

Brandon Lum

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Prof. Natalie Suzelis

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Leadership in a Collaborative Model

A study of leadership of Open Source Software

Abstract:

Today, the internet has allowed greater collaboration amongst people. This has sparked organizations and projects which are based solely on a collaborative model. Because such a model is fairly recent, some classical ideas of leadership may not hold true in a modern context. Therefore, in this paper, I study the fairly unexplored idea of leadership in a modern collaborative modeled organization (which I define as organizations modeled around collaborative systems) and discuss the various factors that lead to its success and failure. This research is done through a study of Open Source Software Development projects, which is a prime example of organized groups built largely upon the idea of collaboration. To do this, I use various publications, papers and articles on collaboration through technology and Open Source in Business. In addition, I draw from past and present philosophers and scholars such as Marcus Tullius Cicero, Benjamin Barber, Heather Gautney and Professor Deborah Gordon as they speak about their ideas of leadership. In this paper, I will show that a collaborative modeled organization should not have a central leadership, but should rather rely on common interest among the people. In addition, I conclude that a collaborative modeled organization may be preferred when innovation is fundamental to the goals of the organization.

Keywords:

Leadership, Collaboration, Open Source, Innovation, Consensus

A Study of Open Source and Leadership

In the basement of a small town in Russia, Anton, a young software engineer spends his night hacking away at what he believes will be the next big technological breakthrough. His dissatisfaction with current technology, coupled with his passion and interest of computer software, is what fuels his commitment to writing programs as part of a new web server development. However, he has run into a problem and cannot seem to figure out what is wrong with his code. Exhausted from being unable to solve the problem himself, he decides to take the night off. However, he is not alone. Just as he pulls close the top of his laptop, Peter, a software developer at a United States technology firm gets ready to continue working on the exact same project. He quickly scans over the progress made by his fellow developers and sees the fault in the program which was flagged out. Noticing the flaw, he starts rectifying it immediately. In fact, besides Anton and Peter, there are another fifty people from all over the world working on the same project. Each of them contributes their expertise and innovative ideas to the development of the application. This is exactly what the idea of Open Source Software Collaboration is about – A group of people with a common goal, coming together to create an application in a public and collaborative manner.

Background on Open Source Software

The free software movement (later renamed as the Open Source Initiative) was launched in 1983, with the goal of advocating software developers to release application code they wrote to the public so that others could use it. Many people thought that this idea was unrealistic. After all, why would one release to others what he/she developed for free when it could be sold? However, Linus Travold proved them wrong. Linus was the creator of Linux, which in the present day, is one of the most favored server operating systems that is used by government agencies such as the White House, the Department of Defense and fortune 500 companies such as IBM and Google. Besides Linux, there are many other open source projects ranging from daily applications such as Mozilla Firefox and VLC Player to professional tools such as Blender and Audacity. All of these applications started out as unstructured groups of individuals coming together because they wanted a specific functionality that other applications could not offer. Some of which have grown to become major successes. In fact, as of 2009, sourceforge.net, a website which hosts open source projects reported a total of 230,000 software projects registered, and a total of 2 million active users.

Leadership and the Open Source Model

Having been a part of the Open Source Community and the former President of the Free & Open Source Alliance (Singapore), I believe that the Open Source community is definitely a fairly new and unexplored area which we can draw lessons on leadership from. After all, it is an example that opposes most leadership models of great leaders from past eras (These models largely promoted organization and structure). Instead, Open Source relies heavily on the participation of contributors rather than a central leader, which is also the reason for its great success. In this article, I will start by first analyzing how technology has been an enabler for collaboration on a greater level. Thereafter, I will explore if leadership is centrally important to the success of open source, which will cover several areas such as the importance of a common consensus compared against the need of a central leadership in creating organization and motivating innovation. From this I will derive a collaborative model in which organizations can adopt. Throughout this paper, I will make references to great writers and philosophers of leadership such as Cicero, Barber, as well as articles about leadership such as “What is Occupy Wall Street?” by Heather Gautney and the Radiolab podcast, “Emergence”.

