



# The Synergies of Cooperatives and Open Source

Are cooperatives<sup>1</sup> and open source projects<sup>2</sup> and communities a natural fit? What are the similarities between the two? What is the difference between a traditional company that invests heavily in open source and the traditional products and services that are produced from a cooperative? This paper reviews what the major themes shared between open source and cooperatives are and how they relate to one another. These themes are decentralization, democratic governance, community value, compensation schemes, and ethics.

## Underlying Motivators

There are three underlying motivators that drive both open source and cooperative initiatives and their shared themes. These incentives are autonomy, mastery, and purpose<sup>3</sup>. What

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<sup>1</sup> "The term "cooperative" (or "co-op") has a very long history in many countries and has been used to describe a broad range of institutions and enterprises. Cooperative ownership, cooperative purchasing, cooperative selling, and cooperative labor have all been called co-ops.", Wolff, Richard D.. Democracy at Work: A Cure for Capitalism . Haymarket Books. Kindle Edition.

<sup>2</sup> "Open source software involves developers at many different locations and organizations sharing code to develop and refine computer programs that are then distributed at no or low direct cost.", Josh Lerner;Mark Schankerman. The Comingled Code: Open Source and Economic Development (MIT Press) (Kindle Locations 48-49). Kindle Edition.

<sup>3</sup> "When it comes to motivation, there's a gap between what science knows and what business does. Our current business operating system— which is built around external, carrot-and-stick motivators—doesn't work and often does harm. We need an upgrade. And the science shows the way. This new approach has three essential elements: (1) Autonomy—the desire to direct our own lives; (2) Mastery—the urge to make progress and get better at something that matters; and (3) Purpose—the yearning to do what we do in

separates open source communities and cooperative entities from traditional enterprises is how the former lean more heavily (but not exclusively) on these non-monetary incentives.

## **Decentralization**

The desire for decentralization is a shared theme between open source and cooperatives. This theme is motivated by the desire for autonomy. For open source, decentralization can take the form of decentralized leadership structures, but sometimes this is not the case. The biggest driver for decentralization in an open source project is the organic development of a diverse contributor base<sup>4</sup>. Any open source project can be ‘forked’ which incentivizes<sup>5</sup> the original project’s leadership to be liberal in accepting the best ideas as contributions. When a project’s maintainers ignore the features and contributions contained in forks of the project, their version of the project runs the risk of becoming less influential. For cooperatives, decentralization comes from the worker owned aspect of the entity. The steering power and direction in a cooperative is dispersed through the group via the one worker, one vote principle<sup>6</sup>.

## **Governance**

Democratic governance is another shared theme between open source and cooperatives, and it is again motivated by the desire for autonomy. While the push for decentralization in open source is attractive because community members can avoid coordination with a hierarchy when performing individual tasks, democratic governance is what provides a method for influencing the overall project. When tasks are distributed from the top down, there is a complete lack of autonomy in what a developer works on. When there is democratic governance, a member has input and therefore more autonomy in what tasks have priority.

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the service of something larger than ourselves.”, Pink, Daniel H.. Drive: The Surprising Truth About What Motivates Us (pp. 203-204). Penguin Publishing Group. Kindle Edition.

<sup>4</sup> “The widespread diffusion of Internet access in the early 1990s led to the third era that saw a dramatic acceleration of open source activity. Because it became easier for developers at very distant physical locations to collaborate on the development of projects at low cost, the volume of contributions and diversity of contributors expanded sharply, and numerous new open source projects emerged.”, Josh Lerner;Mark Schankerman. The Comingled Code: Open Source and Economic Development (MIT Press) (Kindle Locations 130-132). Kindle Edition.

<sup>5</sup> “Forking occurs when different developers create a new version of an existing software program, and when this new version competes with the original version.”, Josh Lerner;Mark Schankerman. The Comingled Code: Open Source and Economic Development (MIT Press) (Kindle Location 2512). Kindle Edition.

<sup>6</sup> “[...] each productive worker’s job description not only includes the specific tasks that he or she performs within an enterprise’s division of surplus-producing labor but also requires each worker to participate equally in democratic decision-making by the enterprise’s board of directors. Each productive worker is an equal member of that board.”, Wolff, Richard D.. Democracy at Work: A Cure for Capitalism . Haymarket Books. Kindle Edition.

