

# Social Enterprise & Intellectual Property : Ideas from the Open Source Movement

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## Abstract

This paper first briefly sketches some definitions and historical background of intellectual property law (such as copyright and patents) then places approaches to intellectual property in the context of 'anti-globalisation' politics and competing ideas around private and 'civil' ownership of such discoveries as gene sequences, medicines, etc..

It then looks at the dilemmas around intellectual property for social enterprise and describes some approaches social enterprises have taken. Specific issues raised by current work on replicating and franchising successful social enterprise business models are examined. These issues are related to the general problem of balancing private and common ownership in social enterprise.

One well-developed approach is that of the open source software movement. Open source software is produced co-operatively by an international community of developers working together voluntarily over the internet, and is made available free of charge to everyone under a 'general public license'. The history, methodology and achievements of this movement are briefly described as background to a more detailed examination of the legal instruments and approaches that have been deployed, and some of the disputes that have arisen.

The paper then looks at the kind of business models that might be implied by this 'open source' approach to intellectual property - focusing on the obvious problem of how you make money from free software! - and some business case histories are briefly described.

Finally, the paper looks at how both the legal instruments and business models of the open source movement might be applied to social enterprise to help reconcile the tension between private and public wealth creation, and calls for more work towards an imaginative and radical approach to intellectual property for social enterprise.

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<sup>1</sup> To view a copy of this license, visit [creativecommons.org](http://creativecommons.org). The Creative Commons licensing system is currently being adapted to English law in partnership with the *Programme in Comparative Media Law and Policy* at Oxford University. Their first draft English license is set out in the Appendix to this article. Note this is untested in England and may require further modification for Scottish law or other parts of the UK.

## Who owns ideas?<sup>2</sup>

Nobody objects if an inventor gets a patent for a new mousetrap; but many people feel troubled when a company applies for a patent for a new mouse.

John Howkins, 2001, The Creative Economy

The hitherto recondite subject of intellectual property law has become a political hot potato primarily because intellectual endeavour is the new driver of economic growth in the industrialised world. The earliest prediction of this phenomenon, as far as I know, was by the French situationist Guy Debord. Writing in the late 1960s he said:

The complex process of the production, distribution and consumption of knowledge already gets 29% of the yearly national product of the United States... In the second half of this century culture will hold the key role in the development of the economy, a role played by the automobile in the first half.<sup>3</sup>

As Debord predicted, the annual growth rate in the knowledge-based and creative industries in OECD countries was twice as fast as service industries overall and 4 times that of manufacturing throughout the last decade of the last century. In the UK in 2001 there were for instance 60% more professional artists than in 1991, 55% more musicians, and *400% more people working in digital media*. Between 1987 and 1997 the American copyright and patent industries increased their output at the rate of 5.8% a year compared to 2.8% a year for other industries, and increased the number of jobs at 4.0% a year compared to 1.6% in the rest of the economy.<sup>4</sup> Last year alone, IBM applied for 3,415 separate patents.<sup>5</sup>

At the same time *globalisation*, through ease of travel as well as communications technology, has highlighted intellectual property issues. For example, in the early 19<sup>th</sup> century the American textile industry was able to grow by copying Lancashire inventions, but poor communications and legal infrastructure prevented it becoming an issue. Charles Dickens, apparently, was upset that he received no compensation when his work was copied in America: the United States, now among the fiercest defenders of intellectual property rights, did not honour foreign copyrights when its economy was developing. Now, multinational companies are active in all international markets, can easily discover copying and take action to prevent it.

It is now both more important *and* more possible to protect intellectual property, and creative industry and knowledge-based multinationals are driving the extension of intellectual property rights. George Monbiot, building on the work of the economic historian Eric Schiff, has recently pointed out that a number of companies whose inventions and businesses were first developed in Switzerland and the Netherlands when there were no patents - and also when there were very high rates of business growth - have now become leading lobbyists for the extension of intellectual property rights:

Switzerland and the Netherlands eventually adopted patent laws in response to threats from other industrialised nations. This, Schiff argues, was a political decision, not an economic one. It is, he notes, difficult to avoid the impression that the absence of patent laws 'furthered rather than hampered development'. The two countries relied for their growth not upon exclusive rights but upon high educational standards and technical ability.<sup>6</sup>

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2 I am indebted to David Evans, 2002, for this section title.

3 Guy Debord, 1973 (translation - original in French in 1967), para.193

4 John Howkins, 2001

5 James Heald, 2004

6 Industrialisation Without National Patents by Eric Schiff, 1971; quoted in George Monbiot, 2002.

It sometimes seems as if the American government extends protection every time Mickey Mouse is about to come out of copyright. The original copyright law in the United States, enacted in 1790, gave the author 14 years of protection and another 14 if s/he was still living.<sup>7</sup> Those numbers doubled in America in 1909. Congress increased the renewal period to 47 years in 1976, around the time Mickey Mouse's number came up. Then, Disney lobbied Congress for the Bono Copyright Term Extension Act of 1998 - American copyrights now last for the inventor's lifetime plus 70 years, or 95 years for corporations.<sup>8</sup>

This extension of property rights is not limited to their increasing duration; it affects at least 2 further areas. Firstly, the increasing application of intellectual property rights to discoveries in the natural world, which is further discussed below. Secondly, the increasing tendency, especially evident among big businesses, to attempt to copyright or patent almost anything, regardless of whether any research and development effort really went into it.<sup>9</sup>

This brings us to the question of how these extensions of intellectual property rights are justified. The basic purpose of intellectual property law is to balance private and public benefit, for example by ensuring that time and effort spent in research and development are rewarded, but at the same time that ideas and information are shared as freely as possible. There are two clear public benefit arguments for the private reward provided by intellectual property rights:

- ∞ firstly, that plagiarism is unethical, and ownership of the fruits of your own research and development time and effort is an aspect of a broad social justice - the right to intellectual property is indeed enshrined in Article 27 of the Universal Declaration of Human Rights - and
- ∞ secondly, that fewer people will invest in research and development if the results will not 'belong' to them, or at least pay them back in some way, so the supply of new ideas or books or inventions will decline.