Media and technology and its influence on Collaboration

Before the public segregation of the ARPANET (now known as the internet) in 1983, the use of e-mail and online forums was unheard of. People used primitive methods of communication like letter sending or making phone calls. These methods which were slow and often expensive over long distances were barriers to collaboration. With the development of the Internet, modern platforms such as forums, chat rooms and social networks have made transmission and sharing of information much easier and faster. It takes just seconds for someone to post a twitter message to the rest of the world. This ease of communication has been a facilitator of widespread collaboration. One example of that is “Yahoo Answers”, where people from all around the world post questions and members of the online community vote on the best answer to the questions posed. This ease in collaboration and communication is the basis of Open Source’s success. This idea is supported by Jeffrey F. Rayport, in his article “Technology Will Make Collaboration Your Next Competitive Advantage” on the MIT Technology Review. In the article, he iterates that “Technology-based platforms explicitly designed for collaboration arose in the late 1980s with the

concept of "groupware" or "collaborative work environments." (Rayport , 1). In mentioning this, he refers to the early use of the Internet Relay Chat (IRC) where people started to get connected via the internet, which later gave way to other platforms such as online forums, wikis and social networks that we see today. Therefore, it is evident that technology has played a significant part in the creation of collaborative models such as open source. Having established this, the next question would be how then do such collaborative models relate to leadership?

Open Source projects do not usually have a centralized leadership. However, the projects are still successful. This is despite the argument by some that any form of organization requires leadership. The reason that open source projects do not have a centralized leadership is because of the nature of collaboration and media. To illustrate, we will take a look at an Open Source project "Drupal", which is a content management system (similar to a blog infrastructure). Drupal's member base consists of more than 1million registered users, and this includes a very diverse group of people. By viewing the first few pages of the member directory, one can see that members are from many different countries such as China, Canada, Iran, Denmark, Australia, Thailand, the United States and Kazakhstan (<http://drupal.org/profile>). In fact, this level of diversity is common in many Open Source projects. I put forward that such globalization and diversity is a key reason why a central leadership is not possible. To explain this, I will borrow the idea of two MIT scholars, Amar Gupta and Satwik Seshasai, whom describe the "24-hour knowledge factory" – defined as different teams working from different regions across the world (Gupta and Seshasai, 1). Using the conceptual model of the "24-hour knowledge factory", it is evident that more work can be accomplished. However, the nature of the diversity of members prevents a centralized leadership because of the limitations of time zone and distance with regards to responding to incidents. This makes the idea of a central leadership in open source infeasible. Opposing this idea, one may give a counter-argument citing large companies like Red Hat. It is true that Red Hat, because of its business nature, has organized leadership in place. However, Red Hat's development of software is still very much based on the community through the Fedora project, where they explore new features which they later incorporate into their distribution.

In addition, the ease of communication leads to another problem in the selection of a leader. Having many widespread platforms of communication gives everyone an opportunity to fight for central leadership. This makes it hard to identify good leaders, and creates a risk of having the project fail due to poor leadership. This idea is well explained by Barber Benjamin, an American political theorist, in his 1975 article, "Command Performance". In his article, he describes this phenomenon as the "firecracker society". He explains that "False prophets make the lives of real prophets difficult; fashion leaders do the same for real leaders" (54). In this quotation, Barber explains that due to the influence of media, and the massive amount of information, the public can no longer distinguish real leaders from celebrity figures. Barber gives an example of this by reiterating Norman Mailer's interest in politics. He explains that most of this 'noise' comes from individuals like Norman Mailer who used tactics to gain celebrity status, and thereafter tried to influence others based solely on his short-lived fame. Based on this, it is clear that much uncertainty is created in electing a central leader especially in the settings of online collaboration where people can masquerade their identity easily. A member who claims to be from a fortune 500 company may in fact just be a teenager. Therefore, relying on a central leadership creates a high risk of poor leadership, which may lead to a failure of a project. As a result, the open source model chooses not to have a central leadership. From the above factors, it is clear that media and technology has made collaborative organizations biased towards a de-centralized form of leadership.

