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Is the Online Volunteer the New Capitalism?

Antonella Broglia

A new model of production is making its mark on the global economy. Thousands of volunteers form a digital network to collaborate on a complex project. And who would believe that these online volunteers could outperform the biggest and wealthiest companies in the world? But that is precisely what is happening. This model of production is not only a wealth driver in the digital world. It is also a laboratory for experimenting with more lightweight forms of collaborating, with more flexible infrastructures, and with a degree of generosity and idea sharing that might serve as an example for many other economic sectors. Will the online volunteer form the basis of the capitalism of the future?

Keywords: Capitalism, Collaborate, Communities, Copyleft, Future, Libre Software, Open Source, Share, Volunteers, Wiki.

1 Introduction

At the heart of the world's economic system we are starting to see an impressive and persistent phenomenon. A new model of production has emerged, one which ought not to exist given commonly accepted beliefs regarding economic behaviour. Thousands of volunteers form a digital network collaborating on a complex project. And who would believe that these online volunteers could outperform the biggest and wealthiest companies in the world? But that is precisely what is happening. In software, in culture, in music, and in the media the online volunteer makes an extraordinary contribution and opens up new markets. Will this be the capitalism of the future?

Yochai Benkler, renowned Yale professor and author of *The Wealth of Networks* [1], reminds us that the history of open source software was not started by Linus Torvalds. The real story behind libre software started in 1984, when Richard Stallman began work on the project of building a non-proprietary operating system which he called GNU (GNU's Not Unix).

Stallman, who at that time was at the Massachusetts Institute of Technology (MIT), imagined a world in which software was a vehicle to allow people to use information freely; a world where anyone could modify software to better suit his or her needs and where everyone could lend software to a friend. This vision was not viable in the context of patent protected software because software manufacturers, in order to make money, had to make it impossible to alter or exchange their software. Any user needing to alter the software had to go to the manufacturer and pay.

So Stallman set about writing software himself, and he wrote a great deal. Stallman adopted a technique that we might call "the snowball". It was clear that he, by himself, could not write an entire operating system. Instead he released chunks of his code under a licence that allowed anyone to copy, distribute and modify his software in any way possible.

Author

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The only condition was that if someone modified his software and then distributed it to someone else, they had to do it under the same conditions as Stallman. Anyone could use it and distribute it without changing it. And they could also modify it and redistribute it, provided that they left everyone free to use it and modify it. This licence was called GPL (General Public Licence) which later began to be known as copyleft. Under this licence everyone could collaborate in peace.

The history of libre software passed through another critical moment when someone took a less ideological and political path, but a much more practical one. Linus Torvalds distributed a *kernel*, the central core of an operating system, called Linux, which he had created under a GPL licence. And many software users began to modify and improve these first components.

Building on what Stallman had already created, Torvalds created a totally new way of working, based on non-hierarchical, reiterative, and voluntary collaboration between a great many people. It was a project which grew thanks to a host of tiny improvements made by hordes of people spread around the world; some contributed a lot, others only a little. Amazingly, and contrary to what everyone had always believed about decentralized production processes with no bosses, the system worked.

It took the traditional technological industry 10 years to recognize the value of libre software. Over time many more people joined in, and many more basic Internet tools began to be developed using the open source system: Web and e-mail servers, for example. And the political discourse gave way to practicalities and standardization.

Libre software opened the door to a new definition; open source software. Open source software emerged from its counterculture niche to enter the world of business. Nobody explains this phenomenon better than Eric Raymond in his *The Cathedral and the Bazaar* [2] (available on the Internet¹).

Imagine that a group of people needs a tool, say a photo retoucher. This people start to develop the tool until they arrive at something that works although it is eminently improvable.

At this point the group makes its invention available to everyone, including information about how the software does what it does. When other people start using the tool they realize that it has a lot of defects, or that a number of other uses could be added. But maybe they are not able to work on the tool to improve or modify it. So what they do is post the defect or the suggested improvement in a forum of users of that software. And among those users there may be someone who knows how to correct or improve that product.

The result is the product of the collaboration of three groups of people: those who created it; those who identified the possible improvement; and those who improved it. Nobody directed or coordinated that process. The process occurred because the people were part of the same forum and worked on the same software, under an open source licence. No money changes hands and no one has to ask permission.