The classic statement on how these principles should operate was by Lord Macaulay in the House of Lords in 1841. Macaulay set out the case for copyright as a balance between on the one hand 'ensuring a supply of good books' by remunerating writers, and on the other hand the evils of monopoly - 'to make articles scarce, to make them dear, and to make them bad'. Macaulay was

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7 This US law was modelled on the world's first copyright statute - the British Statute of Anne of 1710. For an outline of the history of copyright and its relations to technological development and corporate interests - from the invention of printing to DRM 'spyware' - see David Harris, 2004.

8 This point has been made by Stanford University law professor Lawrence Lessig, who co-founded the 'open source' licensing system *Creative Commons* (see Appendix). Lessig made headlines in 1997 when he served in the Microsoft antitrust case (Microsoft launched a successful appeal to have him removed). In the 2002 case *Eldred v. Ashcroft*, Lessig challenged the US Congress 1998 decision to extend copyright protection to 70 years after an author's death. In that case, nicknamed the "Mickey Mouse trial" because it coincided with the Disney character's impending transition to the public domain, Lessig argued that most creativity - including Disney movies like *Snow White*, which was adapted from a Grimm fable - builds on previous work, and that the extension hurt society by limiting the amount of raw material available for creative reinvention. He lost. See Andy Raskin, 2004.

9 As David Evans, 2002, writes:

I could have come up with the one-click shopping method if I had thought about it for 20 seconds. Why should Amazon.com get a 20-year patent on that?

Note that the 20-year figure given here applies to *patents* and the figures given above are for *copyright* extensions. Different aspects of intellectual property are regulated separately and each has different legal implications. Although patents are of shorter duration than copyrights, for instance, they are usually seen as more at odds with public interest, as in the current EU debate over whether software can be patented (as in the US) or is just copyright as currently in Europe. Patents have to be applied for, but can cover almost anything including an idea; copyright is automatic but only applies to a reasonably substantial composition. See David Harris, 2004 and James Heald, 2004, for more on this and especially the implications of the current EU proposals.

concerned with the proposed extension of the copyright term to 60 years, and argued that

The evil effects of the monopoly are proportioned to the length of its duration. But the good effects for the sake of which we bear with the evil effects are by no means proportioned to the length of its duration... it is by no means the fact that a posthumous monopoly of 60 years gives to an author thrice as much pleasure and thrice as strong a motive as a posthumous monopoly of 20 years. On the contrary, the difference is so small as to be hardly perceptible.

Nowadays, of course, much intellectual property is corporately owned, and this fact along with the scale of investment sometimes involved in research and development, for instance in medicine, may well be seen as a reason to draw a new balance between motivating research and development, and protecting society from the evils of monopoly.

On the other hand, modern circumstances also produce more powerful arguments against disproportionately large rewards for intellectual property. Environmental bodies, for instance, have argued that in energy generation and many other technologies, such as refrigeration, corporate research and development is distorted towards areas where discoveries can be patented, when in fact simpler but less original technology might actually give us better fridges!

Such financial distortion of research resources and objectives, as well as wider ethical issues, are perhaps most evident in genetic and medical research. George Monbiot comments that:

New global trade rules have... allowed big corporations to patent crop varieties and, in effect, the genes of plants, animals and human beings. This has grave implications both for food security and the accessibility of medicines.

Some issues here were illustrated recently when multinational pharmaceutical companies challenged a South African law that permitted the manufacture and importation of generic AIDS drugs. South Africa's health minister called the high prices for lifesaving medicines a "crime against humanity." The companies quickly dropped their challenge when the defence of their patent rights became a public relations fiasco, but the effect of the decision to allow generic drugs has been that the pharmaceutical multinationals either closed their plants or withdrew investment from the country.

Michael Sachs, the ANC's head of policy, asked journalist Paul Kingsnorth:

How do we engage with globalisation? And if we engage with it a way that is unrealistic, that is dictated by what are probably good principles, but which don't recognise the reality of a unipolar world with the strength of finance capital which exists out there... you can't just go and redistribute things in this era. Maybe if we had a Soviet Union to defend us we could do that but, frankly, you've got to play the game... you know, you *will* be defeated.<sup>10</sup>

My purpose in looking at this historical and political context of intellectual property rights is not to propose any policy solutions to the ANC or anybody else. It is abundantly clear to many that intellectual property law does require reform - a new way of balancing private gain and public good - and that this reform needs to be wrenched away from the corporate lobbyists and given a more human and humane perspective. Many individuals and organisations are campaigning on this.<sup>11</sup> Looking forward for a moment to the conclusions of this paper, it may well be that social enterprise can play a role in this broader context, if it is willing to wrench itself away from the 'mainstream' policy and funding environment, and see itself as part of 'Another World' - to quote a World Social Forum slogan - a continuum that includes the anti-globalisation movement,

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<sup>10</sup> Quoted in Paul Kingsnorth, 2003.

<sup>11</sup> See for instance the International Policy Network ([www.policynetwork.net](http://www.policynetwork.net)). See also Yochai Benkler, 2001 and David S. Evans, 2002.

environmentalists, the fair trade and ethical business movements, many international aid NGOs and indeed the open source software movement.

Like ANC policy, the current flurry of interest in social enterprise is actually defined by the collapse of the Soviet Union - in a unipolar world where the market is triumphant, how do you use market-based arrangements deliver social benefits? If it is broadly defined to include fair trade, genuinely ethical business, trading NGOs, open sourcing, etc, then the idea of 'social enterprise' sums up all the answers we currently have to this question. Suddenly, social enterprise finds itself playing the only game in town. In some ways, social enterprise needs to be a kind of new 'Soviet Union' in Sach's terms - an example and protector of an alternative economic development route for everybody alienated from globalised big business, whether they are individuals or organisations in the developed world or governments in developing countries.

But why is intellectual property any different in this context from other issues, such as the control of key resources like energy, food and water? In part, Intellectual property rights are precisely a means of bringing key resources into private ownership - patented genetic modifications, for instance, might represent a new way of controlling and exploiting what kinds of food are grown.

Moreover, intellectual property differs from physical property in at least one key respect: it is, as the economists say, 'nonrival'. Everyone can use an idea or a fact or a song again and again without affecting anyone else's enjoyment of it. This is even true, to some extent, of intellectual property in physical form (such as books and records) - but is becoming clearer as information technology develops. You can argue that two people cannot both sit in the same concert hall seat, but both of them listening to the live recording of the concert does not affect anybody else's enjoyment. Soon all physical media for recordings, such as CDs, will be obsolete, as everything moves to digital file formats which can be sent at zero marginal cost anywhere.