A good example of such a bias towards a decentralized leadership can be seen from examining the case of the software company Xara. When Xara decided to make their software open source, they made a crucial mistake of dictating what the developers should do, essentially violating the rule of not having central leadership. This is well explained in the article "Lessons learned from open source Xara's failure" by tech writer Nathan Willis. In the article, Nathan gives an overview of Xara's efforts into taking its project, "Xara Xtreme", a vector graphics package and making it open source, because they wanted developers to get their application working on another operating system, Linux. Xara believed that it did not have to give away all its code, and held back a large portion of their rendering engine. However, the developers continuously requested that the code be released, but Xara did not adhere to their request. Nathan explained that in releasing their project source, "Xara felt it had the right to dictate the terms under which the developer community would operate, and that does not work" (Willis, 1). The result of their

choice to force upon the community their ideologies resulted in disastrous outcomes. This soured the relationship with the community, which effectively ruined the possibility of collaboration. When Xara finally decided to listen and did what the community asked, the novelty of the project had died down and there was no longer anymore interest in the project. This resulted in the development of a premature Linux version of Xara Xtreme that is no longer maintained today.

Therefore, it is evident that given a community which is based on media and collaboration on a large scale, it is often infeasible or risky to have centralized leadership. Thus, any project or community which is based on the same fundamental principles of widespread and large scale collaboration should not restrict itself to centralized leadership. What form of leadership should then be used in such situations?

“Leadership” through a common purpose

In Ron Goldman and Richard Gabriel’s book, entitled *“Innovation Happens Elsewhere: Open Source as a Business Strategy”*, they explain how people come together to collaboratively make decisions in Open Source projects. They explain that in Open Source:

“Rather than someone high up in the organization setting out the goals, the actual people using and developing the software discuss on public mailing lists or newsgroups what improvements are needed. People propose features or capabilities that they want to see added – usually because they want to use them themselves. If enough other users and developers agree that the feature would be useful, then some of them may volunteer to write the code to implement it. However, if interest is too low, nothing may happen.” (Goldman and Gabriel, 62)

The idea portrayed here is that people are creating the application for themselves, and it is only through the collaborative interest of the group, that things get done. The first idea that the authors make is that open source relies on the fact that every participant is part of a project because they have a stake in it. Because everyone is motivated towards the cause, there is no need for central leadership as individuals will organically find a common ground to organize themselves. Evidence of such behavior can be seen dating back to the 1960s and 70s, from the Feminist movement and gay rights movement. This is explained in Gautney’s article “What is Occupy Wall Street?”, as she explains that the feminist movement “eschewed

formal leadership because each woman's experience and opinion had to be valued equally. The personal was the political." (Gautney, 1). This explains that when each individual participant has a personal stake in it, each one must be respected. Another example that she cited was the gay rights activism, and how many of the stories "were told in a non-coercive, leaderless environment that empowered gay men and women to fight for their rights and leave behind a debased life of sexual secrecy" (Gautney, 1). Both examples illustrated the point that success of the project was fueled by passion, as everyone involved had a personal stake in the cause.

However, it takes two hands to clap. Even though individual personal interest is a contributing factor to success, if the interests of the people are not aligned, ideas will not be put through. This is well articulated in Barber's article "Commander Performance" as he explains that when "there is no consensus, [there is] only an unstable balance of opposing interests" (Barber, 53). Barber explains that common consensus – which he defines as the need for the citizens of a state to have a common goal, is important in the success of the state. He goes further to say that without this common consensus, "there is no leadership of ideas, only a competition of ideologies" (53). Through this he explains that when the goals of the people are not well aligned, it results in a lack of focus, thus creating conflict among the several opposing groups. The point that Barber makes here is his belief that common consensus is a crucial factor in success of a state or organization per se. An example of the lack of interest resulting in failure of a project can be seen from the case of the Open Source Graphics Card project. In the article "Why the Open Source Graphics Card Failed", Michael Larabel, a member of the project, explained that one of the main reasons for the failed project is because one of main contributors, Michael Meeuwisse, a graduate student, had decided to concentrate on his studies and no longer had time to commit to the project. In addition, as not many people were interested in pursuing the project, there was no driving force to carry it forward. This resulted in the project's failure. From this example, it is clear that having a common interest and goal is definitely crucial in the sustainability of a collaborative modeled organization/project.

