Charles Leadbeater

Draft (Chapters 1 to 5) – We Think: why mass creativity is the next big thing.

You are free to download this draft of my book, which is due for publication by Profile in the summer of 2007. Please read it, comment on it or pass it on to your friends, but I would be grateful if you referenced it, if you use ideas from it in anything you write. If you want to comment on it please do so through the website: wethinkthebook.com

Many thanks
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Chapter 1 – Going Barefoot

They used to have to close when the sun went down, the shops in the little village of Bahurva in the Indian state of Bihar. When darkness fell virtually everything had to come to a halt – wrok, reading, cooking – because the vaillage had no electricity. Ritma Bharti has changed all that. Largely thanks to Ritma more than 750 solar powered lanterns have been installed in shops, schools, irrigation facilities and medical centres. Now thanks to the lanterns that Ritma built and maintains children learn to read at night, nurses can see patients and shops, like the one run by Ritma's husband, can stay open late into the evening.

Ritma does not have a degree in solar power engineering. She has no paper qualifications. Indeed, she can barely read, write and count. Ritma is an alumni of a remarkable educational institution in a village called Tilonia, in Rajasthan, called the Barefoot College, which was set up in 1971 by Sanjit Bunker Roy after a famine in Bihar that killed thousands of people. Roy turned his back on his life as the son of a wealthy Delhi family to set up an institution that would give India's illiterate villagers greater control over their lives by helping them to learn how to provide heat, light, clean water and food for themselves.

Roy could not afford to employ professionals to teach the villagers. Anyway the city-based experts were not equipped for the task. They could only teach in classrooms and they did not want to work in villages with the poor. So Roy trained a small group of from the village - -barefoot teachers and engineers – who in turn went on to teach others, who in turn became barefoot engineers, teachers and doctors in their villages. Two generations of families have now become barefoot professionals of one kind or another thanks to the college. Thousands of poor villagers have acquired the skills to use simple technologies to improve their lives.

Each night more than 4,000 children who tend cattle by day attend night classes with barefoot teachers in education centres lit by solar powered lanterns built and installed by barefoot engineers. They drink clean water from one of the more than 1,737 hand operated water pumps which have been installed since 1979, providing water for more than 325,000 people. Those pumps are maintained by 1,200 barefoot mechanics. More than 1,000 education centres and schools have been electrified by barefoot engineers. The 30,000 sq ft Barefoot College campus was designed by Bhanwar Jat, an illiterate farmer, working with 12 other barefoot architects. Using Buckminster Fuller's designs, Rafiq, a local blacksmith fabricated more than 150 geodesic domes to be used as schools, dispensaries, telephone booths and community centres.

Out of a mixture of instinct and necessity Roy had hit upon an ingenious self-help solution to rural poverty. But he did much more than that: he devised a new, low cost, way of organising ourselves which could have revolutionary consequences far beyond rural India. His barefoot philosophy scrambles up the cast-iron categories of top heavy, industrial era organisations. In the barefoot world demand generates its own supply, because the consumers can become producers, the learners can become teachers, when they are equipped with skills and tools and motivated to help themselves. The professionals and experts do not have all the answers; committed amateurs – like – Tilonia's barefoot engineers - can devise their own effective solutions so long as they can get access to the knowledge and resources they need. Roy's lack of formal resources – no money, buildings, nor professionals to work with – meant he had to become an organisational revolutionary.

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When Roy started the Barefoot College in 1971 he was a maverick. But the same philosophy is at the heart of mass, participatory approaches to collaborative working that are being fed by the rise of the Internet and low cost technology, the spread of knowledge and education, the ethic of participation and self-help. High tech versions of barefoot thinking are at work in eBay, the trading system, and Wikipedia, the online encyclopaedia, Linux, the open source software community and computer games, such as the Sims, blogging, podcasting, Youtube and many forms of citizen activism. Running through them are some common threads: the spectators want to take part, not just sit on the sidelines; the consumers are becoming contributors; the audience wants to take to the stage. Many new organisations, utilising new technology, will thrive on this spirit of mass participation. If the 20th century was the age of industrial work, mass production for mass consumption, then mass participation will be one of the defining features of the century to come.

The way we organise ourselves in future will not just be an extension of the industrial era, corporate organisations we have become used to – Ford and Toyota, WalMart and Microsoft - with their hierarchy, targets, divisions, civil wars and myriad humiliations for workers and consumers alike. A growing band of organisations in future will resurrect ancient ideas and meld them with new technology. One such resurrection is the idea of the "commons" a feature of village life for centuries: a common resource, like a wood or grazing land, held in loose, self-regulated shared ownership for villagers to graze their flocks on. The likes of Wikipedia and Linux organise their activities around a digital version of the commons. At least one part of our complicated future could be a peculiar mixture of the peasant and the geek, the pre-industrial and the post-industrial combined. That recipe, blending the interactive technologies of the Internet with the habits of the village, may be particularly potent in Asia, where over the next few decades hundreds of millions of people will leave villages to live in cities and connect with one another using mobile phones and computers. They will carry with them village habits and social networks that will combine with the latest wireless and mobile technologies. Out of that new kinds of organisation will be born quite unlike those that grew up around railways, cars and steel, from Detroit to the English Midlands and the Rhineland.

One of the best ways to navigate your way through this world of mass participation and creativity is to adopt the vantage point that Bunker Roy took in India more than thirty years ago. That means flipping the world on its head. Thanks to low cost technology many more consumers can become producers at least some of the time. Good ideas will come from amateurs as well as professionals. Innovation will not just flow down a pipeline, from experts working in their labs and studios, to passive consumers waiting in the line. Innovation is a social, cumulative and collaborative activity; ideas will flow back up the pipeline from consumers and they will share them amongst themselves. That is why the next big thing will be us: our power to share and develop ideas, without having to rely on formal organisations to do it all for us.

But to go barefoot as Roy did you first have to think barefoot. Industrial era organisations have enslaved our imaginations. We cannot image being organised without having an organisation. We cannot imagine work getting done without someone being in charge of a division of labour. We have grown up in an era of standardisation: mass production for mass consumption. But we are moving into a time when with the help of cheap, distributed technology there will be more production by the masses, for their own ends. As a consequence, innovation which has long been seen as an elite activity, undertaken only by special people, in special places will become more like a mass activity, often involving large collaborations of professionals and amateurs, designers and consumers, sharing their ideas. Increasingly we will think together.

We-think will change the was we work and consume; it will change the way leadership is exercised and where new ideas will come from. More leaders will have to be like Bunker Roy, inspirational and visionary, but humble and self-effacing. More work will be self-organised and self-motivated to tap into people's ideas and imagination. Industrial era organisations like to broadcast at people, issuing instructions to their workers and regarding their consumers as targets for their marketing and wallets to be emptied. Barefoot organisations are more convivial. They work through dialogue and interaction, co-creating value with and among their users. Industrial era organisations see themselves mechanistically: they are value chains or pipelines. Barefoot organisations are more like rolling creative

conversations. They are organised without that requiring top-heavy organisation. The claim that we can successfully self-organise ourselves will strike many people as utopian and fanciful, especially in light of the myriad failures of cooperatives and communes. Yet in many areas of our lives we rely on old forms of volunteer self-organisation such as clubs. Scientific inquiry has long relied on the sharing of ideas among peers. In many rural communities mutuals and cooperatives still organise the marketing of agricultural products. Those old forms of mutual endeavour take on a new life when they are combined with the power of the Internet, which allows mass participation to be taken to scale. One of the best models for how this kind of collective self-organisation is another barefoot activity: a day on the beach.

The Beach Ethic
Beaches are ordered without being controlled. No one is in charge. Beaches are model civic spaces: tolerant, playful, self-regulating, democratic in spirit, mildly carnival-like. Underlying the beach's appeal is a simple idea: the beach is a commons where people can self-organise in play. As a day on the beach unfolds everyone takes their spot, adjusting minutely to where everyone else has pitched their towel, tent or windbreak. There are no zoning regulations, fences nor white lines to tell you where to go (admittedly this is not true of some beaches in France and Italy.) The order emerges as each new family joins the throng. Yet that order will not be exactly the same two days running.

On the most popular beaches people spend all day in close proximity but they are generally civil and considerate. They do not interfere with one another and disputes between neighbours are rare. Excessive noise is frowned upon. People generally avoid stepping on one another's towels or invading impromptu football pitches. Other than the odd lifeguard to look after safety no one is in authority. Perhaps precisely because there is no one in control people take it upon themselves to self-regulate. Parents look out for one another's children. Complexity theorist have a fancy name for this: they call it emergence, when an overall order emerges from a system with many participants; no one person is in charge; each participant is adjusting to their local conditions (the people on the towel next to them); yet a stable organisation emerges from these thousands of interconnected decisions.

Adaptive and self-organising communities rely on more than good communications between neighbours and peers to make sure everything works. An overall order emerges from a mass of localised decisions only if there are some simple norms and goals to provide a skeleton structure. On the beach those norms stem from the common goal of having a good time, relaxing with your family and friends, not being at work. It is easy to understand what everyone else is trying to achieve. That is what helps people to get on. Beaches are egalitarian in spirit. That is not to say there are no posh resorts. But generally a beach is a bad place to show off social status, armed with only a towel and trunks. There is no room for BMWs, Mont Blanc pens and other signifiers of wealth and prestige. Beaches are places where ages, sexes and classes mingle. Both Karl Marx and Queen Victoria liked a trip to the Isle of Wight. Beaches are democratic because barriers to entry are almost non-existent: having a towel helps but even that it is not essential. People take pleasure not just in their physical surroundings but the atmosphere in which everyone else is having a good time. People read on beaches in droves but few work. Thankfully beaches are hostile to most forms of modern technology. Beach life is egalitarian because the technology is resolutely cheap and simple: buckets and spades, nets and kites, good for toddlers and grandparents. The technological acceleration that has so enriched and disrupted the rest of our lives in the last thirty years has passed the beach by.

Not only do we like what beaches do for us an individuals we like the kind of society we become on a beach: civil and playful, active and open, above all self-regulating. There are neither managers nor guardians telling us what to do. The public beach is an example of self-organising, peer-to-peer, commons-based production of pleasure. And of course it is not alone: public spaces of all kinds thrive on this ethic of mass self-regulation and participation: festivals, carnivals, parks, libraries exhibit many of the same features.

