen to avoid anything that might distract the OA movement from that objective. You, by contrast, see the P2P movement as a catalyst for the next stage in the evolution of human societies?*

MB: That's right. And when I talk about P2P I have in mind three things. First, it is a description of an existing trend that any social scientist would have to agree is taking

place. Second, it is a normative position on the desirability of enabling more egalitarian subject-to-subject human relationships — and people from any number of different "metaphysical" positions would surely agree that that is a good thing. Third, it is a [praxis](#) for strengthening and promoting these human relationships.

RP: So in addition to trying to understand what is happening, you want to encourage and promote it?

MB: That's right. I want to marry both the pragmatic and radical visions in one integrated perspective.

RP: Can you explain what you mean?

MB: I mean that we cannot sit around waiting for the new society to develop. I believe that we should strive to extend the positive trends that we can see around us. After all, we live in the here and now, not the future.

No one can prevent us from having a vision of where we want to be, but my focus is very much on creating that new world *right now*, not waiting for a hypothetical alternative.

The strength and the secret of peer-to-peer

RP: So a P2P-based society would be a better place to live would it?

MB: Absolutely. In my view, P2P transcends and includes equality and freedom, which are no longer opposed to each other in the way that they are in the industrial paradigm (a point I explain in my paper [P2P and Human Evolution](#)).

Similarly, in P2P altruism and self-interest are no longer seen as being in opposition to each other. People can be politically opposed to each other in some aspect, but pragmatically united in their P2P practices.

RP: A more fulfilling society then?

MB: Yes. One big difference, for instance, is that where a traditional peasant may have liked his work and his community, he was not able to resist the higher productivity of the money economy. Since the peer producer model is more productive than the current model based around corporations, people living in a P2P society will produce more social wealth, and be much happier human beings than the [Organisation Man](#). That is the strength and the secret of the peer-to-peer movement.

RP: In your [writing](#) you frequently argue that we are currently in a stage of "cognitive capitalism". I assume this is another way of talking about the knowledge economy. But can you describe cognitive capitalism for me, and say how it differs from regular capitalism?

MB: Industrial capitalism was about the accumulation of material assets; cognitive capitalism is about the accumulation of immaterial assets, essentially through the copyright system — which creates state-protected rents for the companies involved.

Peer-to-peer transcends cognitive capitalism, because its focus on creating an information commons undermines the monopoly of intellectual property.

RP: *OK, so like industrial capitalism, cognitive capitalism is based on the private ownership of assets, but ownership of knowledge rather than material assets. P2P, by contrast, assumes that knowledge assets are communally shared?*

MB: Right.

RP: *You say that when you talk about P2P you are describing observable social practices. Some, however, might argue that these social practices are only temporary phenomena that will soon disappear, or perhaps be [emasculated or criminalised](#). Is The P2P Foundation building its house on shifting sand?*

MB: When [Karl Marx](#) wrote his early books, there were only a few thousand workers in manufacturing, but he saw this as the future, and he was correct in this essential insight, though he made many other predictive mistakes.

Rather than being transient, P2P is the core of a new society, and so just as important as those 19th Century factories.

The key question

RP: *Why are you so sure of that?*

MB: There are good reasons for believing it to be so. First, it is already the mainstay of the current technological infrastructure — nobody can argue that the Internet and the Web are only transient — and the distributed team is also the new model for working together in corporations.

Second, as I said previously, the focus of social innovation is moving away from the world of the enterprise, to civil society, and you'll find [many trend watchers](#) who agree with this.

So these are incontrovertible facts. What is also incontrovertible is that immaterial production is becoming an ever-larger part of our economy and, within that sphere, it is increasingly apparent that peer production is more productive and more efficient than the traditional model — in so far as it creates more value than for-profit alternatives.

These things guarantee that P2P processes will continue to grow, and demonstrate that it is more than a transient phenomenon.

RP: *The P2P-based society that you describe sounds very different to today's political and economic realities. How do you envisage a P2P-based economy co-existing with the current system?*

MB: Well, the key question today is a simple one: will P2P remain a subsystem within a capitalist economy, or will the market at some point become a subsystem within a [pluralist](#) economy that revolves around a core of peer production.

RP: What is your answer to that question?