This difference between intellectual and physical property impacts on the famous 'commons' problem, which is crucial to social enterprise. In 'The Tragedy of the Commons' Garret Hardin asked us to imagine a pasture where villagers graze their cattle. However, grazing obviously tears up the grass and degrades the land. If there are no agreed or enforced limitations, each villager has an incentive to run as many cattle as soon as possible, to extract the maximum value before the pasture degrades. As Eric Raymond has pointed out - this is most peoples idea of why co-operatives don't work!<sup>12</sup> The usual solutions to the commons problem are:

1. The pasture turns into a sea of mud
2. An authority imposes grazing rights
3. The villagers fence off their own bits

I have seen many co-operatives degrade in ways analogous to this, but generally I believe - having worked in co-ops of one sort or another for most of the last 25 years - that they can work - that the villagers can come to a voluntary and self-managed agreement which is actually in all their long-term interests. But that is not the point I want to make here - which is that unlike grazing, using intellectual property does not decrease or degrade it; indeed, in the case of software, as Raymond points out,

Widespread use of open-source software tends to increase its value, as users fold in their own fixes and features (code patches). In this inverse commons, the grass grows taller when it's grazed upon.<sup>13</sup>

So, perhaps, as knowledge and creativity become the drivers of the new economy, and the

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<sup>12</sup> Eric S. Raymond, 2000, p.8

<sup>13</sup> Ibid.

distinction between producers and consumers begins to dissolve, intellectual property rights seed their own destruction.

## Private property or common ownership?

I remember well the debates in the UK worker co-operative movement in the 1970s and 80s around 'common ownership' or the alternative 'co-ownership'. In common ownerships the workers do not share directly in the assets - for example in a winding up surplus assets would be given to charity rather than divided among the workers - and in its extreme form no participation in capital growth at all would be allowed. In common ownership the workers are the stewards of assets that are really publicly owned; in co-ownership they simply jointly own the assets. The then UK worker co-op umbrella body promoted common ownership, influenced by the thinking of large founding organisations, such as the Scott Bader Commonwealth, which were indeed dealing with the stewardship of large assets freely given to current and future workers. In their situation, of course common ownership was appropriate, just as it is appropriate now when social enterprises are taking over former public sector services and assets. For small, new-start entrepreneurial co-ops, however, the pure common ownership model was always a disincentive for commitment, growth, and ultimately survival - though in a number of cases the *businesses* survived and prospered by shaking off the restrictive common ownership form (fencing off the commons).<sup>14</sup>

After 1997, partly because of the election of a Labour government in the UK, but moreover because of the international emergence of social enterprise as 'the answer' for the social market, issues around the public/private balance of social enterprise have focused more around government definitions of social enterprise, which see it as working for broad social good rather than serving narrow interest groups. One of the defining characteristics of New Labour is its drive for consensus - its vision of a coherent society rather than one riven with intractable discontinuities and conflicts. In fact, of course, social enterprise is often driven precisely by oppositional and narrow interests - for instance by a group suffering discrimination saying in effect 'we don't care about society - we're going to make this work for us'. I am often amused by the government's own definition of social enterprise:

Social enterprises are businesses with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners... Social enterprises are diverse. They include local community enterprises, social firms, mutual organisations such as co-operatives...

Dti Social Enterprise Strategy, p.7

The problem here of course is that this 'definition' is of what New Labour would like social enterprise to be, not what it is. Neither social firms nor co-operatives, for example, have any commitment in principle to reinvest profit in their business or in 'the community' (whatever that means). Co-operatives, indeed, are often *primarily* about extracting profit for their members. Most secondary or marketing co-ops in particular are about precisely this - and the government itself predicates the tax treatment of such co-ops on the assumption that profit will be substantially returned to the members.<sup>15</sup>

Social enterprises therefore approach the whole issue of property ownership in some confusion. In

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<sup>14</sup> Blackwall Products is perhaps the best known example.

<sup>15</sup> This is the underlying principle of mutual trading status: since all profit must go to the members it need only be taxed when it is distributed to the members, and is therefore tax-free at the time it is actually earned.



this as in so many ways they sit precisely in the middle: not private, but not public either; working for social good undoubtedly, but for private gain *as well*. Each social enterprise is pretty much left to find its own balance.

There has been little work to date on a specifically social enterprise approach to intellectual property, but it is emerging as more of an issue now because of the current focus on replicating successful social enterprise business models.<sup>16</sup> We are already beginning to see problems emerging around perceived conflicts between the interests of local workers and communities buying into an established social enterprise business model, and the interests of the model's originators and promoters (protecting their model as a recognisable brand, repaying their research and development time, funding future service provision and growth).<sup>17</sup> Similar conflicts of course take place in all types of commercial franchise and license operations. but in social enterprise this has the added dimensions of ethical, and perhaps legal responsibility and accountability to local stakeholders. Could this local responsibility be seen to over-ride contractual responsibilities in a franchised social enterprise? I know at least one case where this is a live debate.

How might a social enterprise approach to intellectual property differ from a private enterprise approach? I don't think anyone can answer this question yet - this article is an attempt to open up precisely this discussion - but it seems to me any answers will have to take account of some basic principles, such as:

- ∞ rewarding real work rather than chance discovery
- ∞ ensuring reserved rights are not exploitative, but offer an appropriate balance between rewarding research and development time, paying for on-going services (in franchising for example) and freely sharing know-how
- ∞ distinguishing between the 'nonrival' nature of knowledge and ideas - which subject to considerations such as the above should be freely shared - and types of intellectual property such as brands and trade-marks which have no 'knowledge' component and which might indeed be 'rival', or which might protect the public by distinguishing an established brand from an inferior copy
- ∞ maximising stakeholder participation - perhaps a more universal social enterprise principle than the government's emphasis on use of profits - and basing intellectual property rights on maximising participation
- ∞ using innovative legal/financial structures, as we always have done, perhaps to place intellectual property rights in common-ownership or charitable structures where they can be held in trust for wide social benefit and at the same time protect the originating social enterprise from commercial competition.