This book is about what happens when the beach ethic of mass self-organisation gets taken into work. What emerges are highly participatory forms of organisation that function like a latter-day commons, a meeting place and shared resource for millions of independent contributors. But the future is far from certain for these fledgling

commons, like Wikipedia, the online encyclopaedia and Linux, the open source software project. In England the village commons were enclosed into private property to encourage more private investment to raise agricultural productivity and provide more food for expanding urban populations in the 18th and 19th century. Now the same argument is being used – often quite erroneously – to justify enclosures of the digital commons that are emerging from Internet culture. The argument of large corporations, such as Microsoft and media companies such as News Corporation, is that the digital world will work better if everything can be turned into private property, to be protected and controlled. One of my aims is to show how dangerous and wrong-headed an idea this is. Were these emergent commons to be parcelled up and fenced off then mass, participatory, barefoot solutions could become all but impossible. We would return to our familiar, dull roles as consumers and waged workers, but we would be largely denied the opportunity to be participants and contributors. We could buy, have, make and acquire, but we would find it much more difficult to enjoy collaborating, participating, contributing and playing.

To understand how dire this world of digital enclosures could be, imagine finding your favourite public beach had been bought by Microsoft. You would only get onto the beach by buying Microsoft towels or windbreaks. You would be told where you could lay down your towel according to how much you had paid. If you wanted to surf as well as sunbathe it would cost you more. Kite flying would require a permit. Every two years you would find your equipment was no longer compatible with the beach's sand. You could not modify your windbreak yourself, because key aspects of the design would be kept secret. You might have a reasonable time but the commons would have been turned into commerce and you would not be a player but a consumer, passive, dependent and no longer in control.

Every weekend in corporations all over the world millions of people rush, a smile on their faces, to leave work and get to a beach. Something similar is increasingly happening on weekdays as well as the beach ethic challenges the corporate work ethic. People want to engage with open, collaborative barefoot organisations because they are the working equivalents of the beach. Industrial era organisations thrived on Max Weber's protestant work ethic and rational forms of scientific organisation presided over by experts. Organisations of the future may well be infused with more of the beach ethic of self-organisation. That is another reason for us to think barefoot in future.

Chapter 2 – Pigs Can Fly

An online encyclopaedia created and maintained almost entirely by amateurs attracts more people than the New York Times online, carries more content than most other encyclopaedias combined and threatens to dwarf similar services offered by large publishing companies. A computer programme started by a wispy Finnish computer science student and initially developed almost entirely by unpaid volunteers is the main challenger to the computer operating system created by Microsoft's, one of the world's largest corporations with the best-funded research teams.

Most email depends on a programme created by barefoot programmers and most Internet transactions depend on servers running what might be called barefoot software. The world's record industry has had its business model upended by a bunch of hackers creating file sharing systems that have as their common currency the MP3 file, an innovation given away for free by its creator, a publicly funded German computer scientist. The main alternative to the might of Wal Mart is not another hypermarket chain but a trading system through which millions of participants buy and sell with strangers, by setting their own prices, advertising their own products, doing their own deals and deciding how to ship their products. The most successful computer games outsell Hollywood blockbusters because they allow the players to fiddle, tamper and change the action, creating their own characters and storylines. These player-developers then contribute their innovations, for free, back to the larger community playing the game. Computer games generate more revenue than films in part because they mobilise unpaid player-developers in their millions. The most powerful super computer in the world was not created by IBM but by amateurs pooling the downtime of their personal computers to search for signs of extra terrestrial life. An army of millions of amateur clickworkers, working for free, were as effective as Nasa in finding craters on Mars.

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At the start of the 21st century this should not be happening. The last decades of the 20th century witnessed the triumph of the market and corporations. Cooperative and collaborative values were in retreat. In an increasingly materialistic and venal world, people do not do things for free: there has to be something in it for them. And if there is nothing in for them, then they have to be told, instructed what to do by managers. Those are the only two ways to get things done: markets and hierarchies, incentives and instructions. Yet in field after field we are witnessing the same phenomenon: large groups of committed and knowledgeable amateurs, working without pay, are creating highly collaborative forms of organisation, which operate with little hierarchy and bureaucracy and yet mobilise resources of a scale to match the biggest corporations in the world.

Linux, the open source software programme, is one of the biggest challengers to Microsoft. Wikipedia, the online encyclopaedia, attracts more traffic than the New York Times and its news reports are as trusted as those of the BBC. Apache is the citizen software that runs on more webservers than proprietary software produced by Sun Microsystems. eBay traders buy and sell more than 25m items a day, in volumes to match the biggest global retailers. In the UK more people use eBay than vote in local council elections. The Sims, the computer game, is as big at the box office as Star Wars in part because 90% of the content for the game is now generated by people who play it. The biggest super computer in the world has not been created by IBM but by the SETI project to track down life beyond our galaxy. Many more projects of this kind are in development in law, education, banking, betting, drugs development and politics.

Everything we have been told about organisations and work tells us this should not be possible, especially in an age of rampant consumerism dominated by large companies. Yet here are large groups of people voluntarily committing their labour together, without seeking financial reward or being told what to do, and managing to create complex products and services that millions of people rely upon each day. It should not be possible. Pigs, famously, do not fly.

We are told that to be organised we need an organisation. Yet all these are complex and highly organised activities without a single organisation being in charge of everything that goes on. We are told that to make sure order is maintained someone has to be in control. Yet these activities seem ordered precisely because no one seeks to be in control and so people have to exercise their sense of responsibility, adjusting to one another, sorting out disputes as they go. The order comes from within these communities not from the top. To get complex tasks done reliably we have assumed we need a clear division of labour, so everyone knows in advance what they are supposed to do, whose job it is to do what. Yet in these non-organisations people seem to voluntarily distribute themselves to work, as and when it needs to be done. They find their own niches to work in alongside other people. Consumers, we are told, are happiest when they are being treated like Kings, waited on hand and foot and offered the widest possible choice. Yet in these vast communal efforts the consumers willingly become workers, devoting some of their time, effort and imagination to develop products for one another. They do not want to be just passive recipients but players and participants, at least some of them do, some of the time. They do not just want more choice but more say. These are activities of mass participation rather than mass consumerism.

We have come to expect that innovation will come from special people – boffins, geeks, designers, artists – working in special places – labs, garages, studios. They create their inventions and push them down a pipeline to waiting consumers. Every invention has a moment of birth and an inventor who can say, in advance, what their clever gizmo is for. Yet in these new endeavours innovation is the work of multiple authors. It is cumulative, collaborative and often depends on the contributions of intelligent users. It takes place all over, not just in specially designated zones. We expect that innovation will not take place unless people have the financial incentive to be creative. That means they have to be able to patent and protect their intellectual property so they can exploit it commercially. Strong patent protection is the basis for innovation, we are told. Yet in these swirling swarms of creativity innovators share their ideas quite freely and welcome it when others borrow what they have done, to improve upon it. They put a lot of unpaid effort into their innovations and then, bizarrely do not seek to profit from them, nor to control their use.

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Sitting in your office at Microsoft, working your socks off, meeting constantly updated plans imposed by impatient managers who want you not just to deliver relentless growth but to do so with a smile on your face, while endorsing all the nauseating corporate brand speak, it must be bewildering. You are being beaten by a bunch of people who mainly work from home, create products for free, because they enjoy it and with no one telling them what to do. When you are on a plane to Redmond, Seattle, Microsoft's head quarters, to account for your latest deviation from the corporate plan, hoping to save your bonus, these open source guys are probably in the pub, and they still do a better job. How did that happen?

It happened because the barefoot philosophy that Bunker Roy developed in Tilonia is scrambling up the logic of managerial capitalism. Consumers turn out to be producers. Demand breeds its own supply. Leisure becomes a form of work. A huge amount of creative work is done in spite, or perhaps because, of people not being paid. These new non-organisations pose a huge challenge to the established organisational order and the professions and managers who design, control and lead them. They embody a new ethic of collaborative, shared effort, often not motivated by money. As a result these scrambled organisations excel at practical tasks – sharing knowledge, providing news, trading goods and services, innovating new products – which large, hierarchical organisations thought were their terrain. You do not have to buy into alternative, hippyish, altruistic values to believe these collaborative forms of work are significant. They matter because they get things done, usually at very low cost. These collaborations are especially effective at a form of rolling, mass innovation. Given that innovation is at the heart of capitalism's dynamic that is a pretty significant development. We have found a new way to innovate together, at very low cost and mass scale, globally. These collaborations are not designed for mass production, so much as production by the masses. They are emerging, designed for an era in which creativity could become a mass activity not just an elite one.

The truth is that most traditional commercial organisations do not want their consumers to become contributors. They quite like them passive and so dependent. They do not want their staff self-organising, they want them to be aligned to the corporate plan. They do not like it when innovation comes from all over. They want ideas to emerge in orderly fashion from their R & D labs so they can control them. Industrial era organisations were designed for a heavy, slow world. They do not want to face competitors designed for an era when ideas flit about like pollen carried by swarms of bees. Leaders quite like their self-image as lonely, harsh, authoritative figures, cut off from the organisations they drive into corporate battle. The idea that you might be able to lead more effectively in a far more open, transparent and conversational way ruins all the fun.

The irresistible force of collaborative mass innovation is about to meet the immovable object of entrenched corporate organisation. This book is about that coming conflict and what will emerge from it.

The Self Assembling Bird's Nest
Larry Sanger and Jimmy Wales had a problem. The free online encyclopedia they had set up – Nupedia – was growing at snails pace. Nupedia relied on voluntary contributions but had such an elaborate system for peer review that only highly qualified contributors could get their material accepted. After several months only a few articles had made it through the process. On January 2, 2001 Sanger had dinner with a computer programmer Ben Kovitz who explained a new development in websites called Wikis which he thought might breathe new life into Nupedia. Wikis are websites that can be edited by any user, using nothing more powerful than a standard web browser. They allow people to dip into a text, contribute to it, leave their mark and exit. The text then grows as a collective creation, and collaborative piece of work, being edited by several hands. Sanger immediately saw the potential for using a wiki to rescue Nupedia and he quickly persuaded Wales to set up a wiki version of the encyclopaedia. The reviewers and editors on Nupedia did not like the idea. In common with professionals in many other walks of life, they felt under threat and resisted. They did not want their work to be associated with something as low-brow as a wiki, something that anyone could edit. There was, they complained, no guarantee of quality. So Wikipedia was launched with is own domain name on January 15th 2001. A month later it already had 1,000 articles and reached 10,000 by September. By March 2005 the English Wiki had more than 500,000 articles, many of them based on

multiple contributions. In its first four years Wikipedia attracted 2m entries, in 105 languages. Nupedia meanwhile was closed down and only ever attracted 24 entries.

