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The emergence of peer production: challenges and opportunities for labour and unions

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Key points

- The emergence of peer production is not a transient phenomenon but an essential part of the evolving economy since it is based on both technological capacity and social demand.
- As this emergence is accompanied by many negative social and environmental externalities, it is vital that the labour movement and trade unions demand strong regulatory safeguards.
- There are also important potential advantages, such as a greater opportunity to choose meaningful and autonomous work, as well as other ecological benefits.
- Positive responses that have been emerging include the creation of generative entrepreneurial coalitions, platform cooperatives and labour mutuals.
- This policy brief recommends approaches that support a new cohort of autonomous workers and consider them as an integral part of the existing labour and union movements.
- A productive model that combines global open design communities with distributed manufacturing should be explored as a potential framework for local re-industrialisation and the creation of a substantial amount of blue-collar jobs.

1. Introduction¹

The aim of this policy brief is to discuss the implications for labour and unions of emerging forms of work that are organised via distributed networks. We focus on what has been called 'commons-based peer production' but also address the more controversial case of 'platform capitalism'. Our aim is to highlight the opportunities that the emergence of peer production offers for a new wave of cooperative organisations that can create 'non-subordinate labour'.

Commons-based peer production (CBPP), first named by Yochai Benkler (2006), refers to a new means of work organisation enabled by distributed digital networks. The internet facilitates the creation of a collaborative infrastructure where systems of work coordination are based on 'open input' through contributions. This means that both paid and unpaid workers can contribute to the co-creation of shared knowledge goods, without requiring authorisation to do so².

We can summarise the definition of CBPP by stating that it combines:

- an open contributory system of distributed tasks;
- forms of participatory governance of the common work and infrastructure by the involved individuals, communities and companies; and
- the creation of commons, i.e. shareable resources as outputs.

It could be argued that this system differs from the traditional capitalist one that consists of paid labour producing commodities and freelance agencies producing for the market. Nevertheless, CBPP communities are already embedded in the system of capital, particularly as they have to create livelihoods and an economy around their contributory systems. At present, it is still very difficult for CBPP contributors to generate incomes outside the market system.

¹ It should be noted that some paragraphs of this report are based on Bauwens and Kostakis (2018). Therefore, the authors are grateful to Vasilis Kostakis for his valuable insights. We would also like to thank our colleague from the P2P Foundation, Ann Marie Utratel, for her critical feedback and support with the editing. All errors remain the authors' sole responsibility.

² For example, in the case of the Linux software, 75% of the contributors are either paid by large companies like IBM and Red Hat or freelance as independent project workers, whereas 25% of the code is produced by unpaid volunteer contributors (APC 2010).

Commons are a shared resource, a community of users, and are governed according to the rules and norms of that community. More specifically, knowledge commons are easily replicable, cannot be exhausted through use (because they are non-rival), and therefore do not suffer as much from the 'free rider'³ issue. Commons can also be created by fiat. For instance, a public institution decides to make a commons of, or 'commonify', a knowledge resource such as the geographic information from the National Oceanic and Atmospheric Administration of the U.S.; or there may be a pooling of resources by companies, like the open sourcing of battery designs by Tesla. The knowledge that is created often remains outside the market, since shared knowledge that can be freely copied is abundantly available and outside supply and demand tensions.

However, these knowledge commons can create vibrant commercial eco-systems with services and value-added products. A study of the fair use⁴ economy in the U.S. calculates this economy to have already reached one-sixth of GDP in 2008–2009, with 17 million workers involved (Rogers *et al.* 2011). Though these calculations have not been updated, we can expect them to have increased since that period.

Regarding the institutional structure of CBPP, it consists of:

- the community of producers, including paid or unpaid labour;
- an entrepreneurial coalition comprised of companies and entrepreneurs that engage with the market by adding value to the shared resources; and
- network management institutions, often in the legal form of foundations, which manage the infrastructures that enable the cooperation processes, but do not command the labour force.