I believe ideas such as these can be further developed through study of the open source software movement. This is also characterised by an unholy mixture of private businesses (some of them very big indeed) and public and philanthropic bodies. It also features a vibrant philosophical discussion around intellectual property and other private/public issues.<sup>18</sup> Open source has of

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16 This current trend can be seen everywhere in the social enterprise world in the UK, from the current focus of the School for Social Entrepreneurs ('Ready, Steady, Grow') to Social Firms UK's £1million Phoenix programme, which is already registering names and trade marks for a number of franchise and other replication and growth strategies.

17 I have been engaged a number of times designing legal/financial structures which attempt to accommodate these sometimes disparate interests, so my own interest in finding new legal solutions is not at all academic!

18 See for instance The Open Source Philosophy Archives at [www.kmentor.com](http://www.kmentor.com)

course had to confront intellectual property issues because it deals precisely in the production of knowledge (writing software code) in an environment which, before the emergence of open-sourcing, was almost monopolised by Microsoft. There have also been high profile clashes between the so-called 'content industry' - publishing, music, film, - and free exchange services such as Napster. And there are other influences at work here: perhaps the tenuous Californian link between nerd culture and the tail end of the 60s counter-culture - Guy Debord would be pleased! - and of course all this is completely dependent on the internet with its entirely new infrastructure of democratically distributed production and near-zero communication costs faithfully reflected in the ideological superstructure of the World Wide Web with its origins in the free exchange of ideas in academic science.

Yet, by and large, open source is a world in which some big businesses, lots of small businesses, many, many individual volunteers, and public and philanthropic bodies from all over the world work together in a very positive, non-hierarchical and highly successful network. Millions of hours of work are put in, the results are given away, and everybody involved is very happy about it. How has this been achieved, and what lessons are there here for social enterprise?

## Does open source mean curtains for windows?<sup>19</sup>

It is quite possible for computer users to know nothing of 'open source' software, since, in the developed world at least, over 90% of computer desktop environments are by Microsoft, and utilise mainly propriety 'closed source' products. Even people working in companies whose computer networks run on open source software - IBM is one of them, for example - workers may be hardly aware of it because they still tend to use the Windows desktop environment. Nevertheless, almost all computer users do in fact make very regular use of open source software without knowing it. Perhaps they have wondered momentarily what 'apache' means when they type the wrong website address into a browser and get an automatic error message such as:

**Not Found**

The requested URL was not found on this server.

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*Apache/1.3.29 Server at www.economicpartnerships.com Port 80*

Apache is, in fact, the open source server software that runs the internet - currently about 70% of all networked servers in the world run on Apache.<sup>20</sup> It has no legal owner, no promotion, and no contracted service organisation behind it at all, yet has in a few short years overtaken all other products in this market.

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<sup>19</sup> For this section title I am indebted to The Independent on Sunday, 9/5/04. p.10

<sup>20</sup> In the April 2004 Security Space survey of 14,174,836 Web sites, the Apache Server was recognized as the most widely implemented server platform, with 70.48% share, representing 9,990,804 deployed servers. In the April 2004 Netcraft survey of roughly 50 million Web sites, Apache again rose to the top for the 96th straight month, with 69.01% market share and 15,747,757 active servers. According to Netcraft, the number of sites deploying Apache grew by over 30 percent in the last twelve months, from 25 million to 33 million. Apache's growth has outpaced that of competing products, as the overall number of deployed Web sites increased by 25 percent over the same twelve month period. At the same time, Microsoft's market share declined from 27% to 21%.



Or, if they are politically active, computer users may have heard that the World Social Forum - one of the key structures in the 'anti-globalisation' movement, uses only the open source computer operating system 'Linux'.<sup>21</sup>

As it can be downloaded free from the internet, is also easily available on free CDs, and most of the users are in developing countries, nobody knows how many people use Linux and other open source software in preference to Windows and propriety brands on the desktop. In the developed world it is thought that Linux has about a 5% market share, but it is believed to be growing faster than all other computer operating systems combined. Wal-Mart - almost uniquely too big to be intimidated by Microsoft - already sells PCs with Linux pre-installed for under \$400, but more interestingly, in March 2004 Hewlett-Packard announced that they are starting to sell PCs worldwide to business customers without pre-installed operating systems but with Linux on CDs. In the UK in June 2004 they released their first Compaq Business Desktop, the DX2000, with Linux pre-installed and supported, and announced their first Linux pre-installed/supported Compaq Laptop. Although mostly used on hardware originally supplied with Windows or MacOS at the moment, therefore, some commentators believe that by the end of the decade perhaps 10% of all new PCs and Laptops will come with Linux.<sup>22</sup>

The other most widely used free programme is now the 'OpenOffice' suite, similar to Microsoft Office but cross-platform. Again it's impossible to say how many people use OpenOffice: we know there have been over 20 million downloads of the suite from the website [www.openoffice.org](http://www.openoffice.org), but again each of these might be further disseminated, and in any case most users probably install from CDs either distributed free with magazines etc. or as part of a Linux package.<sup>23</sup>

So what is open source software, and why is it so successful? Open-source software used to be

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21 The World Social Forum website ([www.wsfindia.org](http://www.wsfindia.org)) states:

Peoples' movements around the world are working to demonstrate that the path to sustainable development, social and economic justice lies in alternative models for people-centred and self-reliant progress, rather than in neo-liberal globalisation.

The World Social Forum (WSF) was created to provide an open platform to discuss strategies of resistance to the model for globalisation formulated at the annual World Economic Forum at Davos by large multinational corporations, national governments, the IMF, the World Bank and the WTO, which are the foot soldiers of these corporations.

Firmly committed to the belief that Another World Is Possible the WSF is an open space for discussing alternatives to the dominant neo-liberal processes, for exchanging experiences and for strengthening alliances among mass organisations, peoples' movements and civil society organisations...

The Media Center at WSF 2004, equipped with a complete network lab of 120 computers and 40 lap-top connections was maintained open and functional 24 hrs for the entire forum with FREE SOFTWARE!!!