Wikipedia is an dizzying collaborative creation. Anyone can edit it, take away the information and use it. There are no editors, fact checkers or proof-readers, at least not ones that are paid. An encyclopaedia is an august body of knowledge, a bit like a monument, compiled by experts through an editorial process few know about and at great expense. Wikipedia is a constantly evolving account of a huge range of things, continuously updated and mainly compiled by a breed of committed amateurs, through a process which seems completely transparent. The Encyclopedia Britannica has 44m words of text. Wikipedia already has 250m. Quantity, of course, does not necessarily equate with quality. It is not Wikipedia's aim to replace encyclopaedias or to supplant all forms of expert knowledge. Many critics argue Wikipedia's democratic approach gives it a populist edge: the contributions on popular culture such as Coronation Street or Barbie dolls are sometimes far longer than those on art or politics. Wikipedia has had its problems. Some small sections of the site – the section on President George Bush and the war in Iraq - had to be closed down because contributions to them became a kind of political warfare. The site has suffered some vandalism, inaccuracies and some people have tampered with entries to self-promote themselves or attack others. It is far from perfect. Yet on the whole Wikipedia is an easy to use, well organised, starting point for research on many subjects. Attempts to doctor it will be found out, probably more easily than reporters on the New York Times making up quotes from invented interviewees. It is not the final story on that subject but often a good place to start. And it invites you to contribute because you are giving something back to the community you have drawn from.

What is remarkable is how Wikipedia manages to make it all work. It is as much a social innovation as a technological one. Wikipedia recruited its first full time employee in January 2005. Its annual running costs are less than $100,000. Wales, a former options trader, bankrolled it in its first four years to a tune of about $300,000, a pittance compared to the money that venture capitalists poured into the Internet during the dot.com boom. One secret of Wikipedia's success is that it is very easy to use: costs of entry are virtually zero. Anyone can take part, you do not have to show your credentials at the door. (Imagine a company that allowed people to come to work for it first and only asked questions about their credentials, once they had seen the quality of their work.) But because there are so many people swarming over the site you had better be reasonably sure that what you are going to add is accurate, because not then other people will correct it. That process of peer review is not in itself new, it will be familiar to most academics and scientists. But Wikipedia is taking it to scale for three main reasons. First, everyone contributing is in effect asked to sign up to Wikipedia's norms and values to adopt a neutral point of view and not to grind an axe. As Wales explains, this helps to set the tone in which discussions take place, a common goal that people can join in attempting to reach. Second, the peer reviewing system does not descend into chaos, grind to a halt, nor allow through rubbish because it has evolved very delicately. When individuals get into a dispute about an entry they can propose a vote on the issue. If that does not work there is mediation, then an arbitration committee and finally Wales himself might have to make a judgement. This set of checks and balances means the whole community is governed by consent. Although there is vandalism the community is largely self-healing: it sorts it out itself. Third, the community has developed its own social structure. Not all Wikipedians are equal. Those involved in the project for longest form a kind of aristocracy. Policies and strategies are openly debated, posted online and voted on. That commitment to transparency means it is very difficult for a group to change strategy without anyone else knowing. Few managers in large companies could bear to operate with the transparency of Wikipedia. Most of the work is actually done by about 1,100 people. Outside that core group a few thousand more make more than 100 edits each a month. Then there is a long tail who have done little more than add an entry here and there. The power of communities like Wikipedia is this sliding-scale of contribution. Traditional companies do not have good ways for people to make occasional contributions when they feel like it. Employment contracts are too cumbersome for that. But Wikipedia has the flexibility to mix committed and occasional contributors seemingly effortlessly.

Wales is an unlikely looking leader of a rebellion: self-deprecating, softly spoken and charmingly modest. When I met him in July 2005 in Oxford and in May 2006 in Norway he was wearing ill pressed black trousers and the same a black cheesecloth shirt embroidered with a red pattern (I assumed it had been washed in between.) He looked like a folk singer. "Wikipedia is governed in a set of different ways," he explained. "In part it is anarchy, really no one is in control of the content, its up to people to sort it out for themselves. In part it is democracy because some things do get voted on. There is also an element of aristocracy: people who have been involved in the community longer, who have acquired a reputation, have a higher standing in the community. And then there is monarchy - that's me – but I try to get involved as little as possible." Wales' aim is that Wikipedia should become the Red Cross of information, a global resource, to put the extent of knowledge contained in an large encyclopaedia in the hands of everyone on the planet, for free. Already it has more than 1,000 articles in 100 languages. In some African states, Wales explained, teachers are downloading Wikipedia onto CDs which they then take to villages with a PC but no Internet connections.

Listening to Jimmy Wales spin his tale of Wikipedia's birth and growth I imagined was like listening to Henry Ford on the eve of his launching his moving assembly line at Highland Park in 1913. Until Ford came along car production had been an odd-ball activity. The US produced 7,000 cars a year, mainly from small workshops owned by rich people and they were then sold to other rich people. No one had dared think cars could be for the masses. They could not see how that might be done. But for most of that decade, Ford a renegade outsider and his team of engineers, had been experimenting with a fundamentally different approach to production, with the aim of creating a product for a mass market of mid-Western farmers. A bit like the encyclopaedias of today, the car workshops of 1913 used only skilled craftsmen to make bespoke products. Ford wanted to use a rag-bag army of barely literate workers to achieve the task. To most of the rest of the car industry it must have sounded crazy. Yet most of the ingredients of Ford's mass production system were already around to be borrowed: the moving line came from the meat packing industry; the interchangeable parts came from the machine tool industry; the scheduling skills came from railroads. Ford's genius was to understand how they could be brought together. Ford created a new way to see organisations: how to mobilise resources on a mass scale, to make standardised products for mass markets and in the process bring about far reaching social and economic changes. What Ford did for the industrial economy Jimmy Wales is doing for the knowledge economy. And like Ford he is doing it by borrowing ideas from many different sources. None of the organisational ingredients that make up Wikipedia are in themselves new: peer review comes from academia and science; the wiki was a tool developed elsewhere on the net; the encyclopedia is a well established form; the way Wikipedia settles disputes borrows from other, older communities; the barefoot philosophy of amateurs doing jobs previously reserved for professionals was pioneered by social entrepreneurs. What is new is the way that Wales and Wikipedia has put it all together. Even now most people cannot see how the mass of people could become participants in innovation rather than merely consumers. Yet just as Ford transformed the way we made products, so Wales and others of his ilk are transforming the way we create ideas, together.

To underline just how different is Wikipedia's approach to organisation, consider what it does not do. There is no Wikipedia head office and no research lab in the woods. There are no corporate perks, learning programmes, nor memos from head office about travel expenses. Wikipedia might exclude trouble-makers but it has not downsized large swathes of its workforce. There is no human resource department in charge of recruitment. People recruit themselves. Their role depends on their enthusiasm and skills and the judgement of their peers. Wikipedia does not have to employ consultants to devise knowledge management programmes to get people to share ideas. People do that automatically. Had large corporations adopted Wikipedia's recipe the entire knowledge management industry of the last ten years might have been redundant. What to Wikipedia comes naturally has to be forced, engineered and aligned in most organisations: that is a measure of how dysfunctional they are. There is nothing to outsource to India because everything was open source from the outset. (Strictly speaking Wikipedia operates under a GNU Free Documentation Licence, which allows rival sites to set up using the same software. As of summer 2005 one rival existed Enciclpedia Libre.) Companies are always in search of a better fit with their elusive customers. In Wikipedia the customers are contributors and designers of the content. They are fused together. Wales will not

hand over the community to his offspring. He could not appoint his best mate to become finance officer, with rich stock options. Contributors to Wikipedia work through peer review the whole time. They do not have to subject themselves to embarrassing 360 degree career reviews or submit to sessions with a personnel manager. In short, Wikipedia does not carry the dispiriting and dysfunctional baggage of life in big business. It is a self-organising community that works for non-commercial motives. It should not work, but it does, and because it does we have options for how we work together that we never had before.

Wikipedia resembles a bird's nest lovingly constructed from millions of little pieces of information, each laid delicately together to form a robust, safe structure, which is nevertheless comfortable for its inhabitants. Yet it is a bird's nest that assembles itself, as if the grass and twigs themselves knew exactly where they should go.

The End of the Value Chain
How different from the main way we imagine traditional organisations as "value chains" made up of iron links. That image tells us all we need to know about what organisations were for and how they had to be set up to do their job. Each step of an activity, from conceiving a product through to its manufacture and distribution, was a link in the chain. The final link was the transfer to the consumer. By that stage the product – a fridge, washing machine, Apple iPod – embodied all the value that had been invested in it – labour, raw materials, design and software. Each link in the chain represented a transaction: people, machines and raw materials to be added had to be paid for. The goal of management was to organise the links in the chain as efficiently as possible, to know where in the chain your link fitted. It was assumed – at least until the late 20th century – that value chain organisations worked best when most of the links were vertically integrated, with a company controlling most of its supply chain, with jobs and tasks, organised hierarchically. Working in one of these organisations was simple: if you want to know what to do next you followed your detailed job description and if that did not give you the answer, you turned to someone in authority to ask for directions.

We should not sniff at value chain organisations. They have achieved a huge amount in the last century. They organised a complex range of activities, often within a single organisation, sometimes under the same roof, to produce goods and services at prices that many people could afford. The car, television, fridge, telephone, cataract operations, maths lessons - all might be the preserve of the rich had we not invented ways to make them on a mass scale and at low cost. In the past three decades it has sometimes not been clear whether these value chain organisations have been falling to bits with the growth of networked production, outsourcing and constant restructuring, or whether on the contrary they have been tightening their grip through business process re-engineering and downsizing. Hierarchies are flatter, job descriptions for some skilled workers are vaguer, the working day is more flexible and the boundaries of organisations have become more porous. Organisations are interacting with one another in new ways as partners and suppliers. As products become more technologically complex, so firms have had to look outside for new sources of specialist knowledge. Good companies recognise they make better products if they engage with their users earlier in the design process. Consumers increasingly want products that look and feel distinctive. We will continue to rely on value chain organisations in many walks of life.

Yet our modern, networked, versions of value chains organisations – Toyota, Wal Mart, Nike, Cisco – are value chains nevertheless and they are haunted by the same questions. They say they want to give workers more autonomy, yet more people seem to feel more insecure and frustrated at work and less committed to their employers. Management jargon about empowerment and alignment washes over people as a form of double-speak. In an increasingly democratic age, the unaccountable power of many chief executives is an anachronism. For all the talk of corporate social responsibility, company life seems hollow, little more than a race to deliver the numbers on time. True these organisations now give consumers a bewildering array of apparent choices but even that can be bewildering, especially when what you really want is a bit of support or advice. More choice does not necessarily mean better customer experience. Many consumers now find companies more unyielding and less personal.