While CBPP models are based on a core of shared knowledge resources, this is not the case for so-called 'platform capitalism'. In this model, networked technology is not used to mutualise productive knowledge but to facilitate direct market exchange between supply and demand. This is mostly done through intermediation by privately owned platforms. Although this new form of economic exchange is of interest due to its potential to mobilise 'idle resources' and increase access to them, no actual shared resources are created. This absence of the 'commons' is evident, for example, in crowdsourcing sites for distributed labour, where the supply of labour is forced to compete and is not interconnected. The average prices and wages consequently go down. Additionally, while this system allows for external contributions, the process is entirely controlled by platforms or the participating companies, and the produced knowledge is protected through exclusionary forms of intellectual property.

2. What peer production means for business and capital

The advantages of peer production for businesses and capital are rather obvious and explain the fairly rapid growth of both models: CBPP and platform capitalism. Specifically, the participating companies in these models:

- have access to a much wider pool of productive knowledge (it is difficult, even for large companies, to compete with networks of entrepreneurs, contributors and researchers that have pooled their knowledge in such a fashion);
- can make substantial savings (Tapscott and Williams 2006), mainly by pooling the resources needed for the development of non-core infrastructures; and
- have access to a wider pool of workers and experts, including more direct links to user communities.

The platform capitalism model in particular has substantial advantages, as platform companies:

- do not have to invest in new infrastructures since they can organise the use of already existing resources;
- can claim that they are not employers but merely market-matching players, meaning they either do not have to pay participants or use payment mechanisms that avoid contributing to social security systems, etc.; and
- creatively use legal grey zones to avoid paying taxes and other social and public contributions.

We are not suggesting here that these models have become mainstream, nor that they are being adopted 'wholesale' by corporations, although a significant number of companies have created hybrid adaptations. While these new models can be useful and positive for individual businesses that successfully adapt to them, they can also carry risks, not only for companies that end up displaced or disrupted, but for the capital system as a whole.

3. What peer production means for labour and workers

Peer production of immaterial resources creates an additional pool of unpaid 'free labour'. The crowdsourcing platforms active in platform capitalism often create new mediation channels between supply and demand that disempower the workers and put them in competition with each other. A number of these platforms also do not recognise themselves as employers and thus escape the responsibilities of social security, unemployment insurance, taxation and other payments that classic employers face, to the detriment of the freelance workers. In addition, companies in the platform economy do not invest in traditional material infrastructures, thereby undercutting their traditional rivals and harming the conditions of workers in these legacy industries.

Furthermore, workers in both CBPP and platform capitalism rarely work together in communal physical spaces. This development undermines the traditional organising capacity of workers and unions that was present in traditional industry. Indeed, the move from a job-based 'division of labour' to distributed systems of tasks that can be obtained via platforms disaggregates a workforce that was once more easily unified through its collective presence in factories or single corporations.

In general, there is a strong link between the rise of precarious freelance workers (the 'precariat') and the emergence of digitally networked technology (Standing, 2014). This has allowed employers

3 'Free riders' are users of open and free systems who do not contribute to the maintenance of the system, or who use its resources without reciprocating.

4 'Fair use' is defined as shareable resources that are not protected as intellectual property.

and capital to deploy workers differently, choosing precarious forms that cost them less and externalising the risks of entrepreneurship to the workers. Worst of all, the disruptive effects on traditional business sectors may increase the number of unemployed or even 'unemployable' workers, which gives rise to social and political instability and the emergence of radical reactionary movements.

However, despite the litany of disadvantages, there can also, with the support of organised labour and the appropriate policies, be real advantages for workers.

As mentioned before, CBPP is an open contributory system in which workers can freely associate themselves. This means that workers can choose their pursuits according to their own interests, skills and passions, and translate them into either waged labour or freelance activity. Joining such networks has clear benefits on an educational (peer learning), reputational (recognition of skills and contributions by peers and potential employers) and organisational (new types of links between workers, based on the interaction through platforms) level.

Most importantly, the membership of workers and contributors on these platforms, when not coerced, is based on passionate engagement. This is one of the prime conditions for a satisfying life and a very important criterion for educated workers of the Millennial generation, many of whom are also motivated by sustainability concerns (Rayapura 2014). It opens the way for a vision of labour that is not subordinate. The collaborative practices that emerge in peer production create better working conditions and offer the satisfaction of pursuing meaningful activities that can substantially improve the negative externalities of traditional enterprises.