MB: My expectation is that the market will eventually become a subsystem with a P2P economy. So in the system I foresee we would have:

- a core of non-material production using peer-to-peer principles in their pure format (non-reciprocal peer production);
- a surrounding sphere of reciprocity-based gift economy, for services in the West, and for the protection of the remaining traditional world in the South;
- a market that is divorced from the obligation of endless accumulation, and so becomes '[natural capitalism](#)' (as envisaged by [Hazel Henderson](#), [David Korten](#) and [Paul Hawken](#).) In other words, it would no longer be obliged to destroy the biosphere, and it would have a market that is subject to peer arbitrage, not just power play — as is the case today with [fair trade](#);
- States and governance enriched with multi-stakeholder principles (e.g. states subjected to peer arbitrage as well).

RP: What is the difference between reciprocal and non-reciprocal peer production processes?

MB: In a non-reciprocal model there is no direct reciprocity. So if, for instance, you work for a free software project most of the time you do it doubly free: that is, you do it out of free will, and you do it for no remuneration, for no direct benefit. Moreover, everybody can use your contributions.

By contrast, in a gift economy situation — such as a Local Trading Exchange System like [LETSsystem](#), or the [Time Dollar](#) system — you do expect a return for your contribution. As such, it is a reciprocal model.

This distinction, by the way, demonstrates why it is a mistake to describe the Internet, or peer production, as operating like a gift economy. It's actually a non-reciprocal arrangement.

From here to there

RP: OK, so that's how you see the future. But how do you envisage us getting from here to there?

MB: Peer-to-peer is continuing to grow organically, that is its strength. It also strengthens the wider economy in many ways, and leads to new business models. So I expect to see capitalism embrace P2P to a certain degree.

In that respect it will be similar to the way that feudalism embraced capitalism: essentially because it was more productive, enriched certain feudal lords and the monarchy, and they thought they could control it.

Ultimately, of course, it represented a new form of social organisation, much as peer-to-peer does today.

RP: You make it sound like a gradual process of change. But if your analysis is correct it seems more likely that the ancien regime will fight tooth and nail to resist P2P. In fact, battle has already begun — with the music and movie industries apparently intent on destroying, or at least enfeebling, P2P technology. We can also see growing resistance from publishers and many other intermediaries, all of whom view peer-to-peer as a direct threat to their livelihood?

MB: As you say, incumbents like the Recording Industry Association of America ([RIAA](#)) and others who live from IP rents are already actively resisting peer-to-peer, and they have persuaded governments to create a copyright regime that is stifling cultural freedom.

But the established forces are not a monolithic bloc, and many other companies have clearly realised that adapting to P2P processes is a necessity. In fact, the huge success of companies like [Google](#), [eBay](#), and [Skype](#) — whom I term the [netarchists](#) — flows directly from their enablement of P2P processes.

Self-conscious movement

RP: Nevertheless, given the way in which incumbents are attacking P2P today I doubt that it will be able to withstand the onslaught without itself becoming more organised, and developing into a self-conscious movement committed to the kind of changes you want to see?

MB: You are correct of course. Today we can see civil society is furiously engaged in creating new social practices, which are then attacked by corporate vested interests — for example when youngsters are told that online sharing is illegal.

In the process, however, these youngsters become more conscious of the issues. It is precisely this evolution that is the basis for the coalescing of an emerging but already powerful movement, with supporters of free/open, participatory, and commons-related ideas joining together and becoming a large self-conscious movement. And we see The P2P Foundation playing an important role in facilitating this.

The creation of the [Pirate Party](#) in Sweden, by the way, is a good example of how political and economic resistance to P2P creates a more conscious social movement. The Pirate Party is now a real social force.

RP: Attacks from incumbents aside, what other threats does P2P face?

MB: One threat is that as we as individuals increasingly use participative platforms with [weak links](#), we will co-evolve with corporate [Web 2.0](#) platforms. However, as communities consciously involved in peer production, and hence with strong links, we will naturally prefer open infrastructures, open standards, and an end to dependency on corporate platforms.

RP: I guess you are referring to the way in which for-profit corporations attempting

to profit from Web 2.0 developments will "naturally" want to create proprietary platforms. To be effective, however, P2P communities need open platforms. The danger here I guess is that — in the way that Microsoft captured the PC with its proprietary Windows software — Web 2.0 companies could appropriate the infrastructure of the Web?