Wikipedia, Linux, eBay and the host of other non-organisations are more like barefoot communities than value chains. They are more like self-organising collaboratives. They are a quite different way of organising ourselves, often without the heavy hand of an organisation. Others are following where these pioneers have led. In industry after industry workers, entrepreneurs and investors will be asking whether there are open, collaborative alternatives to the standard corporate model: could you do in your industry what Wikipedia has managed to do for the encyclopedia business? There is a viable alternative to corporate organisation and the market. It is not centrally planned communism, but new forms of barefoot, cooperative endeavour emerging from within knowledge rich global capitalism. It is proving particularly effective as a way to share and create new ideas. There is an alternative. It works. Pigs can fly.

Chapter 3 – The Genie is Out of the Bottle

Nick Jaffe has finished for the night. He puts his earphones to one side, closes the lid on his laptop and sits back in his chair, his nightly communication to his worldwide audience complete. He is not quite sure where they are, nor how many of them there are, but he knows they are out there because his nightly sessions – a mixture of music, chat and ranting – are being downloaded. Nick Jaffe is not broadcasting. He is a podcaster and just 13 years old. His studio is his bedroom. For him taking part in mainstream radio would be like going to a restaurant with his parents wearing a suit and tie.

Nick Jaffe produces media in a way that someone twenty years his senior could only have dreamed of. He consumes media in a completely differently way as well. He rarely watches television or listens to the radio. He acquires most of what he wants to watch from the Internet, from sites such as Youtube. He most likes short films and comedy sketches which no one over the age of 15 will have heard of. He carries most of what he wants to watch onto his iPod, his device of choice. He gets the content from various aggregators of podcast materials and through recommendations from his mates. He does not like material being pushed at him. Nick Jaffe's media life is pretty much a seamless cycle of production and contribution, reviewing and sharing, watching and listening.

How could Nick Jaffe's entry into media production affect organisations as mighty and powerful as the BBC or CNN? By 2005 it became possible to follow a breaking international news story, almost as it happened, without ever having to open a newspaper, turn on a television or listen to a journalist. Instead, you could, turn to accounts provided by swarms of barefoot reporters, contributing their slice of the story, online, often with the help of photos taken with digital camera phones. CBS, the US news network has just a handful of foreign correspondents and most of them are in Washington waiting to fly to places where the news has already happened or to events that can be planned for. So when the Asian tsunami struck across the Indian ocean, over a Christmas weekend, when news is supposed to not happen, CBS was a bit stretched. The worst hit places were far-flung. When the mainstream media turned to their usual sources for information – aid agencies, governments – they found they too had little idea of what was going on. The most telling and graphic images of the tsunami, which really explained what it was like to be in Banda Aceh when the wave struck, came from digital cameras operated by tourists and locals. On the web you will find tens of thousands of video clips of the tsunami and its after-shocks.

When London's transport system was hit by terrorist bombs in July 2005 Christine Armanpour, the legendary CNN news reporter could be seen on television, standing in a non-descript London street, in an exchange of thinly veiled mutual ignorance with an obscure "security analyst." Neither had a clue what was going on. While Armanpour was stuck on the street would be reporters were already on the scene: citizens caught up in the action. Once we might have accepted that Armanpour was "live" and "on the spot" in London. But now we grow quickly frustrated: we know when people are just filling space. The London street scene might as well have been a digitalised backdrop. A television reporter in a suit, standing outside a building, speculating about what is going on, is no longer good enough. Our expectations of authenticity and immediacy have risen sharply. The new standards are being set by barefoot reporters, citizen journalists, bloggers, people who want you to know what it was like for them. They have something to contribute, in their voice, for their slice of the action. That morning as Armanpour

floundered in the street in about four hours following the bombs the BBC received 20,000 emails, almost 400 photographs and four video clips from people who wanted to tell their part of the story, add their piece of information. They did not want to be in the limelight, to displace Christina Amanpour; they just had something to add to the picture. The following night the main BBC evening news led with a piece of video footage shot from a camera phone, taken by a participant in the drama who for their sake of their fellow citizens became a citizen reporter for a few hours.

That is all a far cry from the profession I joined when I started work at the Financial Times in the mid 1980s. Then readers were allowed to contribute to the newspaper in only two ways. They could write a letter to the editor, which we would cut in half and condescend to publish if there was enough space. Or if they were particularly well connected the editor might agree they should write an article for the comment pages. Those two, carefully policed zones, were the only places journalists allowed readers into their closed world. I spent most of my time avoiding readers in case I found out they were not that interested in my long articles about the future of the European steel industry. The journalists performed on stage; the readers were the audience. Now it turns out that many readers do not want to be just an audience. They also want to take part. That does not mean they want to take to the stage themselves. Nor do they want to take part all of the time. But many want to be able to have their say and connect with people who share their interests. Thanks to mobile phones, podcasts, blogs and what will come after them people can communicate, even if only to very small audiences online.

We have grown many more eyes and ears. Weblogs, podcasts and mobile phone text messaging have given people new voices. The Internet and communications networks provide the nervous system to link them together. People who were once consumers, prepared to leave it to the professionals, are now becoming participants creating and distributing, critiquing and recommending content. The action is no longer just taking place on the stage but among the audience as well. We have crossed a threshold. From now on swarms of barefoot journalists will be alongside the professionals on any story of note and on many more that are not of note.

Niche news will thrive. In 2004 a customer of US cycle lock manufacturer Kryptonite, found his super strong bicycle lock could be opened with the help of a ball point pen. He posted his findings on bikeforums.net, where it was read by 400,000 people. A video version was downloaded more than 3m times. Retailers started clearing their shelves and shipping products back to the manufacturer. Kryptonite replaced at least 350,000 products at its own expense. The story really took off when professional and citizen journalists joined forces and the story got taken up by the New York Times. More us will work in this mix, where amateurs and professionals, consumers and producers, can find themselves swapping roles and sharing ideas.

Newspaper organisations can be drawn in a series of straight lines: copy gets written, edited, printed, distributed and read. The content goes from the journalist via the editors to the reader. There is no flow back up the pipeline. The blogsphere is criss-crossed with lines and links. Readers are simultaneously writers and publishers. They market one another's content by word of mouth. Everything works by lateral links. There are no artificial deadlines set by the necessity of distributing news on paper, by road to breakfast tables. Content gets created when people feel something needs to be said. A newspaper's content expands and contracts depending on the advertising available to sustain it. The blogsphere expands and contracts as news demands. A blog or podcast gets distributed if people find it interesting. News used to be broadcast, from the top down. Now it is also generated, laterally, by word of mouth, from the bottom up. It is more like being part of a conversation than sitting and listening.

So far so good. But it is one thing for there to be a welter of reports, gossip, clips and photos. It is another thing for it to be brought together, ordered, classified, tested, in a way that means it can be trusted and made part of a bigger picture. Much blogging is drivel. If Pro Am reporters are each contributing their slice of salami, how do you put it back together into a single sausage? Many Big J journalists' response to the rise of citizen journalism is to argue "they cannot be trusted, they are not proper journalists, there is no quality control." Big J journalists as with other professionals do not see that people these days often feel able to make up their own minds about quality and

credibility without having to turn to professionals for advice and judgements. These free-form communities are developing their own capacity for structured self-organisation to deliver reliable products. The most impressive is probably OhMyNews, the citizen news service in South Korea which has thousands of regular contributors. We are just at the start of the rise of citizen-media. It could herald far reaching changes in the way our societies work.

Nick Jaffe is not going to displace Christine Armanpour, at least not yet. But he announced the arrival of a new media environment, one that will disrupt and reconfigure the world of mass-produced, industrialised media. In a sense we are moving from an era in which information and media was produced for the masses, to one in which it will also be produced by the masses. The corollary of that is that we are moving from an economy of mass production to one in which innovation and creativity also become mass activities, rather than being confined to an elite of journalists and broadcasters, special people, working in special places. The audience, at least a large chunk of it, that used to simply watch and listen, passively, how wants to and is able to take part, to have their say. They will no longer just sit slumped on their sofas; they can take to the stage themselves, become part of the action, at least some of the time, in a way they want. If the last fifty years have been about the creation of cultures, organisations and infrastructures for mass media consumption – the couch potato society - the next fifty will be about mass media participation.

More than a passing fad
The means of media production are becoming increasingly widely distributed. The iPod generation do not just want to watch and listen wherever they are, increasingly they also want to create and contribute. More than 1bn people worldwide and rising have the capacity now to become mini-media producers. Some may be professionals freelancing in their own time, most of a rising breed of Pro-Am producers: amateurs like Nick Jaffe, who do it because they love to not because they are paid, but who operate to high standards of production. They want to do it well, judged by the standards of the communities they operate in.

Those mini-media producers are linked not just by infrastructure but also by shared platforms and commons, such as MySpace, the web site aggregator, Second Life, the mass player immersive computer game and Wikipedia, the online encyclopedia, which allow them to exchange, share, combine and review information.

These communities allow a long sliding scale of contribution. Industrial era information producers can only really work if the people contributing are employees, journalists, for example: professionals with the skills to use the very expensive equipment required to make media content. In this world the producers were employees, who worked 9 till 5, five days a week. Viewers and listeners did not get much of a look in. But the new media communities, the likes of Wikipedia and Second Life, allow a sliding scale of contribution: people can either contribute a lot (most edits on Wikipedia are made by a little more than 1,000 core contributors) or a little.

These new media communities can only extend the range of potential contributors by adopting a modular design for their products. Wikipedia is broken down into tens of thousands of particular articles. Linux, the open software programme, is broken into many thousands of smaller modules. That means people can contribute to just the piece that interests them, where their skills are relevant, without having to be involved in the organisation as a whole. As long as the modules fit together, like lego bricks, then it doesn't matter.

Participative media is encouraging new kinds of personal freedom - individual activities like Nick Jaffe's – only because it is also creating new kinds of social production: more or less tightly knit forms of collaboration to create, aggregate and distribute content.