In open source communities, there are basically three types of governance<sup>7</sup> of the open source project that the community develops. The first type, the benevolent dictators as exemplified by Linus Torvalds and Guido van Rossum of the Linux and Python communities respectively, shares the least with cooperatives in terms of governance. The second type of governance within open source is enlightened dictatorship, or an idealized meritocracy. This type of governance is based on the idea that people gain influence by becoming thought leaders through doing useful work. Another description of this kind of governance is 'those who code get their way'. The last type of governance is delegated governance. This type of governance has power delegated to small groups that come together to form a single governing body. These latter two forms of governance share the same spirit of worker participation in governance to a great degree with cooperatives, and the first form enables worker participation to a larger degree than what the name implies.

Cooperatives have multiple structures which enable democratic governance. With worker owned cooperatives that have a one worker one vote mandate, the workers can legally vote the leadership into their roles. Worker managed cooperatives manage the products and services created by the entity. In worker directed cooperatives, the workers decide where to invest or spend the surplus/profit democratically. In all forms of cooperatives, the workers have a high degree of participation in how they are governed, but the most democratic type of cooperative is the worker directed cooperative.

## Communities

Both open source and cooperatives are deeply intertwined with communities. A big motivation for the open source contributor is the development and showcasing of mastery of one's craft<sup>8</sup>. This gives social capital to the individual contributor within the context of a community. For many cooperatives, building the community is the business strategy which leans towards 'greater purpose' as the motivation<sup>9</sup>. For these cooperatives, a feedback loop in the form of

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<sup>7</sup> "[...] there are three prevalent themes in many communities. These are: **Dictatorial charismatic leadership** Governance and decision making that is largely driven and controlled by a single person **Enlightened dictatorship** Governance that effectively has no formal leader but in which leadership is determined by reputation in the community **Delegated governance** Governance that is delegated to a series of smaller units that all fit together to form a single governing body.", Bacon, Jono. The Art of Community: Building the New Age of Participation (p. 322). O'Reilly Media. Kindle Edition.

<sup>8</sup> "The central empirical finding by Belenzon and Schankerman is that developers strongly "sort" on a variety of observed project characteristics, istics, which suggests that software developers are heterogeneous with respect to their motivations. Highly restrictive developers (i.e., those registered to contribute to highly restrictive projects) almost exclusively contribute to projects with highly restrictive licenses, suggesting that these are motivated by the ideology of the open source movement. Unrestrictive developers primarily contribute to projects with unrestrictive strictive (more commercial) licenses, which suggests that they are going to where reputation gains are likely to be obtained. They are also likely to contribute to larger projects and to those that are sponsored by corporations, again suggesting career concerns. Finally, restrictive developers are much more likely to contribute to projects aimed at end users (e.g., computer games), whereas unrestrictive developers target developer-oriented (programming tool) projects.", Josh Lerner;Mark Schankerman. The Comingled Code: Open Source and Economic Development (MIT Press) (Kindle Locations 637-642). Kindle Edition.

<sup>9</sup> "Building community is a business strategy. [...] Building a business means thinking a lot about how to acquire, keep, and grow a customer base. Huge amounts of resource goes into improving our understanding of how we can serve customers and grow our business. For ambitious organisations, who want to thrive over the long term solving big meaningful problems, there is another more fundamental enquiry: how do you attract and support the people you need to get the right work done? ", "Better Work Together:

serving the immediate local community with their products and services is the best way to attract new members to develop those products and services. In return for building, serving, and responding closely to the needs of a community (instead of using profit as the main motive), the whole cooperative acquires social capital as a group. This is in contrast to open source where the individual is the one that gains social capital.

## Compensation

Monetary compensation is the traditional way to think of motivation for economists and the general public. Both open source and cooperatives have non-conventional approaches to compensation. As mentioned before, open source is largely driven by social capital, but that social capital can indirectly have monetary gain in the form of building a strong signal for competence in one's craft. This serves as kind of an ideal resume for contributors to an open source project. More traditional compensation schemes, such as literally packaging the open source and selling it (or bundling it with closed source<sup>10</sup>) are also common if licensing allows it. Cooperatives can sell products and services as a normal business would at the group level, but at the individual level the compensation schemes can be similar to those that you would find in a business that runs as a partnership. Some way of working out fair compensation<sup>11</sup> must occur in an entity that has one member, one vote. An interesting attribute of cooperatives (and professional services firms that run as partnerships) is that there is much less inequality between the highest and lowest paid members than a regular corporation. Whereas corporations have ratios of 278 times the typical worker compensation ratio<sup>12</sup>, partnership style entities have average ratios at about 4<sup>13</sup> or 10<sup>14</sup> to 1. One would assume here that this is

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How the Power of Community Can Transform Your Business." *Better Work Together: How the Power of Community Can Transform Your Business*, by Anthony Cabraal et al., Enspiral Foundation Ltd, 2019, pp. 90–90.