This is the first time in WSF history, that media members were allowed access to the facilities at the Center 24 hrs a day. The challenges were present every day of this world forum, although no official complaints: the dedicated effort of fifty Free Software Foundation (FSF) volunteers and members, with great enthusiasm and considerable knowledge helped in all technical aspects to make this first-time event a reality. Keep in mind this is a youth revolution, since most of the FSF volunteers are younger than 21. They all showed the world that we do not need restrictions and privatization of systems of information, that knowledge and human communications are truly free and democratic. The software's name? It's LINUX.

22 IDC estimated that the market for paid Linux client shipments will experience a compound annual growth rate of over 25% between 2002 and 2007, which has so far proven correct.

23 The OpenOffice.org website also tells us:

When we say that millions use OpenOffice daily, we are being modest. What is more, they use it in dozens of languages and on half-a-dozen platforms. At least 40 percent of our users, we estimate, are using OpenOffice in languages other than English. OpenOffice is present on every continent, virtually in every nation. And if it has not been localized (translated and configured) for a given language, it will be soon. Why? Because it is easy to do and because, unlike proprietary software, there is little market disincentive. Big companies cannot justify localizing (or porting) product X for small markets so they don't. But open-source projects, which rely on organized groups of volunteers, are able to do this. Schools, governments, corporations in every area of the world directly benefit from the remarkable adaptability of open-source software... Cost is only one factor in this equation. Equally important is the ability of open-source software to be modified to accommodate the needs of the people using it.

called 'free software' or 'software-libre', and it is indeed free in two senses:

- ∞ there are few restrictions on how you access, use, modify or redistribute it<sup>24</sup>
- ∞ you don't pay for it!

This does not mean that open-source products do not have software licenses associated with them; in fact they almost always do, but the licenses 'may not restrict any party from selling or giving away the software' and 'may not require a royalty or other fee for such sale.'<sup>25</sup> This has the effect of setting the license price at zero, since once a copy of the software is given to any user they can redistribute it to others without charging and without owing any license fee to the software's originator. However, it is not the 'free' cost that is most important here, but the freedom to use open source software as you like (as long as you don't curtail others' freedom). This freedom is intimately bound up with its distributed, democratic development methodology - tens of thousands of programmers all over the world are improving it all the time - even though each one of them may only put in a few hours a year fixing a bug or adapting it to new hardware. It is also a freedom from dependence on a single owner of the intellectual property, and the risk that they will either use their position to overcharge for upgrades etc, or go out of business leaving you with no warranty and no service. This was specifically cited as the main reason Munich City Council recently changed to Linux.

The open software movement is driven partly by political and partly by pragmatic factors, which happen to coincide in software development. Richard Stallman - probably the best known free software advocate - has argued that

Extracting money from users of a program by restricting their use of it is destructive because the restrictions reduce the amount and the ways that the program can be used. This reduces the amount of wealth that humanity derives from the program.<sup>26</sup>

Note however that Stallman, though often thought hostile to commercial considerations, does not argue that software development should always be an unpaid or non-profit activity; rather he proposed the abandonment of for-profit business models based on treating software as intellectual property, arguing instead that for-profit software development be done as a professional service. In fact this is, as we shall see, precisely the business model of most for-profit open source software companies, which are based either on providing services tied to the intellectual property (eg. consulting) or on using the intellectual property to attract people's attention and then realizing money indirectly from that (eg. through advertising).

The political and the pragmatic advantages of open sourcing are intimately linked. Most computer users know to their cost that modern software cannot be thoroughly tested. The number of possible paths in a big programme is astronomical - so *all* programmes have bugs. What open sourcing does is say to the software users - all of them - here's the code, if it goes wrong, or if it doesn't do something you want it to do, you fix it, we'll incorporate your 'patch' and give you credit for it, and everybody wins! So it effectively enlists tens of thousands - maybe millions - of creative individuals in the production process. There is much evidence that this huge

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24 An open-source license grants at least four separate rights with regard to source code:

- the right to view (i.e., to see the code in the first place and possess a copy of it)
- the right to use (i.e., to compile the source into executable form and run the resulting application)
- the right to modify (i.e., to make changes to the source code)
- the right to redistribute (i.e., to give the source code to a third party, potentially in either modified or unmodified form)

25 The Open Source Definition by Bruce Perens ([www.opensource.org](http://www.opensource.org)).

26 Richard Stallman, GNU Manifesto ([www.gnu.org/gnu/manifesto](http://www.gnu.org/gnu/manifesto))

community of developers can outperform even the most powerful private research and development effort, and that it is the practical superiority of the resulting software that is really behind its demonstrably higher growth.<sup>27</sup>

At the same time, this user-participation substantially dissolves the seller-buyer relation by enabling all users, if they like, to play a creative role in production. I cannot emphasise enough that this challenge to classic formulations of *alienation* (as in Marx for instance) feels very real. When you open a utility in Linux you can see who wrote it, get their e-mail address, and even sometimes an impression of them - they may put in a quotation - usually from somebody like Henry David Thoreau! - or a nerdish joke like 'May the source be with you!'. It's something like standing in front of the dozens of coffee brands in a supermarket and choosing the fair trade label - a little bit self-indulgent, of course, but also a little bit of a connection with the real origins of the coffee and the real lives of the growers normally so disguised by the colourful wrapper. What's going on here really is an entirely new mode of production with its own exchange relations.

Yochai Benkler is one theorist trying to come to terms with this. He has used Coase's analysis of the reasons for the emergence of firms in a market economy to explain what's really happening in open source or, as he calls it 'peer production'. This terminology is important to Benkler because it links open sourcing with other similar systems, like the free exchange of academic discoveries noted above. While acknowledging that other explanatory frameworks - such as gift-culture - might be relevant, Benkler argues that transactional costs analysis provides a sufficient explanation for the emergence of peer production (or 'peering'), thus placing it in the same widely accepted theoretical framework as the emergence of firms themselves. Benkler extends Coase & Demsetz's matrix of business organisations and property rights to something like the following.

|  | Implementation costs of property rights lower than the opportunity costs of no property | Implementation costs of property rights higher than opportunity costs of no property |
|--|---|--|
| Market exchange cheaper than either organising in firms or peering | Pure market (eg. farmers markets, freelancers)  | Pure commons (ideas, facts, maybe highways)  |
| Organising cheaper than market exchange or peering                 | Market with firms   | Common property rights (Swiss pastures)  |
| Peering cheaper than both market exchange and organising           | Propriety 'peering' such as user feedback   | Peer production (free software, academic science)                                    |

Having extended the usual explanatory framework from 'capitalism' (markets with firms) to peer production, Benkler goes on to explore under what circumstances peer production will be cheaper than either individual exchange or organising individuals in firms, and therefore will predominate. His answers currently revolve precisely around the nature of intellectual property and the internet, as opposed to other types of production: if, for instance, both inputs and outputs are nonrival (such as information), communications costs are near zero, and reach enough people, and the key resource is individual human creativity which cannot be reliably costed, but which self-selecting individuals can easily estimate for themselves.