Production by the masses creates millions of markets with a few consumers, whereas hit-driven industrial era production was designed to create a few products – songs, TV shows – with millions of consumers. And these markets behave much more like conversations – they encourage an interplay between producer and consumer – not just an exchange of goods and money. People who want to be participants and players want different things

from people who just want to be couch potatoes. Players in any game want equipment to play with, a pitch on which to play, people to play with and some shared rules by which they play. Couch potatoes want good service: anytime-anywhere media, at the flick of a button. Commons based production offers something much more fundamental and potentially radical: tools that allow for mass participation.

There are several reasons for thinking this is more than a passing fad scurrying across the margins of the economy. First, these new collaboratives are emerging in information, software, entertainment, culture and media, which are among the fastest growing sectors of the developed economies. These sector are not marginal but central to modern economies and indeed modern life. Second, while these new patterns of organisation are still emerging, the larger ones - and there are plenty that stay very small – nevertheless seem to have some powerful and durable features. They are driven by cheaper, more distributed technologies. They speak to values of individuality: they allow people more scope to express what matters to them and makes them distinctive. Third, they do not depend – as earlier efforts at collaborative self-organisation did – upon people buying into alternative or altruistic values. These collaboratives grow because they work: their chief selling point is their practicality. If you want to buy anything in the world the best place to go is probably eBay. People do not use Linux open source software just because they do not like Microsoft; they do so because it works. Youtube is not just an interesting experiment; is allows amateur film makers to find an audience. Fourth, these social and collaborative ways of organising have powerful economic benefits in terms of competition: they are very low cost compared with traditional media. Online games that mobilise the contributions of thousands of players get a very low cost workforce of co-developers. These collaboratives often provide the most potent competition to incumbents and their established high cost models. Imagine a start up coming up with an alternative to Microsoft's Powerpoint programme. No venture capitalist in their right might would back it, no matter how good the software. Why take on Microsoft? Competition to powerful incumbents often will not come from the market but from groups of amateurs who will carry on innovating even when there is no money to be made.

These new collaboratives are finding ways to respond to their own weaknesses. Wikipedia is still not as accurate at Encyclopedia Brittanica, which is also not as accurate as most people thought. One objection from traditional media stems from the cacophony of the material available on vast sites like Youtube and MySpace. How do people find their way to what they might want? Don't they need a navigator? Isn't that a role that only skilled professionals – like journalists – can play? Well perhaps, but it also turns out that the best of these communities work by allowing people to flag and recommend what might be relevant. Content is self-sifted by the participants. A similar but slightly different objection is about quality. Many of these collaboratives work only because they have low or non-existent barriers to entry: it is very easy to take part and contribute. But they how can these very open, easy to access self-organising sites be trusted, if there is no one looking after quality? Don't we need gatekeepers – professionals like journalists and regulators – to inspect and assess for quality? Again these collaboratives seem to be evolving their own, distinctive solutions to these questions, relying on self-help and peer review to trial, debate, test and sift good ideas from bad. On November 15th, 2004 for example Robert McHenry a former editor in chief at the Encyclopedia Britannica published an article mocking Wikipedia as the "faith based encyclopedia" highlighting in particular an article on Alexander Hamilton. Hamilton's biographers disagree on whether he was born in 1755 or 1757. Wikipedia glossed over this debate fixing it at 1755. McHenry argued this showed it could not be trusted in the way a professional produced encyclopaedia could be. But within hours of McHenry's article being published the reference was corrected and over the following days all dates and references in the article were checked. Within a week Wikipedia had a version which was clean and correct. Ironically McHenry's critique had triggered precisely the collaborative self-correction mechanisms which should make Wikipedia so robust over the long run. Rapid feedback, peer review, many people looking for problems and providing solutions, provides a recipe for rapid improvement and high quality.

It is still early days but it seems likely that these highly social and distributed forms of media production, sharing and consumption will be durable. The dot.com boom was fuelled by venture capital money looking for the next big thing. Too often it found a better way to get pet food to people in a hurry. What we are witnessing now is a wave of

social innovation fuelled by a mixture of cheap technology, amateur passion, simple economics, individual expression and loose collaboration. The lack of money, at least at the outset, is part of what makes this wave so powerful and durable. In media and culture, lack of resources is as likely to produce radical innovation as a well funded corporation, look to the margins for the next big thing, not the mainstream

So What?
During Communist rule in Poland amateur film making clubs thrived in steel works, dockyards and factories. They made not just documentaries or home movies but fully fledged feature films. Film making was encouraged in part to divert people away from idle chit chat or trying to find out what was going in the West. Marysia Lewandowska, the Polish artist based in London has spent several years looking at the experience the film makers and at a talk at the Institute of Contemporary Arts in May 2006 she explained. "What they were really doing by making films was learning how to be free, how to make something that mattered to them."

Lewandowska's insight also applies to the rise of social media. By making things that express themselves, however modestly, people are learning a new kind of freedom of expression and creativity. Freedom is not to be measured by how much you can buy, the choices available to you as a consumer. Personal autonomy is also about what you can be, how you can express your distinctive sense of self. Social media allows a vast expansion of that kind of freedom. That is why these new forms of collaborative endeavour will prove to be so much more significant than the first Internet boom.

The first Internet boom, in the late 1990s, seemed to offer a revolution but actually just promised to get dog food to your door more quickly. Why should these new collaboratives offer anything more substantial? Or to put the question in a slightly different way: is this just a way for kids to display pictures of themselves on the Internet and for bands to market their MP3 files or could it bring larger, more significant benefits to society?

First, it is good for personal autonomy. How we consume information, what news and views we get access to is fundamental to how we see the world and make decisions. The kinds of cultural activities we engage with has a huge bearing on who we think we are, where we come from, the story we tell about ourselves. Seen in these lights traditional mass media suffers from several limitations whcih stem from its economics. The high capital costs of creating systems for creating and distributing content - employing hundreds of journalists and others in expensive office space in London, buying printing presses and building studios etc – means media organisations need to find big markets to attract advertising or win support for public subsidy. That may mean, however, the number and range of views and voices traditional media can air are too limited : there isn't enough time, money and capacity to reflect the diversity of what people have to say. New, more distributed, forms of production and sharing allow many more views to be garnered from many more sources, often from those that would not pass the tests of return on investment or public value. A related critique is that high capital costs puts media organisations in the hands of only a few people – corporate owners or state appointed executives. Concentration of power is a bad thing if it suppresses diversity and debate. As yet more distributed forms of production have escaped this problem: Jimmy Wales does not decide what happens in Wikipedia in the way that Rupert Murdoch can influence his editors and empire. If distributed media allows for more diversity of expression then it should also create a more open, contested culture. It should be possible to see any issue – and so our own role in it – from several different vantage points. That in turn should help to make us more self-aware, reflexive and critical.

Social production recreates the possibility that people, like the Polish film makers, can find a sense of autonomy through work, albeit not work for a corporation. People who produce, for free, new computer games, encyclopedia article, software, music, films are finding ways to express themselves through voluntary labour. That is why social production offers the possibility of a deeper sense of freedom based on participation not just consumption; taking part not just consuming. It also allows a wider range of motivations to come to the fore. Most people have diverse motivations. They are neither purely altruistic, completely self-interested, nor obsessed by the power and status conferred by hierarchy. Non-market, social forms of production allow people to do things because of their passions, interests and skills rather than because of the financial rewards or because they are told to do so by their boss.

Second, social production of media should be good for democracy and the quality of debate in the public sphere. Television and mass media have provided the information backbone to our public life: that is where issues are debated, politicians and others appeal for our attention and occasionally our votes. Yet concentration of ownership gives undue weight to the views of a few. The passive send-and-receive broadcast model means that people are treated as targets for well-honed messages rather than as citizens and participants. The need to reach large audiences with well produced commercials requires money and that in turn creates opportunities for corruption in party funding. Politics is turned into a spectacle, part of the entertainment business, searching for an audience: George Galloway's appearance on Celebrity Big Brother is just the most recent and infamous example of this trend.

The media commons would make it far easier for people to have their say, to voice their views and to get organised: it promotes basic democratic values such as self-organisation, free association and self-regulation. Modern political parties, themselves creatures of the industrial era, now find themselves constantly outflanked by social movements and campaigns, often born by self-organising networks. These new forms of political engagement are not based on send-and-receive models of communications; they are more like vast rolling conversations. We have already seen in the US and the UK that bloggers and campaigners can provide an important new check on the power of traditional media, forcing newspapers and news channels to pick up stories they have ignored or dropped. The rise of blogs-come-political campaigns such as the Daily Kos, which emerged out of the ruins of Howard Dean's failed presidential campaign, show that social media can get organised and have an impact in its own right.

Third, in the long run commons based media should be good for equality and global development. At first glance it is far from clear why there should be any connection between media, poverty and equality. Why should people who need clean water, food and HIV drugs be at all concerned with how middle class kids in the developed world share their MP3 files? About 25,000 people a day die from diseases caused by lack of clean water. Set against that challenge the debate over the merits of social media versus traditional media seems besides the point. But at Yochai Benkler puts it in The Wealth of Networks:

"Information, knowledge and culture are core inputs into human welfare. Agricultural knowledge and biological innovation are central to food security. Medical innovation and access to its fruits are central to living a long and healthy life. Literacy and education are central to individual growth, to democratic self-governance, and to economic capabilities. Economic growth itself is crucially dependent upon innovation and information. For all these reasons information policy has become a critical elements of development policy and the question of how societies attain and distribute human welfare and well-being. Access to knowledge has become central to human development."

Stacked up against that challenge how does traditional media fare compared with social media production? Proprietary systems for owning and controlling knowledge limit its flow and direct it to where people can pay. That is why so much pharmaceutical research is devoted to diseases of the rich and corpulent and so little to diseases of the poor. In most scientific and cultural fields one person's output becomes another person's inspiration or input. If proprietary controls – such as patents and copyrights – put up the price of inputs, then it will price out of the market some innovators who cannot afford to pay the fee to license access to the knowledge. The alternative to proprietary systems for spreading knowledge and ideas has been international versions of traditional public service broadcasters, often state funded and at times politically motivated.

Barefoot media offers some distinct advantages. As Amartya Sen has argued good government depends on democracy and democracy depends on the free flow of information. To the extent that social media production is less easy to control than traditional, concentrated broadcast media, then authoritarian regimes have fewer options to keep their populations in ignorance. Common based media is relatively low cost and so more readily applicable to problems of the poor. It does not rely on employing high cost, professional journalists or researchers. Open and collaborative models encourage self-help and self-reliance. Wikipedia's example is just the leading edge of what could become a new global information commons, stretching from information and media, into culture and science.