MB: Right. So our relationship with these [Web 2.0 companies](#) is double: we are happy for them to enable further participative practices, but we are aware that as for-profit companies, they might want to control, or even appropriate, our cultural creations.

For the moment, the Web 2.0 companies are embracing the ecology that sustains the commons created by their users, so I consider Web 2.0. to be a welcome development. But in order to avoid becoming too dependent on these companies, it would be wise to ultimately develop community-based resources as a back-up option.

The politics of P2P

***RP:** You make frequent use of terms like capitalism and feudalism, and in your writing you often refer to Karl Marx and other communist and socialist thinkers. Do you not think that this, and indeed the assumptions beneath your analysis, might alienate a lot of people?*

MB: In what way?

***RP:** Well, the various free and open movements are already viewed as a dangerously radical development. Bill Gates, for instance, [famously commented](#), "There are some new modern-day sort of communists who want to get rid of the incentive for musicians and moviemakers and software makers under various guises." In a similar vein, the editor of the American Chemical Society's *Chemical & Engineering News*, Rudy Baum, wrote [an editorial](#) in which he concluded, "Open access, in fact, equates with socialised science."*

I'm wondering if it is possible, in 2006, to use the politically-charged terminology and concepts that you do without losing your audience before you have the chance to state your case. After all, we live in a world in which the only acceptable way of talking about economic and political issues is by first doing obeisance to the primacy of "market forces"?

MB: I agree that the use of certain concepts can be problematic, but that has to do with my own individual background and limitations. I would add that in Europe such terms are mainstream in the social sciences, and used daily in the press. The US has different sensibilities, but it is not the whole world.

But you are right: resistance to the concepts I use could pose problems. That is why it is better to focus on pragmatically supporting and interlinking concrete projects that are able to unite people from different backgrounds.

Most of the people around the P2P Foundation, by the way, would not consider themselves to be leftists, and I would think that most have an entrepreneurial spirit.

As I say, peer-to-peer is a description of existing social practices that we are merely seeking to extend, not an attempt to sell a particular ideology.

RP: I am assuming that you personally have always embraced left wing ideologies.

MB: I was certainly to the left in my youth, but during my career in business I gradually arrived at more centrist positions. Then, in 1998, after seeing the growing crisis of the corporate world, and all the negative indicators concerning the destruction of the biosphere, I re-assessed the desirability of continuing to occupy a cosy position in the establishment. As I say, however, you should not assume that P2P is the monopoly of the left.

RP: Indeed, the co-founder of the Open Source Movement, [Eric Raymond](#), is a [Second Amendment libertarian](#), and when I [interviewed him](#) I was struck at how right wing his views are, even though he describes himself as an anarchist — a political ideology normally associated with the left. Interestingly, he argued that in creating the Open Source peer governance model, software developers have demonstrated the practicality and desirability of anarchism.

The choice is simple

MB: Like many social phenomena P2P can be interpreted in a number of ways, depending on your political perspective. So while people with an anarcho-capitalist disposition like Eric Raymond (who are opposed to the state, but favourable to a free market), may support and practise peer-to-peer relationships as a way of achieving individual freedom, they are likely to be suspicious of any talk about communities.

People of a more left-wing disposition, on the other hand, will find it attractive because of the new [relationality](#) that it empowers, although they may fear its encapsulation within the current for-profit system.

I'm pretty sure we'll have right-of-centre P2P theories as well at some point. As you point out, Open Source advocates can be extremely pro-capitalist.

RP: When you use the term relationality here I assume you mean the way in which P2P encourages what you call egalitarian subject-to-subject relations and [equipotentiality](#)?

MB: Right. As traditionally conceived, by the way, anarchism was a social ideal, and I do not share its *a priori* hostility to the market and the state.

So people of my own disposition differ from traditional anarchism in that we are not opposed to the state, nor to the market, but rather we want these to be reformed within the context of a pluralist economy that evolves around a core of non-reciprocal peer production, and where the state is not a corporate servant, but a neutral arbiter between various aspects of this pluralist economy.

The only thing we need to get rid of is the endless accumulation of material goods in a finite world. It is for this reason that I find the notion of natural capitalism to be a necessary component of social reform.

RP: Can you say more about this?