Human intellectual effort is highly variable and individuated. It is very difficult to standardise and specify in contracts - necessary for either market-cleared or hierarchically organised production.

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27 The technical superiority of open source software is much discussed in the literature - for example in Richard Hillesley, 2004 - indeed in passing in almost all of the other works listed in the Bibliography below. When you move from Windows to Linux you certainly notice its stability - but for the non-specialist user probably the most important aspect of its supposed technical superiority is Linux' lower susceptibility to virus and other security break-downs.

As human intellectual effort increases in importance as an input into a given production process, an organisation model that does not require a standard contractual specification of the effort required to participate... and allows individuals to self-identify for tasks will be better at clearing information about who should be doing what than a system that does require such specification.<sup>28</sup>

Only now, with the 'pervasively networked environment' of the internet, etc., can peer production emerge on any scale: but, presumably, in intellectual property it *must* now emerge just as firms once emerged and came to dominate the market.

Benkler goes on to look at the issue of why people contribute to open source software development. Part of the answer here is again that intellectual property is nonrival. It is reckoned that about 95% of all software development is for use-value rather than exchange-value; that is, it's done in-house to improve custom applications rather than in the course of developing a saleable product.<sup>29</sup> Since the organisations doing this 95% of all software development are in other primary businesses and are not set up to sell or support software, and what they are primarily interested in is improving their own applications, they generally gain by open sourcing such work. Although competitors may also access and use their research and development work (the 'free-rider' problem), these competitors along with the whole open source community will be involved in updating and further improving the application, and given the pace of hardware and other change in IT this pay-back will almost certainly prove greater than any temporary competitive advantage. Any free-riding competitors will gradually tend to be drawn into the open source development work because they must be on top of developments anyway.

One recent study looked at the current growth of open source software in the visual effects industry:

The uptake of Linux has blossomed a spirit of co-operation and collaboration between the once secretive and competitive studios, which have since become open to sharing technologies in the common interest. After all, the competitive edge in the industry is a reflection of the collective creative and artistic talents that contribute to the work of the studio, and not the raw computing power available to any particular company. In the true spirit of Free Software, pooling knowledge and resources on the technology, and feeding back software changes to the community, has been of mutual advantage to all the players. Sharing the technology has improved performance for everybody.<sup>30</sup>

However, much of the open source community is made up of volunteers working in their own time: how can such commitment be explained? Partly, it is thought, just for the creative pleasure - why, after all, do people do crossword puzzles or paint for pleasure? However, as Benkler says:

The primary answers here are that there are a variety of indirect appropriation mechanisms for those who engage in free software development... reputation gains... consulting contracts... customisation services.<sup>31</sup>

Moreover, because of the very large number and variable size of contributions, any individual contribution may not require a large incentive at all, so

Peer production is limited not by the total cost or complexity of a project, but by its modularity,

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28 Yochai Benkler, 2001, p.30.

29 Eric S. Raymond, 2000, p.5.

30 Richard Hillesley, 2004.

31 Yochai Benkler, 2001, p.24.

the granularity of its components, and the cost of integration.<sup>32</sup>

It's easy to see this modularity/granularity at work if you visit a website such as [www.openoffice.org](http://www.openoffice.org), where the development work is divided up into fluid teams which remind me much of Tom Peters' ideas in Liberation Management - of the professional firm as the model for the new economy, with the old line-management hierarchies replaced by teams which cohere around projects then dissolve to emerge in new combinations of individuals around new projects - 'necessary disorganisation for the nanosecond nineties' he called it!

The integration or co-ordination costs indeed stand out as a crucial issue, but again in the case of software and other intellectual property much of this work can be carried out by peer review - since everyone can see and test new code, optimal solutions are to a large extent an emergent property of the production process in much the same way as ecological systems achieve optimal design without the intervention of a designer.

Hugo Spowers, currently working on the OSCar (Open Source Car) project, believes this logic can be extended beyond the production of intellectual property. He is attempting to develop a new business model (based on leasing rather than selling), and a new organisational form consistent with the environmental and social objectives of the car design itself (it's a hydrogen fuel cell plus regenerative braking design). OSCar is now in development through a joint venture with Cranfield University and a British sports car manufacturer, with UK government funding.

The organisational concept is based on two purposes that are embedded in its vision. These two purposes require two organisations, so that each purpose is always pursued with clarity.

The first is a not-for-profit Open Source Foundation that coordinates the design effort, disseminating the technology globally by licensing the intellectual property rights on the same basis to competitors as to our manufacturing facility.

The second is a commercial company (or ultimately companies) that manufactures cars. Network governance will decouple control from investment, focusing the company on pursuit of the common good by balancing the many conflicting interests of all stakeholders.

As with the ownership model, we are seeking to align interests, building relationships with true funding "partners" based on a complex network of common interests. I believe absolutely that, if we get the organisation right, the right results - commercial, social, and environmental - will be emergent properties of the system.<sup>33</sup>

OSCar is one example of how open source ideas are now being self-consciously applied beyond the software world. Another is *ThinkCycle*, an internet-based design resource which might indeed provide exciting collaborative product development opportunities for social enterprises:

ThinkCycle is an academic, non-profit initiative engaged in supporting distributed collaboration towards design challenges among under-served communities and the environment. ThinkCycle seeks to create a culture of open-source design innovation, with ongoing collaboration among individuals, communities and organizations around the world... At the heart of the community is an evolving database of reasonably well-posed problems and ongoing design solutions contributed by universities, NGOs, companies and the general public. The system is primarily aimed at, but in no way limited to, using the design and engineering skills of students and researchers in universities worldwide. One scenario is for professors to assign challenges to their students, assist them in working collaboratively with communities and organizations in developing countries while encouraging peer review from domain experts of evolving design solutions.<sup>34</sup>

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32 Ibid.p.25.