The new forms of structured self-organisation – We-think - witnessed now across fields from software and computer games, to music and basic information sharing – could bring our societies very large benefits in terms of competition, efficiency and innovation, freedom, democracy and social justice. But they also pose a significant challenge to all institutions – not just media organisations – that have relied on high barriers to entry and professional control of knowledge and information. Doctors, teachers and journalists, the organisations that employ them and the places they work are all being changed by this trend from centralised to more distributed activity; mass markets to niche; broadcast communication to conversation; consumption to participation; passive to interactive. This is a world in which as Benkler puts it :

"All the means of producing and exchanging information and culture are placed in the hands of hundreds of millions, and eventually billions, of people around the world, available for them to work with, not only when they are functioning in the market to keep body and soul together, but also, and with equal efficacy, when they are functioning in society and alone, trying to give meaning to their lives as individuals and as social beings."

The continued rise of social media production will not necessarily compete with, still less displace traditional media corporations. Indeed they could complement one another and many corporations will see opportunities in creating their own versions of social media, witness News Corporation's purchase of My Space. The computer games industry shows that proprietary ownership of the core game can be combined with massive subsequent player development: Electronic Arts increasingly provides not just games but platforms and tools for communities to develop games. Second Life, the highly immersive game created by Linden Labs, takes this one step further and allows players together to create the environment. Large computer companies such as IBM are very successful in making money from the open source Linux operating system, by selling related services, rather than software. The point as far as the media is concerned is that the whole domain of media production has expanded: the range of possible contributors and distributors has widened. In other words all sorts of interesting hybrids, collaborations and complements are likely to emerge from the interaction between traditional, industrial era media and the new commons based systems of social media production. It does not have to mean war. But it could because these emerging models present a huge challenge to the established incumbent models of Hollywood, the music recording industry and broadcasters, both public and commercial.

The media industries have relied upon high capital costs for creating and distributing content for their competitive advantage. In the old days they could see the competition coming from a long way off because it needed a lot of money and equipment. But over the last decade that has all changed. It is becoming harder and harder to spot where the competition is coming from in a world in which a twenty year old college drop out can write a file sharing programme on a borrowed laptop which eventually upends an entire industry's distribution and business model: Napster. We now live in a world where any newspaper reader can also become a commentator and publisher. Where bands can create a following online without a recording studio or a record deal.

In this world, not surprisingly the incumbents have sought out new ways to shore up their position. High capital costs no longer provide a sufficiently high barrier to entry. So instead over the past two decades there has been a massive expansion in the coverage of intellectual property, copyrights and patents, to make new forms of social production too costly or too risky. This extension of intellectual property is presented as merely protecting creators against theft. But one motive is protectionist in the economic sense: a rearguard action to protect an incumbent business model against disruptive, low cost competition. All of this will make it much harder for consumers to become producers and participants, to cut, paste, add, amend, share.

Modern societies have developed in the context of mass media and industrial information production, which have shaped our view of where ideas come from, how debate takes place, who can be a media producer and who merely a sofa born consumer. A genuine shift is underway, from production for the masses to production by the masses, which will mean as Benkler puts it:

Charles Leadbeater

Draft (Chapters 1 to 5) – We Think: why mass creativity is the next big thing.

"Information and communications are core elements of autonomy and public, political discourse and decision making. Communication is the basic unit of social existence. Culture and knowledge, broadly conceived, form the basic frame of reference through which we come to understand ourselves and others in the world….the basic components of human development depend on information and innovation and how we disseminate its implications."

The rise of social, commons based media production allows us to imagine how we could reorganise ourselves, promoting greater freedom, democracy and possibly justice, while also promoting innovation and efficiency. Nick Jaffe is at work in his bedrooms. So are millions of others. The genie is out of the bottle. It is not going back in.

Chapter 4 – The Next Big Thing is Us

A single grain added to a pile of sand can cause it to collapse. But spotting which grain of sand will play that role is very tricky. That is why most of the computer world did not notice in September 1991 when Linus Torvalds, then a computer science student in Helsinki, released onto the Internet the first version of a computer programme he had written. When Torvalds left the source code for Linux on the net he asked his fellow software enthusiasts to take it away and tamper with it, make criticisms and propose improvements. With proprietary software – the kind produced by Microsoft – the source code is kept hidden. You buy a "machine readable" version of the code which cannot be adapted. Eventually the geeks responded in droves to Torvald's enticing invitation. Through tens of thousands of voluntary contributions, over many years, authorship of the programme became shared: it is no longer solely Torvalds' invention. He set off a process of mass, participatory innovation. A decade later, about 15m people around the world were using a version of Linux, which had become one of the main competitor's to Microsoft's operating system. The programme runs systems for companies, public services and government around the world, including in China. The Brazilian government has made Linux its standard operating system.

This programme has emerged from a organisational mutant: a mix of a cult, movement and insurrection all rolled into one which defies easy description. A little more than a decade after Linux was first released there were 430 user communities in more than 72 countries and more than 120,000 registered Linux users, many of whom help with the programme's development. In the first ten years the programme's core grew from 236,000 characters to more than 122 million, a 516-fold increase. New sub-systems that provided additional functionality were added at the rate of three a month. Yet despite this rapid innovation and the burgeoning scale of the endeavour, the Linux community has hung together and the software it produces very rarely crashes. It should not work, because no one appears to be in charge, there are no job descriptions, work schedules and bonuses for good performance.

In particular Linux, Wikipaedia and other mass collaborative endeavours raise a set of questions which seem incredibly troubling, seen from within the world of managerial, industrial capitalism.

• Why do people participate ? Often they are not paid, they are not told to do it by a figure in authority, they do not have a financial stake.

• Why do people participate ? Often they are not paid, they are not told to do it by a figure in authority, they do not have a financial stake. Why do skilled people, with busy lives, give their time for free to mass collaborative efforts, only to see the fruits of their labour given away? Why not just free-ride on the effort everyone else is putting in?

• How is it that these distributed contribution can be brought together into a coherent whole? Linux and Wikipedia have thousands of contributions: what stops it all descending into chaos?

• How do these communities hang together? Why do they not split into thousands of fragments? If part of the answer is that they make decisions in democratic and inclusive ways, that just raises another tricky question: how do they avoid being paralysed by laborious democratic decision making procedures?

• Communities have a tendency to become closed and inward looking. They can encourage prejudice and intolerance as easily as they encourage diversity and welcome new ideas. The community elders often become the bastions of tradition not the vanguard of innovation. How do these communities avoid becoming a inward looking clique that ignores new ideas from the outside?

The free-form communities emerging from the mist of the Internet will only become new and powerful models of how we can organise ourselves if they can answer these questions, reliably. Linux provides perhaps the most developed answer we have. Just as Henry Ford created a new logic of organisation with mass production and marketing, so has Linux: decentralisation and mass participation within a framework of common standards to maintain quality has produced sustained innovation on a scale that only a handful of companies could match. What are the rules of thumb at work in Linux that others might follow to turn mass contribution into structured self-organisation?

Eight Rules of Open Organisations
A kernel to get things going…
A community has to start somewhere. It has to have a focus that attracts other people to join in. With Linux that kernel was provided by Torvalds himself in the form of his first rudimentary programme. No commercial company would have dared put out something as unfinished as the first version of Linux. But for potential contributors that was an attraction. It meant there was enough to work on, but still a lot of gaps to be filled in. They could add something. It is impossible to add something to a perfectly honed and finished product. To get an open source community going requires identifying an opportunity and putting up a first, promising stab at addressing it: a kernel, a site, a way of working, a piece of code that will attract other contributions. Communities form around kernels but rarely create them. Attractive kernels usually come from odd, unusual and entrepreneurial people – the likes of Wales and Torvalds – not from mainstream businesses targeting mainstream markets. A kernel is a base camp for the start of a long collaborative climb.

Motivate and attract contributors…
People need a reason to join a community and to keep coming back. Goals and values certainly matter. Linux is idealistic and inspiring: a community underpinned by an ethic of shared exploration. It treats contributors as peers rather than as expendable employees or contractors. People get a sense of self-worth from contributing. As they contribute they get a sense of status from the community. But Linux also depends on being deeply pragmatic and problem-solving: it allows software programmers to get together to do what they love, speaking a language only they understand. It delivers the goods. That is why people keep coming back to it. They get something tangible out of it: better software. A community high on ideals but which fails to deliver practical benefits will soon collapse. Low barriers to entry, easy to use tools…

Communities thrive by attracting a mass of people who can make many distributed and decentralised contributions. That means it has to be easy to take part. Wikipedia took off because it is so simple to contribute. Nupedia failed because contributions were difficult to make. Linux and Wikipedia do not check people out before they are allowed to contribute. They get checked out as they contribute. There is no lengthy recruitment and interview process. It is very easy to get involved. It is also easy to pick up the tools to start creating content. The blog is an easy to use tool for self-expression. The camera phone becomes an easy to use tool for reporting. In open source, this self-help approach is as much a matter of necessity as principle. The first versions of the Unix operating system, on which Linux is based, were created by Pro-Am programmers, Ken Thompson, Bill Joy and others in the 1960s. They could not afford to provide tech support. When they sent the programme to people, usually on floppy discs, they included a set of tools so users could sort out problems themselves. It is like a baker selling a cake but including the recipe and some basic ingredients with the package. The more that easy to use tools are distributed to a community of knowledgeable users, the easier it is for them to start creating their own content. Giving people tools carries a risk that would worry many companies. What participants choose to work on and how they decide to use the tools cannot be mandated from above. But innovations coming from users of products are becoming more important.

That is how the users of mobile phones worked out that SMS was a channel for texting messages to one another. It was not an application the phone producers had ever spotted. Give the users tools and they will tell you what they are for. This highly distributed approach to innovation – giving people tools, inviting them to decide what they work on – would still not add up unless the many contributions people make are brought together. How does that happen?

Crowds need meeting places.
The contributors to Linux do not work in the same office, but they work on the same commons. The idea of the commons as a base for collaborative productivity is ancient. Farmers and fishermen have relied on commons for centuries. Swiss villages, for example, still have codes for jointly managing shared grazing land and woods. Orange growers in southern Spain and rice growers in the Philippines share irrigation systems. These are resources held in shared ownership, which people can access so long as they are members of the community and abide by simple rules. Linux, similarly, is an open source programme governed by a special rules of ownership. This is not the place to go into the details of open source licensing but the basics are that anyone can take away the source code and even tamper with it. But they cannot restrict anyone else's right to use the programme and they are expected to contribute back to the commons any improvements they make. Common resource, like grazing land, have fallen out of favour because it is assumed they easily fall prey to over-use: no one owns the common pasture, so no one has an incentive to look after it and people start to over graze it. Eventually it becomes unusable for everyone. Linux turns this on its head: in the case of Linux, the sheep grazing the commons shit out more grass. The more the commons is used, the larger it gets.