<sup>10</sup> "[...] comingling occurs in settings where firms have the most to gain. In particular, firms comeingle where they can exploit opportunities to lower development and marketing costs (or "synergies"). Examples include combining development of customized software together with the provision of support services, developing both open source and proprietary software for operating systems, and greater comingling of open source and proprietary software ware in large firms where this can be done without sacrificing the benefits of economies of scale." Josh Lerner; Mark Schankerman. *The Comingled Code: Open Source and Economic Development* (MIT Press) (Kindle Locations 761-764). Kindle Edition.

<sup>11</sup> "[...] the easy and most simple implementation of fairness is 'keep what you kill'. This allows a firm to start working quickly but does not give incentives for contributing to marketing for the brand. At the other extreme, there are point systems that give rewards for skill, effort, and long term brand building exercises like marketing. Somewhere in the middle are the traditional systems of hierarchy, where people at the top of the organization decide what the member bonuses for the lower part of the organization will be. [...] we explore the most fair system type, in terms of merit and overall long term contribution, being 1 used in consultancies.", watson, w. "Co-Opensation 1.0: A Worker Owned Incentive System." *Co-Opensation 1.0: A Worker Owned Incentive System*, Vulk Coop, 2016, s3-us-west-2.amazonaws.com/vulk-blog/Coopensation1.0.pdf.

<sup>12</sup> "CEO compensation is very high relative to typical worker compensation (by a ratio of 278-to-1 or 221-to-1). In contrast, the CEO-to-typical-worker compensation ratio (options realized) was 20-to-1 in 1965 and 58-to-1 in 1989.", Mishel, Lawrence, and Julia Wolfe. "CEO Compensation Has Grown 940% since 1978: Typical Worker Compensation Has Risen Only 12% during That Time." *Economic Policy Institute*, 14 Aug. 2019, [www.epi.org/publication/ceo-compensation-2018/](http://www.epi.org/publication/ceo-compensation-2018/)

<sup>13</sup> "Q: What do you think the proper ratio should be between the highest- and lowest-paid partners within a CPA firm? A: This is one of those answers that will probably increase my popularity with some firms and cause me to never be hired by others! If you look at the Top 500 CPA firms (those firms with annual billings of \$10 million or more in fees) you will probably see an average ratio of 4:1 between the highest and lowest paid. Having said that, I see firms where the ratio is 2:1 and I also see firms where the ratio is 10:1. The ratio is distorted because some firms differentiate between equity and income partners, while others treat all partners as one group.", Koltin, Allan D. "Perspectives on Practice Management." *Koltin.com*, PDI Global, Inc, 24 Sept. 2009, [koltin.com/pdfs/KCG-Current\\_Trends\\_and\\_Opportunities\\_Regarding\\_Partner\\_Compensation\\_11-09.pdf](http://koltin.com/pdfs/KCG-Current_Trends_and_Opportunities_Regarding_Partner_Compensation_11-09.pdf).

<sup>14</sup> "[...] the American Lawyer decided to ask law firms about their partner compensation spreads, i.e., the ratio between the compensation of the highest-paid partner and that of the lowest-paid partner. Of the Am Law 200 firms, 111 responded. Here's what

because when the workers have less hierarchy and more say in where the profit goes, inequality is drastically reduced.

## Ethics

Ethics for both open source and cooperatives has to do with the mitigation of exploitation. Exploitation happens when someone creates a product or service but does not have any say in how the surplus (profit) of that product or service is used. Open source mitigates exploitation because its licensing ensures the code is a non-rival good<sup>15</sup>. This means no one is excluded when the good is consumed. Cooperatives mitigate exploitation because the workers literally vote on how the surplus is used<sup>16</sup>.