33 Hugo Spowers, 2003.

34 [www.thinkcycle.org](http://www.thinkcycle.org) (original emphasis).

A third important example of the wider uptake of open source and peer production ideas is the 'open publishing' movement. Matthew Arnison has commented:

Open publishing is the same as free software. They're both (r)evolutionary responses to the privatisation of information by multinational monopolies.<sup>35</sup>

Open publishing is explicitly linked with the 'Indymedia' alternative news and current affairs network of the anti-globalisation movement; but again, what I find most interesting about open publishing is the way the distributed production techniques facilitated by the internet refer back to pre-printing and pre-capitalist modes of literary production, such as the participation of users in a production dialogue in the marginalia of medieval manuscripts.

However, it is of course one thing to understand why peer production works in the case of software development - where we already know it does, in fact, work - and in similar technical design work - and perhaps that it is emerging in all intellectual property development - but quite another to apply similar ideas to social enterprise generally. To begin to do this, it might be helpful to look at the kind of business models currently emerging from the open source movement.

## Open business models

I'm tempted in this section to facetiously cite the examples of Bill Gates (who founded Microsoft) and Linus Torvalds (who first developed Linux). Gates' business model has obviously been tremendously successful in many ways: he is fiercely proprietary, very rich, runs a huge business, and as far as I can make out, is almost universally disliked; Linus Torvalds gave away Linux, is nevertheless financially secure, spends much of his life being feted at international conferences, and is almost universally loved. Which is the better role model?

Allan Vilhan runs his family's restaurant in a small town in Slovakia's Cerova Vrchovina highlands, but is also a musician. A year ago he put MP3s of some songs online and encouraged fans to listen for free. Nevertheless, to date he's made a profit of more than \$1,000. Vilhan is making money because he hosts his songs at Magnatune.com, an Internet music distributor that replaces standard 'all rights reserved' copyright with 'some rights reserved' licenses developed by Creative Commons. Magnatune and its artists make MP3s freely available to play, but they still demand payment when the music is used for commercial purposes, such as inclusion in advertisements or in films on general release. In Vilhan's case, a programmer in Alabama listened to the free versions and later paid \$450 to license two tracks for use as background music in a videogame, and a San Francisco design firm paid \$370 to put a song in a client's Flash presentation. Magnatune also encourages listeners to voluntarily pay for downloads, which brought in \$1,487 more. Since Magnatune splits net receipts from licensing and downloads equally with its artists, Vilhan ended up with over \$1,000. 'Creative Commons is like a marketing tool,' says Magnatune founder John Buckman, who has grossed \$180,000 for 126 musicians since May 2003, 'Free distribution generates exposure, and that builds commercial demand, which is where the real money is.'

In January 2003, Tor Books published Cory Doctorow's novella, Down and Out in the Magic Kingdom in hardback. Simultaneously, Doctorow released the book as a free download on his website, hoping the electronic version would generate interest and increase bookshop sales. 'I didn't do this because I'm a big-hearted slob,' he says, 'I did it because I saw an opportunity to make more money.' Doctorow chose a Creative Commons 'some rights reserved' license called

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35 Matthew Arnison, 2002.



'Attribution-NoDerivs-Noncommercial', meaning

- ∞ that people can distribute his book for free, so long as they credit him as its author
- ∞ they're not allowed to use it as the basis for derivative works; and
- ∞ he requires payment for commercial use, such as a movie deal.

In the 15 months that the book has been available online, there have been more than 300,000 downloads. It's impossible to measure the effect on book sales, but the initial print run of 8,500 copies sold out, and the title is now out in paperback. Doctorow estimates that the speaking fees he received from people who hired him based on the buzz surrounding the giveaway version exceed the advance he received from his publisher - and after the commercial success of his first book established his credentials as a marketable writer, Doctorow received a much bigger advance for his third and fourth books.

These effects depend on the power of free distribution to create supplementary paid markets, and I believe for most artists this is likely to become the most effective business model of all. With regard to software itself, an overview of different open source business models can be gained from the following taxonomy, first drawn up by Eric Raymond.<sup>36</sup>

|                  |  |
|------------------|--|
| Support Sellers  | Software-related revenue comes from media distribution, branding, training, consulting, custom development, and post-sales support, instead of from licensing fees. Revenue is generated in this model by selling two broad categories of items: physical goods (eg. media and hard-copy documentation), and/or services (eg. technical support).  |
| Loss Leader      | A free open-source product is used as a loss leader for traditional commercial software; the open-source product generates little or no revenue, but makes it more likely that customers will buy other products that are sold using the traditional business model.   |
| Widget Frosting  | Companies that are in business primarily to sell hardware ("widgets") may use the open-source model for software such as driver code ("frosting") distributed at no charge along with the hardware. In the "Widget Frosting" model most if not all revenue would be generated through sales of the hardware itself. Using open source for the enabling software increases hardware sales as in the "Loss Leader" scenario, eg. by increasing the base of developers familiar with the hardware and able to make it perform better. |
| Accessorizing    | Companies which distribute books and other physical items (as opposed to software and services) associated with and supportive of open source software.  |
| Service Enabler  | A company creates and distributes open-source software primarily to support access to revenue-generating on-line services.   |
| Sell It, Free It | The "Loss Leader" model repeated and extended through time. In this model a company would deliberately structure its development and licensing practices so as to release software products first as traditional commercial products and then convert them to open-source products when they reach an appropriate point in their life cycle, when the benefits of developing them in an open-source environment outweigh the direct software license revenue they produce.   |

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36 Eric S. Raymond, 2000.