Therefore, I can conclude that an organization can be built upon this model of open collaboration as long as it adheres to two simple rules. First, there must not be a central leadership or ideas dictated upon

the community. Second, there must be a common interest in the cause within the organization or community. These are the fundamental tenets that the model of open collaboration of built upon.

Why the Collaborative Model? – Innovation!

Not only have we proven collaboration to be a feasible model, but it offers a superior advantage in terms of smarts. Back in the era of (106 BC – 43 BC), Marcus Tullius Cicero, a Roman philosopher, in his essay, “On Obligations”, shows the importance of men working together by explaining how many accomplishments such as canals, irrigation channels and artificial harbors would not be possible “without the application of manual labour and skill” (Cicero, 58). Through stating this, Cicero emphasis the idea that it is only through men working together that much more can be accomplished. This idea is exactly why a collaborative model is preferred over others. More specifically, I claim that such collaboration of men result in a greater level of innovation, which is the main draw of such a model.

Many startups today are based on technology, and technology centers around innovative software ideas. This is where the collaborative model shines. The idea collaboration capitalizes on is that a group of people from diverse backgrounds working together, will be collectively ‘smarter’ or more innovative. This concept of a collectively smarter community is explained in the Radiolab podcast “Emergence”. In the podcast, Professor Deborah M. Gordon, a biologist at Stanford University, gives an example of an ant colony, and how as individuals, the ants are stupid and they do not know what to do. However, as a colony, they run effectively. In addition, Professor Gordon strengthens the idea of the collaborative model by explaining that there is no centralized leadership, as the queen is nothing but a special ant that lays eggs. This shows that a community can be more effective when working together, even when there is no central leadership. In addition, the podcast also illustrates the idea that people are smarter when they collaborate. This is illustrated by the story of Statistician Sir Francis Gordon in 1906 when he visited a livestock fair. There was a competition going on where an ox was displayed and people were asked to guess the weight of the ox. Almost 800 people participated, but no one was close to the exact weight of 1,198 pounds. However, Sir Francis Galton took the mean of the guesses and found it to be 1,197 pounds, just 1 pound off the actual result. From this experiment, Sir Francis Galton displayed the concept of “Collective Intelligence”, which is an idea explored extensively by James Surowiecki, Ph.D in American History, in his

book, “The Wisdom of the Crowds”. In it, he explains how the idea of collective intelligence overpowers that of any single individual.

Therefore, it is evident that because of the collective intelligence of the group, a collaborative model would yield greater innovation. In the early ages, Cicero recognized the power of collaboration in the development of canals and harbors. The 21st century is no different. Computers were just bare metal, and it was only through the collaboration of the ARPANET project that we can enjoy the benefits of the internet today. Therefore, organizations that strive to come up with the latest breakthroughs should leverage on the collaborative model, and enjoy the innovative advantage it offers. As Aristotle, a Greek philosopher and a teacher of Alexander the Great, once said in his book “*Metaphysics*”: “The whole is greater than the sum of parts” (Aristotle, 10f-1045a).

Conclusion

From this paper, the study of open source software has led me to derive a structure of a collaborative model, which organizations can consider in the determining if the traditional style of leadership works well for their purpose, or if a collaborative model may be more beneficial. However, this is only possible if there exists a common consensus and interest, and that caution must be taken to prevent imposing ideas on the members of the organization. From this, I believe that more organization can adopt such a collaborative model of leadership. It is my hope that through collaboration we will be able to create the innovative future of tomorrow.

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