The most important thing about this type of licence is that it works the same for three people as for hundreds of thousands of people, as was the case with Linux, a highly complex operating system project.

SourceForge², a meeting platform for open source projects, currently (July 2008) has over 180,000 registered projects and 1,800,000 users. With large systems such as Linux, it is difficult to speak of a true collaboration between peers, since collaborators inevitably become informally ranked according their greater or lesser prestige. But it is a hierarchy that is nothing like the hierarchy to be found in corporations.

The most important question of all is: how is money generated within the system? We are going to look at two cases in which the hybridization between open source software and the traditional capitalist system has produced exceptionally good results.

2 Open Source and Big Blue

The first is a marriage of open source and IBM software (known popularly as the Big Blue). Two worlds that at first sight do not seem to be compatible at all. In *Wikinomics* [3] Dan Tapscott tells us how those two universes came together.

When Linux started to gain recognition in the world of computing, IBM, which was the king of patented operating systems, was not in the market for developing another operating system. It was a risky business and success was by no means certain. But IBM had a certain interest in Linux because Linux could represent a serious threat to IBM's competitors, Sun and Microsoft. So IBM began to take a good look at what open source software was all about and started wondering about whether IBM's way of working and the open source world could be compatible.

In the end IBM took the plunge; not initially with Linux, but with Apache, which was software for Web page servers maintained by a group of programmers who worked online. Apache already controlled half the market while IBM's product for Web servers, Domino, in spite of its name only had 1% of the market.

1998 saw the first meeting between IBM and the Apache programmers. After overcoming their initial mutual distrust they reached an agreement. IBM would take a share in Apache, would distribute their code freely, and would work just like any other collaborator.

Things moved quickly and just three months after the agreement IBM announced that Apache software would be used in all its Web servers. That day, June 22, 1998, was a watershed date in the history of open source software. Spurred on by the initial success, IBM began to consider collaborating with Linux. At that time, IBM was at a half-way point between manufacturers like Dell who sold cheap hardware, and operating system vendors like Microsoft and its Windows and Sun with its Solaris. And since Linux was free and provided solutions, being usable to a limited degree and on trial before being escalated to higher levels, this was just where IBM (whose slogan was that they provided solutions) wanted to be.

In 1999, IBM took a share in Linux. At the beginning they were unsure about how to proceed. Over 100 umbrella projects, each one divided into a set of subprojects, were launched. Over a thousand people were collaborating on the kernel, not counting all the other groups.

But where to start? IBM saw that, as is always the case when you are the last to arrive, they had to start from the bottom, working on the most humble tasks that nobody else wanted to do. And they also saw that in Linux you do not participate as a corporation but as an individual. The corporation is not there to cover your back. So IBM cut off the

¹ <<http://www.catb.org/~esr/writings/cathedral-bazaar/cathedral-bazaar/>>.

² <sourceforge.net>.

team that was working on Linux from their internal communication system and let it communicate with the other Linux people using Linux's own methods, methods that were fast, informal, effective, and totally unlike the typical slow and bureaucratic communication system of the corporate world.

IBM understood that it had to adapt to a new way of working, based on the immediate publication of the results of the work so that a network of programmers can see, correct and republish the work without delay. And although at that time IBM could have distributed their own version of Linux, they decided against it and instead decided to support organizations like Red Hat and Suse.

Of course this way of working, in which they handed over the control of projects, was a new departure for IBM. But it produced some great results. IBM invested 100 million dollars a year in Linux. If the Linux community contributes a thousand million dollars worth of effort, and half of these results are useful for IBM customers, IBM is getting software worth 500 million dollars for an investment of 100 million. A typical case of where both worlds have come out ahead.

Today IBM competes more strongly with Microsoft and Sun thanks to Linux. But what is of even greater importance is that IBM has experimented in an environment, the world of open source, which is of increasing importance in the creation of value. IBM was a temple of intellectual property protection where everything was invented in-house, and now it has learned to collaborate with open, informal, and creative communities, and this learning experience has been of immense value.