## Conclusion

Open source emerged originally from the desire to share ideas<sup>17</sup> among early computer scientists and practitioners, but did not inherently address exploitation. Cooperatives emerged directly from the desire to address exploitation<sup>18</sup> but didn't inherently share the 'recipes' of any innovation that was developed with non-members. While cooperatives and open source projects emerged to solve different problems, there is no reason to avoid the combination of the two structures. This has been done in different forms which includes a new kind of cooperative,

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Am Law learned, according to editor in chief Aric Press: 'These are partner compensation ratios for the 111 Am Law 200 firms that chose to provide this information on our most recent Am Law 200 survey. The ratios are expressed as a multiple: Lowenstein's multiple of 24, for instance, means that its top-paid partner received 24 times the compensation of its lowest-paid partner. Payouts to both equity and nonequity partners were included in the calculations. For Am Law 100 firms, the average multiple was 10.5, and the median was 9.3. For Second Hundred firms, the average was 10.5, and the median was 9.6.'", Lat, David. "Which Firms Have The Biggest Gaps Between Their Highest- and Lowest-Paid Partners?" *Above the Law*, Above the Law, 3 July 2013, [abovethelaw.com/2013/06/which-firms-have-the-biggest-gaps-between-their-highest-and-lowest-paid-partners/](http://abovethelaw.com/2013/06/which-firms-have-the-biggest-gaps-between-their-highest-and-lowest-paid-partners/).

<sup>15</sup> "There is a fundamental difference between the recipe and the ingredients. The use of one of the ingredients by an economic agent prevents anyone else from using it. For instance, the use of a computer or an Internet connection by one firm implies that no other firm can use it. We express this in economic terminology by saying that the ingredients are rival goods, in the sense that there exists a fundamental rivalry between potential users. The recipe is very different: everyone can use it at the same time. Economists term this a nonrival good. The use of a new programming technique in one country or by one individual does not hinder its use in other countries or by other individuals.", Josh Lerner; Mark Schankerman. *The Comingled Code: Open Source and Economic Development* (MIT Press) (Kindle Locations 341-345). Kindle Edition.

<sup>16</sup> "For an enterprise to be a WSDE, two defining conditions must be satisfied. First, there can be no exploitation—no appropriation and distribution of a surplus by anyone other than its direct producers. The collective surplus-producers are likewise the collective appropriators and distributors. Second, there must be democratic direction of the enterprise by both kinds of its workers.", Wolff, Richard D.. *Democracy at Work: A Cure for Capitalism*. Haymarket Books. Kindle Edition.

<sup>17</sup> "Many of the key aspects of computer operating systems and the Internet net were developed in academic settings such as Berkeley and MIT during the 1960s and 1970s, as well as in central corporate research facilities. [...] it was commonplace to allow researchers a great deal of autonomy to pursue topics wherever their intellectual curiosity led them [...] Reflecting this spirit of academic freedom, in these years, the sharing by programmers in different organizations of basic operating code of computer programs was commonplace.", Josh Lerner; Mark Schankerman. *The Comingled Code: Open Source and Economic Development* (MIT Press) (Kindle Locations 434-438). Kindle Edition.

<sup>18</sup> "In 1844 the Rochdale Pioneers founded the modern Cooperative Movement in Lancashire, England, to provide an affordable alternative to poor-quality and adulterated food and provisions, using any surplus to benefit the community. Since then, the cooperative movement has flourished, extending across the globe and encompassing all sectors of economy.", "History of the Cooperative Movement." *ICA*, International Cooperative Alliance, 2018, [www.ica.coop/en/cooperatives/history-cooperative-movement](http://www.ica.coop/en/cooperatives/history-cooperative-movement).

called a platform cooperative, where software infrastructure is developed and shared among members who provide services on top of that shared infrastructure<sup>19</sup>. The combination of decentralization, democratic governance, value of community, alternative compensation schemes, and ethical priorities provides a unique position on how we could organize employment and goods in the future.

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<sup>19</sup> “Green Taxi Cooperative officially opened on July 1. The Denver company now has 800 members, who are also owners of the company, The Nation reports. It’s one of a new crop of taxi co-ops around the world. Drivers pay \$2,000 to become member-owners, which may give them a better share of their own profits than a typical taxi company or Uber would”, Kenney, Andrew. “A Third of Denver’s Taxi Drivers Have Joined Green Taxi Cooperative to Fight Uber.” *Denverite*, Denverite, 28 Sept. 2018, [denverite.com/2016/09/08/third-denvers-taxi-drivers-formed-cooperative-company-fight-uber/](http://denverite.com/2016/09/08/third-denvers-taxi-drivers-formed-cooperative-company-fight-uber/).