|                      |  |
|----------------------|--|
| Brand Licensing      | A company makes the software product itself open source but retains the rights to its product trademarks and related intellectual property, and charges other companies for the right to use those trademarks in creating derivative products distributed under the exact same brand name. This of course requires that the product exist in at least two different forms with two different names: the "official" product referred to by a trademarked name, and the "unofficial" product referred to by a separate name. For example, even though Netscape released source code for the Netscape Communicator product, only Netscape can use the source code to create a product called "Netscape Communicator"; products built by others from the source are typically referred to by the name "Mozilla" (from the original code name for Netscape Navigator).  |
| Software Franchising | "Software Franchising" is a possible business model based on taking to their logical conclusion the ideas of some of the preceding models, in particular "Brand Licensing" and "Support Sellers." The "raw materials" underlying a support seller's business are available to anyone, but it's reasonable to assume that some may be better at the business than others and as a result may build value in a particular brand associated with the company's services. If the company then wishes to expand, one possibility would be to grow not through direct hiring and acquisition but rather through franchising; in other words, the company would authorize other developers to use its brand names and trademarks in creating associated organizations doing open-source support and custom software development in particular geographic areas or vertical markets. In this model the "software franchiser" would not only license brands and trademarks but also supply franchisees with training and services (e.g., centralized support for contracting and procurement, advertising and marketing). |
| Hybrid Models        | There are possible business models that involve software distributed under licenses that are not quite open-source in the strict sense, but are also not as restrictive as traditional proprietary licenses. One way to explore the space of possible "hybrid" business models is to go back to the Open Source Definition and look at relaxing one or more of its requirements: change the availability of source code; change the treatment of different users; change the treatment of different types of use.  |

A list of examples such as this should prompt much thought from social entrepreneurs - who will no doubt immediately think of their own more radical business solutions. The key point is the way in which the open source movement demonstrates the intimate links between intellectual property and the organisation of production *and* consumption.

## 'Copyleft' for social enterprise

What are the implications for social enterprise of open source philosophy, intellectual property rights, production processes and business models?

I want to come right down to a practical example here. In May 2004, John Goodman, the national policy co-ordinator for Co-operatives<sup>UK</sup>, wrote to me about a professional development programme I am writing for my company, Economic Partnerships Limited (EPL). The programme, called *the VBBA* (Values Based Business Advice), is for professionals and other experts who want to extend their work to social enterprise. John was concerned about ownership and control of the learning materials and standards:

Ultimate control over what's in and what's out has to lie with some over-arching group that has an overview of the whole programme. At the moment we don't have such a body - maybe now is the time to think about creating one... The VBBA proposal has come through NESEP, which is funded from a variety of sources (mostly public)... It has also drawn on the DfES-funded project *Social Enterprises with a Wide Market Focus*... However, it is to a large extent the

brainchild of EPL, which is a for-profit co-operative. We need the outcome of this work to be a nationally-available public resource but we don't want to steal EPL's idea. This issue will have to be resolved.

Given the background set out in this article, it is easy to see John here grappling with the unresolved public/private balance in social enterprise, and grasping for something like open sourcing - both in terms of intellectual property and also peer production business models.<sup>37</sup>

A lot of my own paid work for social enterprises is in 2 areas:

- ∞ training, especially writing training materials, and
- ∞ designing organisational structures, including writing company constitutions

Both of these, it seems to me, might be more widely used and, dare I say it, *improved* if they were freely available to all trainers and lawyers to modify, extend and deliver.

Since both training materials and organisational structures are 'nonrival' - indeed generally, like software, the more they are used the better - it seems sensible to open up their development by 'open sourcing' them and facilitating 'peer production'. For example, creating a 'development community' around designing better legal/financial structures for various social enterprise purposes - especially when looking into new possibilities such as Community Interest Companies or Open Capital Partnerships - is almost bound to benefit everybody, since the key skills lie in areas such as advising on what structures are appropriate rather than their detailed design (which almost always draws on previous models anyway).

Similarly, all of the VBBA materials could be posted on the internet and through existing networks the nucleus of a 'community of developers' invited to read, test and improve them precisely by delivering them in various contexts. The correct open source license, such as that reproduced in the Appendix to this article, would prevent commercial exploitation and ensure acknowledgement of the originators (the community of developers would be paid either by their own organisation or their customers for the training, but they would not be able to financially benefit from the materials directly, for example by publishing them for profit). Ideally, the 'over-arching group' - for which John identified a need - would also be the community of developers expressed through their improvements - precisely an emergent property of the system rather than an imposed hierarchy - since only those modifications which work and find general agreement will be accepted. Because of the modularity/granularity of the development work 'what's in and what's out' in any specific aspect of the training would be decided by those very highly expert, committed and active in that specific aspect. Might this be an 'everybody wins' solution? Certainly:

- ∞ EPL gets acknowledgement and therefore the 'indirect appropriation' of reputation gains etc. outlined by Benkler
- ∞ EPL also gets the possibility of direct financial returns if the materials are ever published - unlikely perhaps, but surely made more likely if widely used and known through open sourcing than if limited to EPL's immediate clients
- ∞ everybody in the community of developers shares knowledge and experience and gets better materials
- ∞ all of their customers, current and future, get better training
- ∞ if the community of developers also has the final say over 'what's in and what's out' they also

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<sup>37</sup> Actually, of course, I'm quite happy for *everyone* to steal my ideas - what I need is a way of them doing it which takes less time from me - such as an effective internet infrastructure to facilitate the sharing.

really do have ownership and control over the fruits of their labour, without having to deal with an imposed and possibly bureaucratic hierarchy.

The VBBA may be particularly suited to an 'open source' approach, partly because it is explicitly an attempt to draw the conventional business world into social enterprise and ethical business - especially its professional support infrastructure such as sympathetic individuals in law and accountancy practices. And that's my final point really - the open source movement shows us not only approaches to intellectual property that might be more appropriate to social enterprise history and values, but that the ideas and practices intimately associated with these approaches - peer production, new organisational and business models - have produced probably the most successful democratic, co-operative and community based effort of our time, closely linked both politically and practically with the anti-globalisation and environmental movements, in a context that turns producer and consumer relations upside down. If there is a new economic infrastructure associated with the internet, then open source is its pre-eminent 'superstructure'.

Open source is social enterprise gone mad, with private, public and philanthropic bodies working together with thousands of individual professionals and volunteers for both public and private benefits which, in this framework, seem to be almost completely complementary. I have no doubt about the importance of the legal frameworks, organisational structures and business models that might emerge from bringing the open source and social enterprise movements to more conscious cross-fertilisation. The main question-mark in my mind, to return to Benkler's hypothesis, is whether social enterprise is yet a 'sufficiently networked environment' - and with sufficient technical knowledge and resources - to overcome the problem of co-ordination. Does open source only work for the technically competent and fully-wired - or can it really be for everybody?

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# Appendix:

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