Self Distribution of labour
Open source ownership then becomes the basis for something even more powerful: open source styles of working, based on an accelerated process of peer-review that quickly identifies, and then irons out, bugs and promotes good ideas. Linux is akin to an open meritocracy. Being the boss's best mate does not count for much. Torvalds assumed that as people started to use the programme, they would try it out in different settings, find different ways in which it did not work and so discover how it could be improved. The more people tested it, in different situations, the more bugs would be found and if the users had the skills and tools to improve the programme themselves, then innovation could take place on the spot, where the problem had arisen, instead of being sent back to head office for repairs. Many thousands of Linux contributors have made a long tail of smaller contributions, highlighting bugs. These provide the starting point for more ambitious innovations that are mainly the work of about 400 lead programmers who have earned a reputation for writing good software. The only way to get status in the Linux community is to be respected by your peers by making contributions that other people find useful. A traditional software company might employ these lead programmers to work full time. But it would find it much more difficult to mobilise the long-tail of mini-contributions that eventually add up to something far more substantial. This ability to allow many thousands of people to make mini contributions is a vital organisational innovation.

Encourage people to build on your ideas…
Open source products are designed to evolve and accrete from the combination of many thousands of small contributions and a few large ones. Open source is not about creating beautifully designed, perfectly honed products. A good piece of code in an open source project is one that can be built upon by other people. The aim is constant improvement and refinement. That only takes place with dialogue and debate. In many larger organisations the ethos is the corporate parade ground: speak only if you are spoken to, name rank and serial number. These communities are like vast unfolding conversations. A pragmatic, fix-as-you-go, approach to innovation – release early, test, learn, adapt, improve, release again – is made all the easier when there is lots of rapid feedback, because testing it fast and cheap.

Think Lego…
But then all the bits must fit together. How do they all add up, creating a whole that is greater than the sum of its parts? As Linux has become more complex, so it has been broken down into a series of interconnecting modules,

like Lego bricks that click together. That means a team of programmers can work on just one module without necessarily knowing what anyone else is doing. As long as all the modules click together the programme as a whole should work. The way in which the modules click together, however, the interfaces between the bits, depends on some clear, simple, central design rules. Those rules usually do not come from the community but from a small core team, in this case Torvalds and some of his lieutenants. They design rules and protocols which allow mass innovation to add up. Linux is far from the first product to use modular design principles.

Modularity has been a feature of computer development since at least the 1960s when IBM was developing its system 360 computer. Fred Brooks the person responsible wanted everyone involved in the project to be kept abreast of what everyone else was doing. Daily notes of changes were shared with everyone. Pretty soon people were starting work by sifting through a two-inch wad of notes on design changes. By the time that wad was 5 feet thick Brooks decided he needed a different approach. The costs of communication and coordination had spiralled out of control. Miscommunication and misunderstandings grew. Adding people to the project did not solve the problem: more work got done, but more misunderstandings and so more bugs were created. Brooks decided to break the S360 into discrete modules – Lego bricks – which could be worked on separately. A core team set visible, central design rules, which specified what modules were needed, how they should to click together and what they should do. That meant that module makers could concentrate on innovation in their small world, while the core team could look after the architecture of the system as a whole. New and better modules could be fitted in without the entire system being redesigned.

Modularity takes off, however, when it is combined with open ways of working. Then it enables a mass of parallel experiments, with different teams working on the same modules, each proposing new solutions. That is how Linux gets the Holy Grail: a mass of decentralised innovation combined with overall coherence. Everything is done independently but it all fits together.

Conversational leaders…
Many large traditional organisations make modular products. Modularity alone cannot explain why Linux all fits together; motivation also counts. In Linux people want it to all fit together because of the way the community governs itself. In many large organisations people seem to be at war with one another.

Torvalds embodies the norms which encourage people to contribute and share. The open source ownership of the project, the fact that Torvalds gave his creation away, set the tone for the way the community behaves. It is all based on reciprocity. Even self-organising communities need leadership, but of a very distinctive kind. Torvalds is the acknowledged leader of the Linux community, just as Wales is the monarch of Wikipedia. But they are not leaders in the manner of corporate chief executives. They tend to be quiet, self-effacing, modest and self-confident. They lead by establishing values and norms. They do not need to hog the limelight, claim all the credit or have a big office. They lead by setting the context for many thousands of other people, at all levels of the community, to take decisions for themselves. Their particular style of top-down leadership allows for a mass of highly distributed bottom-up initiative. Proposed improvements have to gain a following, especially among respected peers. In some open source communities, such as the one that creates Apache, the software which runs most web servers, improvements are voted on by a committee, which has a revolving membership. These communities work because they have ways to raise and resolve conflicts, usually quite transparently, which promote good solutions, establish a common sense of direction, hold people together and in extremis, punish bad behaviour.

The New Model
Henry Ford created his revolutionary approach to mass manufacturing by combining many ingredients that already existed in meat-packing, machine tools and railroads. There is nothing new about many of the ingredients in Linux, which draws upon a long history of mutual organisation. People have worked side-by-side on the commons– usually in the shape of land - for millennia. Peer review of work is an established academic discipline. Democratic voting procedures are common in most membership organisations. Many products are designed in modules that can be

clicked together. Software has been distributed with tools for users since the 1960s. None of the ingredients is new. What is distinctive about Linux is the way these ingredients have been brought together so that open source ownership of the programme has spawned open source styles of working and innovation on a vast scale, very rapidly. Ford's combination of techniques created a product that in turn uncovered untapped demand at the outset of the modern industrial revolution. Linux works for an age of the Internet, in which people want autonomy and control as well as a sense of community and connection.

So what have we learned about when these collaborations built on mass creativity work? A group, possibly quite a small one, usually creates a kernel that invites further contributions: it's a base camp, not the peak. The project must be regarded as exciting, intriguing and challenging by a critical mass of engaged users with the know-how needed to contribute to it. It must be very easy for disaggregated contributions to be made, because it very easy to take part. Tools should be widely distributed, experimentation cheap and feedback very fast. That enables a constant process of trialling, testing and refinement. The product should benefit from extensive peer review, to correct errors and verify good ideas. Contributors should get a tangible sense of satisfaction from their involvement. No one should have to wait for a long time to find out whether their idea has been approved (a feature of life in big organisations.) Tasks should be broken down into modules around which small, close-knit teams can form. That allows a huge diversity of experiments to run in parallel. There should be clear rules for how the modules are brought back together and the good ideas are separated from the bad. Ownership of the project has to have a strong public component, otherwise it is difficult to see why sharing would make sense.

Lets go back to some of the questions we started with.
Why do people commit their time to projects from which they are unlikely to get direct financial benefit? Open source taps a wide range of motivations. Some are high minded and altruistic, but most are problem solving and pragmatic. These communities are a good way to get things done if you are sharing music, playing games, swapping ideas, writing software. If you are a hot shot programmer being part of an open source community is one of the few opportunities you have to show off your skills. But if that is what you love doing, then it probably does not feel like work at all. While some companies – Microsoft – see open source as a threat, others – IBM – see it as an opportunity. For many small companies, contributing with others to a shared development platform is the only way they can afford research and development.

How do these communities pull together without a hierarchy being in charge? One part of the answer is technical: the products fit together like Lego bricks, because they are made from modules. But the main answer is political: these communities have effective ways to govern themselves, to review and sort ideas. That process is legitimate and effective because it is organised by peers not by men in suits in a far away office. Leadership plays a critical role not so much in making decisions but in laying out the rules and norms through which the community governs itself. These communities are joined around simple animating goals: Linux is for you if you like writing operating programmes; Wikipedia is about sharing knowledge and building a shared encyclopedia. Clarity of purpose helps prevent mission drift.

How do they move forward without splitting into fragments but also remain open to new people and ideas? The pragmatic, open, problem-solving ethos, borrowed from science, means that people are always looking for better ways to build upon one another's work. The larger the community, and the larger the area it can fan out to cover, the more likely people are to bump into other interesting people. The spirit of decentralisation and independence means people can speak their minds. Debate cannot be closed down. Entry costs are low, so new members can join easily, so long as they have something to contribute. These communities keep at bay the deeply conservative reflexes which cripple traditional organisations. They do not have departments, budgets or corner offices with a view. Traditional organisations encourage group think, discourage people from really speaking their minds and so tend to defend the past. Open source communities are designed to carry on searching for better solutions. They do not stay put.

There are also many situations in which pure open source approaches will not work. When there is no kernel nor shared platform to form around; experimentation is costly and time consuming and so feedback is slow; decision making becomes cumbersome or opaque, beset by complex rules; leaders become distant, capricious or arrogant; yardsticks of performance are so fuzzy that its often a matter of personal taste whether a proposed innovation is really an improvement. This is not a recipe that will work every time, in every setting. This model works for software, where there is a source code.

Chapter 5 – Open by Accident

The best business idea of the last ten years came about by accident. At least that is the impression Jeff Skoll gives of the growth of eBay, where he was one of the first employees working closely with the founder Pierre Omidyar. Skoll's account is that a mixture of luck, laziness and necessity lead eBay to adopt a radical low cost, community-based business model. In many respects there is nothing new about e-Bay: it simply applies the scale and ease of access of the Internet to the age old flea market, to connect sellers to an unimaginably large pool of buyers. In other respects, particularly the way the company has been built upon a community, it marks an organisational mutation that could play havoc with traditional, top heavy, process driven, businesses. The fact Omidyar and Skoll stumbled upon the model for e-Bay by accident rather than design was crucial to the company's subsequent success. In 1995, eBay had about 122 traders. A decade later it had close to 122m, with 25m items for sale at any one time. If eBay had been designed traditionally, from the top down, it would have been too rigid to respond to the emerging needs and ideas of its contributors. Instead, because Skoll and Omidyar could not afford to have central research and development, customer services and a swanky headquarters, eBay had to be built largely bottom up. One of eBay's most creative resources are the participants. They create the value, using the platform and tools e-Bay that provides.