3 Open Source and the Red Hat

As Roger Martin explained in his fascinating book *The Opposable Mind* [4], if Stallman and Torvalds were the first two groundbreaking pioneers of open source software, the third is unquestionably Bob Young, co-founder of Red Hat, the most important distributor of Linux.

Young's ability to find a solution, a third way in a crucial dilemma, is the key to why today he has such influence and makes such profits. Bob Young is even more eccentric than his colleagues; he always wears a red hat and socks and, according to Roger Martin, he loves talking obsessively about his business for hours on end.

To understand Red Hat and its success, you have to go back to the time when Linux was sufficiently well developed to manage complex corporate applications, but traditional companies did not use them because the market was confused and fragmented, and there were a plethora of different versions of the software available on the market.

There were companies like Yggdrasil and Slackware Linux trying to sell their versions on the market. Young had a company, the ACC Corp., which also sold its own version. Linux was very cheap. People bought a CD of the program either directly from a developer such as Yggdrasil or Slackware, or from a distributor like ACC. But these companies did not charge according to the number of users of

that software. Buyers of the CD could install the system on one or on thousands of computers paying the same one-off fee.

One of ACC's suppliers was a company called Red Hat which made an excellent product. Young bought it, created Red Hat Software, and changed his business approach from selling several versions of Linux to selling Red Hat software directly.

Young knew that the Linux market needed a new business model. On the one hand there was the classical model of patented software as typified by Microsoft and Oracle. These companies sold their customers the use of the software but not its code. Any modification or improvement was up to the manufacturer. As Young used to say, buying software from Microsoft is like buying a car with the bonnet hermetically sealed. If the car breaks down, you cannot get in there to see what the matter is.

Microsoft and the like sold their programs at a high cost and then charged for regular updates that users had to buy if they wanted to keep their software up to date. But meanwhile the business model used by Yggdrasil or Slackware also worked, because Linux was free and had therefore become a commodity and, as such, everybody could sell it cheaper than their neighbour.

Survival in the system depended on finding some way to add value to Linux, by identifying needs that no one had yet spotted. This was nothing to do with the code *per se*. Young believed that the answer lay in how corporations purchased. Corporations make decisions that they have to live with for decades and so they tend to buy from the market leader. If a corporation decided to use Linux, it would buy from the number one distributor. Therefore, if you are selling free software you need to be number one or you will be nobody.

And how is it that Red Hat came to be perceived as number one? By putting order and harmony in a chaotic universe. Updating Linux requires the involvement of the company itself to perform maintenance operations, while with Microsoft updating is as easy as pie; the update pack arrives, they tell you how to install it, and that's all.

Red Hat decided to take on the responsibility of maintaining Linux for customers, in an attempt to combine the best of both worlds. And in order to become the recognized market leader, Young decided to rewrite the program so it could be distributed via Internet and not by CD ROM. In this way he distributed the program proactively via every FTP server that he found on the Internet, encouraging the whole world to download it for free.

As a result Red Hat became the most widely distributed version of Linux and gained legitimacy in the eyes of corporations. In 1999 Red Hat floated its shares on the stock market and Young became a multimillionaire on the first day. Now Red Hat controls over 50% of the Linux market and is still growing, proving that by adding layers of value a product created from a voluntary, non-hierarchical, and essentially not for profit organization can generate major wealth if you add ingenuity and customization.

4 Will all Industries Be Open Source One Day?

If open source software is the most obvious example of value generated from voluntary work among peers, it is not by any means the only one. Wikipedia is the largest encyclopaedia in the world; it is free and has been created entirely by volunteers on an open platform that allows anyone to be author and editor.

It is incredible that such a phenomenon exists, with its millions of articles in hundreds of languages. It has become one of the most visited websites in the world, as well as being one of the most recognized and respected brands, in spite of never having advertised.

Built on *wiki*³ software, Wikipedia allows many people to participate in the writing of an article, based on the premise, somewhat akin to Linux, that a lot of people working in collaboration will produce greater quality than a few people working in isolation.

Its founder, Jimmy Wales, began working on the project in 1998 with his collaborator Larry Sanger, when they created Nupedia. Nupedia also allowed anyone to write articles but, unlike Wikipedia, its content was reviewed and approved by a board of academics. After a year and the investment of a great deal of money the encyclopaedia boasted a mere 24 articles and Wales wrapped up the operation.