MB: We can no longer afford a system that [externalises](#) the true costs of things. So I am attracted to the notion of a market without capitalism — i.e. a free market but not based on infinite accumulation. Fair trade, by the way, is an example of a market form that has already merged with a form of peer arbitrage: producers and consumers are treated as partners. So it's a form of capitalism that attempts to divorce itself from unequal power relationships.

There is also a lot of interest in monetary reform today, with the aim of moving from a scarcity-based model to an abundance-based model. That is an interesting form of capitalism that is compatible with peer-to-peer.

RP: As we have agreed, there is likely to be increasing opposition to the development of P2P. What would be the implications if all the free and open movements were to fail in their objectives, and we ended up in an even more proprietary world than find ourselves in today? What's at stake?

MB: I think it's pretty simple: that would lead to a terrible maiming of the biosphere, and massive dislocation. It would also mean increased social inequality, and global civil wars. The kind of regression we saw after the collapse of the Roman empire in fact.

So the choice is simple, we either scale up to a higher form of complexity, which is what I think P2P represents, or we will face a powerful disorganisation of society.

There is also a clear danger of our evolving towards a [panoptical](#) society, where everything is known about us. Likewise, we find ourselves confronted with the threat of information feudalism.

RP: The point you are making here is that as a side effect of current attempts by corporations to protect their outdated business models — through increasing use of digital rights management ([DRM](#)) technologies and [Trusted Computing](#) for instance — we could find that everything we do online is tracked and most, if not all, the information and knowledge we want to access is now proprietary?

MB: Exactly. In such a world, we would no longer own anything ourselves, and we would only be able to access information by agreeing to restrictive licenses that limited our property and our liberty. That would be a clear regression, but it is the world that content owners and their DRM-advocates want to create.

Illogical state of affairs

RP: And that is precisely the kind of dystopia that [Richard Stallman](#) described in his 1997 article, [The Right to Read](#). What, then, do supporters of the various free and open movements need to do in order to avert such a gloomy scenario?

MB: We need to increase the scope of applications in which open and free principles are applied; we need to apply and experiment with peer governance, and learn from

our mistakes; and, as I said earlier, we need to interconnect and learn from each other, in the understanding that all these efforts are related, and have a larger common purpose.

In addition, we have to defensively stop the destruction of the biosphere, and stop the new enclosures of the information commons we are witnessing. Instead, we need to be constructively building the new world, and in a way that ends and means are congruent with each other. If we do this then the P2P subsystem will continue to strengthen, and eventually reach a tipping point. At that juncture it will become the dominant model.

***RP:** You clearly believe that the environmental movement and the free and open movements share some commonality of purpose. What is it that they have in common?*

MB: What they have in common is that both the physical world and the immaterial world need a more commons-based approach. [Peter Barnes](#), for instance, has argued that in order to protect the environment we need to adopt trust-based systems that ensure capital is preserved for our environmental assets.

***RP:** Right. One of Peter Barnes' proposals is that we should seek to protect the atmosphere by treating the sky as a commonly-owned asset. His proposed Sky Trust, for instance, would be a non-governmental not-for-profit institution that would manage and sell a gradually diminishing number of emission permits to oil, gas and coal companies. The income from these sales would then be used to pay yearly dividends to every American.*

MB: Exactly. So I think the respective approaches of the informational and environmental commons are complementary, although of course there are a number of differences. This is a debate that [David Bollier](#) monitors in his [On the Commons](#) blog.

***RP:** What is the central issue in that debate?*

MB: The central issue is this: currently we live in a society that treats scarce and rival resources (i.e. nature and the biosphere), as if they were infinite, and artificially renders scarce what is infinite, since it can be reproduced for free. This is an illogical state of affairs that both destroys the biosphere and impedes the growth of social productivity. And that illogicality is what we want to reverse.

No tried and trusted long-term model

***RP:** One of the most frequent criticisms of the free and open movements is that they simply won't stand the test of economic reality over time. You clearly believe they will, but can you tell me precisely how people will be able to make a living in a P2P-based economy? How exactly would I pay my bills in such a society?*

MB: This is a funny question, since the free and open movements have existed for over two decades now, and the Open Source model is being embraced by venture capital, and becoming the mainstay of the software industry.

It is also funny, since we are witnessing the decline of the mass media, and the growth and proliferation of Internet-based micromedia. So the free and open movements are surviving very well, growing continuously, and expanding at a remarkable rate.