Successful peer production projects create vibrant commons-centric commercial economies that can be organised not by private capital, but by cooperatives and other models familiar with the social and solidarity economy. The physical correlates of peer production, i.e. the emergence of mutualised places of collaboration such as 'makerspaces', create collaborative cultures and promote the mutualisation of the means of production and exchange.

The massive mobilisations of 2011 (the Occupy and 15M movements) have shown how these networked community effects allow for rapid, mass organisation, which could also be used by social, labour and union movements. Faced with the failures and relative weakening of welfare state provisions, new forms of solidarity are starting to emerge. These have been called 'commonfare', forms that are often reiterations of the mutualisation mechanisms developed by the early labour movements, which in turn were the model for the welfare state mechanisms generalised to cover the whole population. Commonfare could also help in avoiding the so-called 'value crisis' (see Arvidsson and Peitersen 2013; Mason 2015; Rifkin 2015)⁵. This crisis is characterised by an increased capacity for contributors to co-create value as a commons that can be used by those connected to the networks while the income is generated by a fraction of the contributors connected to the marketplace.

⁵ These authors agree that the combined challenges of automation, zero marginal cost economics and the commons contribute to a potential demonisation of the capitalist economy.

As for platform capitalism, despite the prevalence of predatory practices it is not without advantages provided that the right conditions exist for a transformation to non-predatory formats. In a context of high unemployment and lower incomes, the platforms of this economy allow for the generation of extra income. For those workers who have passionate interests that do not easily translate into a regular source of income, activities in the platform economy can help navigate periods when other sources of income are not available. In addition, the organisation of tasks instead of jobs, under the relative control of the workers, can help in organising more flexible lifestyles.

Overall, these newly emerging practices offer great advantages but also come at a heavy cost to workers, especially in a neoliberal environment. In our view, both peer production and platform capitalism invite the emergence of new societal and economic models that could be advantageous to workers. Nevertheless, adequate policy and social reforms should be implemented; and to this end, a mobilisation of social forces, including labour and unions, is required. We should aim at a new alliance between the 'older' ranks of the working class and the emerging ones, between the 'salariat' and the 'precariat', which does not prioritise the former over the latter.

4. The potential for post-capitalist forms of production and exchange

The P2P Foundation⁶, a research network and observatory of peer production practices, has outlined a vision that places the emergence of digitally networked technologies and their possibilities for mutualisation at the heart of a sustainability transition. This transition deals more effectively with the negative externalities produced by the current system.

In this section we outline the vision that we have developed from the observation of actual peer production communities, and take this micro-economy as a base for developing a social vision on a macro scale.

In Section 1 we described the current institutional structure of CBPP communities. However, in order to highlight its attractiveness for the younger generations, we describe it here in its ideal form and condition:

- Workers have access to a wide variety of open and contributory commons, which are also self-managed productive communities. Therefore, they can follow their passions, learn through working with others, be schooled in democracy and self-governance, and gain reputations that can help them to find jobs.
- Workers create their own generative enterprises which create value-added products and services for the marketplace, or other forms of economic production and exchange. These enterprises contribute to the well-being and support of the participating workers and wider community and the maintenance of the shared goods they are co-dependent on. In the sphere of distributed exchange, these entities take the form of platform cooperatives.

⁶ <http://p2pfoundation.net/>

- Workers democratically participate in the for-benefit associations that manage and maintain the infrastructure of cooperation. Thus, democracy and self-governance is directly introduced into the sphere of work.

Looking at this micro-economy from a macro perspective, a wider, societal vision can also be developed:

- Civil society is considered productive because citizens contribute to these commons for the benefit of society. Productive capacity and recognition is no longer confined to those that provide subordinate labour to corporations or those that have the capital to organise this work. The civic sphere therefore becomes the core sphere of society, and the commons the core sphere of the economy. In this sense, CBPP represents a true revolution in value creation and distribution, challenging the supremacy of market value.
- The economic entities of the commons recognise both negative and positive externalities, taking appropriate actions to manage them, create livelihoods for those that contribute to these commons, and help in generating, maintaining and expanding them. The economic sphere therefore becomes generative rather than 'extractive' vis-à-vis human and natural resources. This tendency represents a return to the moral markets and economies that were abolished through Smithian capitalism and the absence of which has only been partially remedied through 'external' state regulation.
- Following the model of the for-benefit associations, public and state authorities become enabling and empowering institutions that promote citizens' individual and social autonomy and guarantee their 'equipotentiality'⁷. The state provides welfare (or 'commonfare') services that serve the needs of all workers, salaried and autonomous, in order to eliminate the precarity often associated with autonomous work.