Later Wales heard about *wiki* software and went back to work. This time he published 18,000 articles in a year. Today there are over a million registered editors, of which 100,000 have contributed more than 10 articles, and a hard core of 5,000 editors are carrying out the basic maintenance and operational work.

Why do people do it? Because it is fun, because it is social. And because there are people who are passionate about a subject and want to share their passion. As Tapscott explains, Wikipedia works thanks to a rigorous division of tasks. You have to administer the pages, develop the software, find copyright free photos, moderate conflicts, and watch out for vandalism. And these tasks are basically carried out by volunteers. The content is constantly improved as a result of changes and more changes.

All Wikipedia articles have been edited at least twenty times. And all changes are transparent. It is true that there are mistakes in Wikipedia, but practically the same number as there are in the Encyclopaedia Britannica according to a comparative study based on scientific articles. And, unlike the Encyclopaedia Britannica, mistakes in Wikipedia are corrected at once.

According to a study carried out by the MIT, an offensive word appearing in Wikipedia will be removed in less than two minutes. Of course there will always be vandalism and mistakes, precisely because it is an open project. And since it is open it is in constant growth. It is constantly covering new niches, and is always being edited and corrected. It is like the Long Tail of content. It is not perfect, but it is

gradually covering every possible niche, the ones that a traditional encyclopaedia can never cover because it is not economically viable.

And Wikipedia is only a first step. Wales has new projects on the go, such as text books, news services, or thematic books based on articles from the encyclopaedia. All this has been created as a result of the work of a community of people all over the world. People who do not know each other and whose only nexus is Wikipedia itself.

And from this starting point projects combining this collaborative environment with the commercial world are starting to appear. Last July, in a congress about Wikipedia in Alexandria (Egypt), a book was launched, published by Bertelsmann, that brought together the 25,000 most accredited Wikipedia articles in German. A book with 90,000 authors. All the articles are brief and there are graphics and illustrations. It is expected to go on sale this autumn at a price of 20 euros or less. The list of authors or possible authors takes up 27 pages. Bertelsmann will pay Wikipedia 1 euro per book sold for the use of the trademark.

Looking at other similar cases in the scientific world, Clicworkers is worth a mention. It is an experiment conducted by NASA to see whether volunteers, each working a few minutes, would be able to carry out a routine piece of scientific research which would have taken one scientist months of work. The work consisted of marking craters on the surface of Mars, classifying already marked craters, and looking for other special landmarks on the planet's surface.

In the first six months of the experiment there were 1.9 million contributions. And it also proved that reiterative participation of these volunteers provided the same quality as a geologist with dozens of years' experience. 37% of these volunteers worked on the project for just a few minutes.

This experiment by NASA shows how any project requiring many hours' work by expensive specialists can be reorganized to be carried out in another, much cheaper way.

It is also interesting to note how collaborative volunteer work is becoming increasingly more common in videogames, especially MMOG (Massive Multiplayer Online Games), which are produced without an ending so that users can collaborate in telling the story. Thus, the basis of the game is written but it is the players who write the story as they play.

Second Life is another step forward in the same direction. A 3D world which was created empty and has been "manufactured" by volunteers who have created a world with millions of inhabitants, objects, areas, islands and histories, universities, space crafts, and where every day several hundreds of thousands of US dollars change hands.

Ebay, Amazon, FaceBook, Myspace, and YouTube are all growing businesses based on communities of volunteers who contribute content and produce wealth for everyone. And there are also TV stations and newspapers whose written or filmed news items have been provided by citizen reporters, as is the case of Current TV and Ohmynews, the Korean online daily newspaper which relies on the collaboration of 40,000 non-journalists.

³ Web content editing software that allows any user to add, modify or delete content, thus enabling collaborative writing.

This model of production is not only a wealth driver in the digital world. It is also a laboratory for experimenting with more lightweight forms of collaborating, with more flexible infrastructures, and with a degree of generosity and idea sharing that might serve as an example for a world where, now that water, energy and food are no longer in infinite supply, we will have to share more than just music, films and software.

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