RP: Nevertheless, there is still no tried and trusted long-term sustainable economic model. Not even the flagship of the P2P movement, Open Source software, can yet offer this. In the first part of the interview you talked about the need to develop interim hybrid business models. Whatever happens, there will need to be a process of transition right?

MB: Yes. As I say, The Foundation is working on this at the moment.

RP: Earlier, you gave a broad outline of how a P2P economy might look. Are you able to give me some specific examples of how a P2P-based society might work in practice?

MB: I'm afraid that I have no fixed answer to your question, other than to say that we have to continue developing and studying open business models. The problem is that, despite our best intentions, we cannot safely predict the overall effect of the multiple actions that take place in complex systems like economies.

What's clear is that there won't be one business model, but many. At the same time, we have to look at state-based solutions, such as public funding of open source projects, etc.

That said, I have of course thought about this issue, and I have speculated as to what a pluralist economic system might look like.

RP: What do you see?

MB: I see a P2P civilisation that would have to be post-capitalist, in the sense that human survival cannot co-exist with a system that destroys the biosphere; but it will nevertheless have a thriving marketplace. At the core of such a society — where immaterial production is the primary form — would be the production of value through non-reciprocal peer production, most likely supported through a basic income.

And as I said earlier, it will have a strong reciprocity-based gift economy component — a model that is ideal for services such as the local and complementary currencies springing up that utilise personal community currency models like the LETSsystem, and which also offers hope for the survival of traditional economies.

In addition, of course, I see a market that still includes the production of scarce and [rival](#) material goods, although this process would now be based on peer arbitrage.

RP: Right. As you previously said, you believe that P2P principles can also be utilised in the production of physical goods.

MB: That's right; it's potential for expansion is remarkable. Yochai Benkler, for instance, has noted that the second most popular form of transportation in the US —

car pooling — operates under the principles of a sharing economy.

Essentially, I see three main ways in which P2P might migrate to the physical sphere:

- In industrial processes, as I previously mentioned, we could see the design phase being separated from the material production phase. I see no objection in theory or practice, for instance, why cars cannot be designed by Open Source communities, and then produced by a third party who has access to the necessary capital.
- I can also see further expansion of distributed models, particularly in the field of financial capital. I mentioned, for instance, the "distributed capital" model being promoted by [Open Capital](#) schemes.
- Finally, we could start to make physical items freely available under Open Source licences — artworks say, or bicycles; or indeed books, as already happens with the [Book Crossing](#) project. The licensed item could then be linked to a digital address so that it can be monitored, and protected from private appropriation or theft. This strategy offers a tremendous opportunity for creating a wide variety of different physical commons.

The issue is two-fold

RP: So what does the P2P movement need to focus on in the near term?

MB: The important thing at this point in time is the interdependency of peer production and the existing market/state system. In one sense, peer production exists because of the abundance and distribution of resources available in the present system. On the other hand, the present system is becoming ever more dependent on the social innovation taking place outside the world of enterprise, and on peer processes.

So the issue is two-fold. From the macro point of view, the existing stakeholders have every interest in sustaining and promoting P2P, and indeed many of the open/free foundations are now supported by corporate money.

But clearly we need a more durable macro scale arrangement and, as I said, it is my belief that it will require the introduction of a universal basic income. This is a logical outcome, but it is surely several decades away.

RP: Actually, the idea of a basic income has support in some surprising quarters. [Milton Friedman](#), for instance, proposed a [negative income tax](#) system in the 1960s. And [The Financial Times](#) economic commentator [Samuel Brittan](#) has been [arguing the case](#) for a basic income for a number of years now.

MB: Right. And on a micro scale, the current challenge for peer projects is to generate some income, but in such a way that the non-reciprocal aspects are not threatened or destroyed. So far, it seems to be working.

RP: Final question then: when they write the future history books, how much

importance will be attached to P2P?

MB: How big a deal is P2P? It is as big as the early manufacturing plants in Manchester — the very core of the world to come. It is only small if you have a static view of present realities, and do not understand the underlying dynamic.

RP: *Thanks for your time. And good luck with The P2P Foundation!*

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<http://poynder.blogspot.com/2006/09/p2p-blueprint-for-future.html>

<http://poynder.blogspot.com/2006/09/p2p-very-core-of-world-to-come.html>

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