5. New solutions for the labour movement

Our analysis suggests that peer production is creating a post-factory environment and a new form of entrepreneurialism based on a more autonomous form of labour, which fundamentally challenges the older strategies of trade unions.

Such strategies were premised both on the solidarity and mobilisation capacities of workers gathered in factories and on the universality of the salaried status. The combination of the relative deindustrialisation of the West, the diversification of labour statutes to the detriment of wage labour, and the de-territorialisation of much of contemporary work, has weakened the efficacy of such strategies. In our opinion, it is of great importance to:

- overcome the division between statutes for different workers, and recognise the validity of autonomous work;
- adapt tactics to the networked nature of a great proportion of modern work; and
- propose policies for the reindustrialisation of work based on distributed manufacturing.

⁷ The equal capacity of citizens to contribute to the commons in the way that best fits their interests and skills.

The following examples outline some steps that could be taken in this direction.

5.1. Generative entrepreneurial coalitions

Generative entrepreneurial coalitions are forms of enterprises that participate in co-creating commons while creating livelihoods for the contributors. These enterprise models can take the form of cooperatives, social and solidarity economy organisations, B-Corporations⁸, social enterprises, and non-profit and not-for profit entities.

Marjorie Kelly, in her book on these emerging forms of post-corporate governance and property, provides a list of the following characteristics:

Table 1 **The design of economic power: the architecture of ownership**

Extractive ownership	Generative ownership
1. Financial purpose: maximising profits in the short term	1. Living purpose: creating the conditions for life over the long term
2. Absentee membership: ownership disconnected from the life of the enterprise	2. Rooted membership: ownership in human hands
3. Governance by markets: control by capital markets on autopilot	3. Mission-controlled governance: control by those dedicated to social mission
4. Casino finance: capital as master	4. Stakeholder finance: capital as friend
5. Commodity networks: trading focused solely on price and profits	5. Ethical networks: collective support for ecological and social norms

Source: Kelly (2012).

5.2. Platform cooperatives

The corporate-owned platforms are playing an immensely negative role with regard to the social conditions of labour, extracting huge profits simply by controlling the flows between supply and demand. However, they could be transformed into multi-stakeholder or membership-owned platforms that perform the same function, without the additional 'extraction' of value from these 'peer to peer' exchanges. The second Platform Cooperativism conference⁹, held in New York in November 2016, showed the huge progress that this concept and practice has made in a rather short time. The directory The Internet of Ownership¹⁰ lists more than 300 such platforms, while there are also platforms 'under construction' for nurses, cleaners and others.

⁸ 'B-Corporations' are a novel type of entity that allows the combination of for-profit and not-for-profit practices.

⁹ <http://platformcoop.net/2016>

¹⁰ <https://ioo.coop/>

5.3. Union co-ops

In view of the challenge that platform capitalism represents to trade union organising, unions have started to directly finance alternative cooperative platforms. In *Not Alone*, a landmark report on how unions are responding to the needs of precarious workers, Conaty *et al.* (2016) argue:

'We explored how to bring together co-operative approaches with the additional clout of trade union power. What we found is that such a mission to integrate trade union and co-operative provision is gaining traction in the US with a range of emerging "union co-op" models. The union co-ops concept has been co-developed under a joint agreement between the US Steelworkers and the Spanish co-op, Mondragon. Today, union co-ops are being set up in a range of industries and cities from Pittsburgh to Los Angeles. In Cincinnati, Ohio, seven union co-ops are either established or under development including a food hub, a railway manufacturer, a "green laundry" and a jewellery manufacturer. Crucially, we are seeing union co-ops beating the opposition at its own game.'