Sitting in air-conditioned offices with panoramic views across San Jose, amidst the cultural desert of Silicon valley, Skoll exudes none of the hype and hubris associated with valley entrepreneurs. He is Canadian, understated, alert and neatly turned out. An unlikely visionary he is fidgety and highly intelligent. "Traditional companies did try to copy us but each time they did, they just treated people like wallets," Skoll explained. "They did not see them as a community of participants, and so they did not really connect with them. They just saw the users as a bunch of transactions to be managed. People did not stay loyal to eBay because the technology was better but because they wanted the sense of community."

eBay has created a shared trading platform, laid down some rules and norms and then provided participants with tools that make it very easy to take part. As in Wikipedia, there are few barriers to entry. Anyone can trade almost anything. Most of the action, and so the value, comes from interactions within the community that operates on the common platform that eBay manages. The value does not flow from e-Bay down a pipeline to the consumers; eBay is not a value chain like Wal Mart or a Tesco. Skoll and Omidyar had to think about the task from the other way around because they lacked the resources for a traditional solution. They could not afford a large customer-services call centre. So they had no option but to see the users as participants, contributors and players, creating collaborative solutions, for themselves. eBay is a market place but also mass self-help on a global scale: the barefoot philosophy taken into business.

After launching the original site – the basic architecture of which Omidyar devised on this home computer over a Labor Day weekend in 1995 – the team were inundated with questions from people trying to work out how to make the auction system work. Omidyar is not a workaholic. He did not want to answer detailed questions from eBay users. So he set up a bulletin board through which people could get their questions answered by other users. eBay participants learned from one another what they could do with the site. They had to make it up as they went along: there was no manual. Omidyar provided the kernel that triggered massive innovation in use. In the site's early days it was mainly attracting collectors, people with shared hobbies, who were used to swapping tips with one anther, not just buying and selling. Those norms of mutual self-help helped to forge the eBay culture.

The most basic tool for any eBay participant is an item for sale form, an idiot proof ticket to the trading system that describes what you are selling. But as soon as people are given tools it becomes very difficult to predict exactly how they will be used. The eBay rating system is a prime example of a recurring story with innovation: the authors of an innovation often do not understand how their new product will be used. In February 1998, just before eBay went public, the company introduced a system to allow buyers to rate sellers using a stars rankings. Skoll imagined buyers would use the rating system to warn other participants that a seller was untrustworthy. Instead buyers started to use it to praise as well as to complain. They liked having a say. They did not want to be treated as dumb wallets. As a result, good traders built up reputations that meant they were more likely to be trusted by future buyers. A reputation built up on eBay cannot be transferred to another platform. People with good reputations, the major traders, had an incentive to stick with eBay. The tool thus provided a way to lock in traders to the eBay community that gave them status. That was not eBay's intention. It was a stroke of accidental genius.

Innovating through co-creation with participants requires a lot of trial and error, adaptation and adjustment. You have to give people tools to play around with and see what they pick up on. Rapid learning is much easier if you get fast feedback: make a lot of small mistakes early to avoid making big mistakes later. eBay the company made lots of mistakes which Skoll says stemmed from thinking that the company was the repository of all knowledge and the source of the best ideas. When eBay the company unilaterally decided to make a change to the site - to divide up the Barbie Doll section into dolls and accessories say – it might have made sense to the specialists in marketing. But not necessarily to the Barbie participants. "Most times when an idea came top down from eBay the company it was a mistake. When it came from the community up it was much more likely to succeed," Skoll reflected. "You can only lead a community so far. It has to be very interactive. It helps to have a few simple rules, to set a few guidelines and boundaries. But then you have to have faith in the people using the system, that they have the intelligence to work it out for themselves. It's not up to eBay the company to tell people how to present what they are selling or how to ship it. They can work that out for themselves." So not only do many of the best ideas come about by accident, they do not come from the company at all. They come from the community that the company services.

The almost organic relationship between company and community changed dramatically when eBay the company went public. Many members of the original communities who got the site going felt cheated. The company had to start taking decisions about what it would not allow to be traded, including firearms and fake Rolexes. Many people now regard eBay as just another company, running a trading system or market. However community is still what distinguishes eBay from its competitors.

The same culture is at the heart of Craigslist, no nonsense website that is a blend of shopping, gossip and flirting, which attracts millions of visitors a month. Craigslist started in 1995 as an email from Craig Newmark sent to other people in San Francisco alerting them to upcoming events. The service proved so successful that Newmark decided to turn it into a website. Soon people started emailing one another and they wanted to start selling stuff as well. Eventually something that started just as a hobby that was sustained by volunteers, turned into a company, which is funded entirely by charging companies to post job advertisements on the site. By 2006 there were more than 160,000 such job ads per month. Craigslist operates city-based forums, which in 2005 were attracting postings at the rate of 1m a month. "We think of ourselves as a community service," Newmark explained. "We just have a business structure out of necessity."

If it sounds ramshackle that is because it is. Yet the impact of Craiglist should not be underestimated. In 2005 Craigslist carried more than 5m new classified adverts a month. Goldman Sachs the investment bank warned that Craigslist could be a major threat to newspapers dependent upon classifieds. On Craigslist not only do people get their ads posted for free, to a very wide audience, they also get to interact with the buyers. What newspaper allows you to do that? In 2005, Craigslist attracted 2.5bn page views per month. It was operating in 175 cities across the world. Ten years after its start this mass, self-managed, hybrid mix of commerce and community had a staff of just 18 working out of an old Victorian house in San Francisco. Neither Bain, McKinsey nor News Corporation had seen Craigslist coming. It was too marginal to be on the radar and that was because it was not a proper business, with

investors, shareholders, products and buildings. Craiglist's only asset is its community of participants. That is why it threatens to be so revolutionary. Craigslist is proof of how rapidly the margins can become the mainstream. Craigslist's strengths and purpose, according to Newmark, include:

• Giving people a voice
• A sense of trust and even intimacy
• Down-to-earth values followed through in action
• Simplicity
• No charges, except for job postings
• Freshness of the material
• No banner ads
• Providing an alternative to impersonal, big-media sites.
• Being inclusive, giving a voice to the disenfranchised, democratizing .
• Being a collection of communities with similar spirit, not a single monolithic entity.

What mainstream business would have that as its mission statement?
Newmark, like Jimmy Wales of Wikipedia and Linus Torvalds, is ironic, self-deprecating, physically unimposing and slightly whimsical. When I met him in 2006 he refused repeatedly to be enticed into making grandiose claims for Craigslist. "Really it is very simple," he explained. "Give people to the tools to help themselves and the decent, law abiding majority will sort out the tiny minority who do not want to follow the rules or are intent on creating trouble. It is just about helping people to get stuff done." Newmark describes himself as Craigslist founder and customer support rep.

The Spectrum from Open to Closed
Open source is a rebellion against the established corporate order of proprietary ownership of software and ideas. It is sparking a ferocious conflict between pure open source and at the other end of the spectrum pure closed, commercial forms of organisation: Linux, in one corner, Microsoft in the other. Open source is a damning critique of everything that big business stands for and an essential challenge to monopolists such as Microsoft and Monsanto that make it very difficult for new commercial challengers to emerge. More open source style challengers emerge in other areas, such as biotechnology, education, law, politics and financial services. In virtually every field it is now possible to imagine open source style alternatives to traditional organisations. Sourceforge.net, the online repository of open source projects now lists thousands and they are growing the whole time. These open source alternatives often attract talent, excite the imagination and allow people to self-organise in a way that traditional organisations cannot imagine.

Yet our organisational future will not be a 'yes' or 'no' choice, open or closed, public or private. Between traditional, pure and closed organisations at one end of the spectrum, where ultimately the boss rules and the company owns all the assets, and the pure open end of the spectrum, where the community owns and no one tells you what to do, a vast and very fertile middle ground is opening up. eBay, Craigslist and many other organisations are starting to operate in this space. It will spawn a rich array of new hybrids. At the edges of this middle ground we will find traditional companies seeking to develop more open and interactive approaches to innovation with communities of developers and users. Phillips the giant Dutch electronics company, for example is redesigning its famous national laboratory in Eindhoven, where much of the early work on the light bulb was done, to accommodate a range of outside companies. The Phillips national laboratory used to be like an intellectual fortress, surrounded by high fences and barbed wire, to make sure all the secrets were kept safe. Now Phillips wants to create a campus where its researchers will work alongside others, sharing ideas. Nokia, the Finnish mobile telecommunications company, has an online forum through which it works with thousands of smaller developers, on applications for mobile services. The forum has elicited more than 1m contributors from user-developers. Intel, the semi-conductor giant, has adopted open and collaborative approaches to innovation, with hosts of developers to make sure the technologies it developers meet their needs.

At the other end of the spectrum we should expect open source initiatives that started life with a group of volunteers to become increasingly dependent on corporate support. IBM and Hewlett Packard are donating thousands of hours of developer time to open source platforms. Many smaller software companies are finding that collaborating to develop a shared software platform is the only way they can do research and development. Linux itself is the basis for a mass of commercial activity. The Linux community supports a range of companies such as Red Hat and VA Linux which make a good living, selling services linked to the implementation and application of Linux software.

Nor will organisations have to occupy just one position on the spectrum. They could attempt to adopt open, participative approaches to some aspects of their work, closed and commercial approaches to others. The computer games industry, for example, develops the core to its games in house, at great expense. But once the game is released, as we will see, that is the basis for massive open innovation among players. Equally innovations that start as open, shared knowledge amongst a group of user-developers – an example we explore in the next chapter is the mountain bike – can then become the basis for commercial businesses. Organisations such as the Institute for Microelectronics in Leuven, Flanders, one of Europe's most impressive industrial research facilities brings together researchers from more than 300 international semi-conductor companies in pooled research projects. Teams of researchers from several companies join forces to thrash out solutions to shared problems with technologies that might be three to five years from the market. The companies contributing to these projects each have rights to use the combined knowledge generated. How they exploit this shared knowledge base commercially is up to them.

In the long run the most effective way to make sure open source style working prospers is to expand the base of people and organisations that adopt it. If open source remains just for software geeks with an altruistic bent, then it is likely to remain an interesting but marginal pastime. To make a big impact on the way we organise ourselves open source style methods – collaborative, distributed, co-created ways of working – have to migrate into schools, health systems, banks, governments. They have to move from the margins to the mainstream. Open source conceived as a rebellion against the established corporate order has to become a way of transforming traditional corporations. Companies based on communities, like eBay and Craigslist, challenge all organisations to think again about some very basic questions about how they work, innovate and treat their consumers. Lets start with the changing relationship with consumers. In the era of mass creativity the very idea of the consumer may be misleading. If more production and innovation is goping to be done by the masses, not just for them, then we need to see consumers as participants and contributors, demand can create its own supply.