What is of interest in the context of this paper is that the union co-op model is now being applied to platform cooperative initiatives. For instance, Conaty *et al.* (2016) mention 'Green Taxis' as an alternative to Uber:

'Green Taxis co-op in Denver has expanded its membership in partnership with the Communication Workers of America. This union co-op strategy has led to the development of a highly efficient mobile app. Through the partnership Green Taxis has grown to 800 members, secured 37% of the market in Denver and has rapidly become the largest taxi co-op in the US.'

Another example presented at the recent Platform Cooperativism conference is NursesCan¹¹, a healthcare workers' cooperative platform founded in 2016 with the support of the Service Employees International Union – United Healthcare Workers West.

5.4. Labour mutuals

Labour mutuals, another name for what are legally called 'Business and Employment Cooperatives', represent a way to bridge the gap between freelance and salaried workers. These co-ops can provide the following services:

- The creation of mutual guarantee funds allows them to rapidly pay the invoices of freelance workers and undertake the 'factoring' on behalf of their worker-clients. This can greatly ease the cash-flow issues that are a huge negative factor in the income flow of freelance workers.
- Enabling the transformation of irregular payments into a 'regular', self-funded salary.
- Enabling workers, once a certain income and average salary threshold has been reached, to self-employ in the cooperative

as legally 'salaried' workers, which creates the possibility for membership in social security and welfare schemes that usually benefit only salaried workers.

- The creation of a new legal category of 'non-subordinate but salaried' workers combines the social demand for autonomy with the protections of the salaried status.

Examples of such labour mutuals are the fast-growing SMart¹², a European cooperative structure founded in Belgium, now active in eight countries and counting 75,000 members, and Coopaname¹³ in France. There is also Bigre, a European association of such labour mutuals (Conaty *et al.* 2016).

5.5. Re-localising work and re-dynamising local economies

The potential of linking up global open design communities with specialised networks of micro-factories in cities (such as the Fab Lab global network, ImpactHub, etc.), creates an opportunity for bringing certain activities back to the local level (re-localisation). Cities like Barcelona (originator of the Fab City¹⁴ project), Amsterdam (successfully relocating the crafts industry inside the city) and others are experimenting with this model.

Tentatively called 'Design Global, Manufacture Local' (Kostakis *et al.* 2015), this model also has substantial ecological benefits:

- overcomes planned obsolescence (open design communities do not design for planned obsolescence);
- reduces transportation costs through re-localised production (and thus also the consumption of declining material and energy resources); and
- creates possibilities for a much more rapid and efficient adoption of an open source circular economy, which is much harder to achieve under intellectual property scenarios.

In addition to this, the French rural project Terre des Liens has calculated that their model of 100% organic food would need 12% of the workers in rural areas, as compared to 2% today. It has proposed using a 'circular finance' model, where public authorities re-invest part of their gains. This model of financing is of particular interest in a period dominated by austerity policy, as civic and labour forces can argue that such job creation is in fact not spending more of the budget but actually eliminating expenditures so that they can be re-invested elsewhere.

In the current context of social and political instability, with the rise of right-wing populism propelled by the despair of blue-collar workers (Ramos 2014), this alternative model could be the basis for progressive political programs that would re-create local blue-collar jobs without resorting to protectionist measures.

12 <http://smartbe.be>

13 <http://www.coopaname.coop/>

14 <http://fab.city/>

11 <https://livestream.com/internetsociety/platformcoop2016/videos/141639935>

6. Conclusions

In conclusion, both CBPP and platform capitalism have positive and negative aspects. Given the interconnectedness of their emergence with current technological capacities, we propose that the labour movement and trade unions craft a policy response that:

- strongly regulates against negative externalities that affect workers (e.g. the regulation of Uber and AirBnB);
- strongly promotes the positive aspects by making a link between the new models and those corporate entities that take into account social justice and distribution; in other words, supports generative businesses that create livelihoods around peer production and member-owned or multi-stakeholder-managed 'platform cooperatives';
- supports autonomous work, creates solidarity mechanisms that insert these workers into systems of social protection, and attempts to bridge the divide between the precariat and the salariat, without reducing autonomous work to a subordinate status;
- supports the convergence of cooperative models with those of the social and solidarity economy around the commons and the 'sharing' economy; and
- supports the creation of business incubators and the prototyping of policies that re-create local jobs with a view to promoting potential re-industrialisation through distributed manufacturing models.

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