



Technological Unemployment but Still a Lot of Work: Towards Prosumerist Services of General Interest

Katarzyna Gajewska
coop.ca@zoho.com

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Abstract

This article explores the impact of both technological unemployment and a basic income on the provision of services of general interest. A basic income may promote the restructuring of production into postcapitalist forms and projects involving peer production. This change, as well as technological unemployment, will result in lower state and market capacities to provide services. Instead, people will create various forms of self-organization to meet their needs. The paper presents examples of such models. Some ideas about the new forms of inequalities in this system will be presented to inspire a further study of this scenario.

Introduction

Technological development promises to liberate people from many tasks, including teaching, health care and governmental decision making. An optimistic vision of technological unemployment sees it as liberation for humans. In light of a structural analysis of the introduction of a basic income, however, it does not seem realistic that all people will be able to spend their entire time on leisure (Pelletier 2013). While the large part of the population will be liberated from employment relations, the majority of people will still need to organize a significant amount of tasks that cannot be replaced by robots. Even if a complete automation of daily life tasks is possible thanks to technological development, there are structural constraints to the implementation of such full automation. For the owners of capital to extract gains from their means of production, the machines will need to be either very expensive, like real estate, or programmed obsolescence will need to be integrated in their design. Since technological unemployment will grow, these machines will not be accessible to those living

only from a basic income. Therefore, a scenario of the way services of general interest will be organized needs further exploring.

This article argues that the introduction of a basic income and technological unemployment will result in reorganization of the realm of production. A significant part of the total work to be conducted for daily life functioning will be exercised outside of commodification and therefore will not be taxable. Since the vast part of the society will not contribute financially to the state, a relationship between the state and the population will change and public employment will need to be reduced. This will constitute a challenge for service provision by the state. While part of the population, such as specialists in technology or the owners of the means of production, will be able to use commodified services, the majority of society will need to compensate their limited resources with prosumerist practices and self-organization. This article presents three organizational structures that may become dominant models of the provision of services of general interest. This system of citizen welfare provision will profoundly transform the state's role and operation. The new system will imply new types of problems and challenges. The last section will propose further questions to study to anticipate the consequences of technological unemployment and the introduction of a basic income.

Production

The dissociation of work and income resulting from the provision of a basic income will have a far-reaching impact on the structure of production. In this section, the transformations of the structure of production that are already taking place are highlighted because they may further thrive thanks to a basic income. Three trends in the realm of production may be fostered by a basic income: 1) the decentralization and democratization of production, 2) the post-capitalist logic of production and 3) peer-production model and organizational change. These trends are strongly related to the needs and opportunities of the precariat and proficians – a growing group of those with unstable employment relations as a result of technological development (Standing 2011). On the one hand, material security will enable people to take risks and pursue production outside of enterprises and with little capital. It will be possible to decentralize production. The introduction of unconditional income is expected to increase prices due to a scarcity of laborers ready to work for wages below the basic income. This will foster production outside of the market. It will motivate the development of alternative ways of organizing production, involving spontaneous contributions of a large group of participants, as in the case of Wikipedia or Linux. Basic income will free up time for the engagement in such projects.

Technological development has transformed production systems. Formerly, means of production were centralized in the hands of the few. However, this has changed because the means of production are cheaper and smaller. Therefore, they are accessible to a broader group of people. The digitalization of production (products that can be designed on a computer and produced by a 3D printer) has brought about new organizational forms. For instance, thousands of *makerspaces* have emerged globally and the Obama administration has introduced a program equipping schools with workshops, where pupils can utilize 3D printers and laser cutters. This maker movement is generating a culture of sharing and collaboration. The products can be improved by many contributors thanks to open source design. To exemplify this emerging production system, Anderson produced a lawn watering system, which can be sold for US\$100, lower than the market price. Open source production can also promote the democratization of research. For instance, community DIYbio has several platforms for open source production, such as Biocurious in Silicon Valley and Genspace in New York, where laboratory tools are produced to make them accessible to the broader public. Another online community, Open Source Ecology, works on open source tools and machines necessary to build a self-sufficient village (Anderson 2012). In addition, 3D printers can reproduce themselves, which further democratizes the means of production (Rigi 2012). In the realm of cultural politics, a new structure of production is based on the principle of radical democratization, horizontalism, and a decentralized network: ‘The

cultural production of peripheral urban areas is also not formal. It is precarious, informal, fast, and takes place in collaborative networks, promoting the transference of both symbolic and real capital while empowering socio-cultural movements without the aid of the traditional cultural mediators.' (Bentes 2013, 29)

Williams demonstrates with survey data that the market and commodification of production are not as pervasive as is often assumed. Non-commodified work accounts for half of human production to achieve subsistence. The introduction of basic income would further foster non-monetary work and exchanges (Williams 2003, 2004, 2005, 2007; Wright 2010). The more the illusion of a commodified world and full employment is challenged, the more one can expect an increase in alternative forms of production beyond market and state logic. Indeed, as White and Williams illustrate, they are already quite widespread (White and Williamson 2012, 1640). Peer production also functions outside of the capitalist logic (Barbrook 2000; Rigi 2012; Söfderberg 2010).

One can observe a different logic in the organization of production that emerges in alternative production systems operating outside of the state and the market. Production is increasingly achieved on the basis of principles other than coercive and centralized collectivism such as freely chosen self-selection and distributed coordination. An interactive ethos is one of the characteristics of modern generations (Tapscott and Williams 2008, 36). Peer production usually functions as a decentralized system composed of small modules, on which contributors work at a chosen time (Benkler 2013). This feature of production seems to be particularly suited to the realities of life for the precariat, who have limited control over their time (Standing 2013). Instead of delegating the provision of subsistence to the state or the market, the precariat may simply engage in self-organized peer production or prosumerism to meet their needs. Roberta Scarlett (2013) points to the fact that it is difficult for the state to control this new economy, even though it will achieve a high level of organization and reliability among participants.

A basic income and a cultural shift resulting from the new principles underpinning the production system will privilege use value rather than exchange value in the organization of economic life. Since income will not depend directly on the exchange value of work and their produce, a concentration on needs will increase. For instance, instead of using fast food or other services as 'time saving' tools to free time for work of higher exchange value than these services have, people may prefer to invest their time in the direct production of services for themselves. A consumption tax, which is mentioned as one of the financing mechanisms by the promoters of a basic income, will further scare the population away from the market and encourage prosumerism. While manufacturing jobs will be automated, there are still services that cannot be replaced by robots, especially in the domain of care. Since the possibility of earning money with ones' work will shrink, people will need to organize themselves to meet their needs through exchanges. Time will become a parallel currency. Some peer-to-peer platforms may be operated by activists for free. Examples of such services are car sharing, airbnb, and couchsurfing. They decentralize the economy and make services cheaper because there is less labor and intermediary structures involved in production than in models based on employment. This implies also less taxable revenue and consequently a smaller public budget. Even if the state introduces obstacles to this economy, it would need to dispose of high tax revenue to finance necessary administrative capacities such as surveying the Internet networks and inspections at homes. Such an attempt has been undertaken in New York City, for instance, where authorities tried a provider of a couchsurfing apartment for violating the illegal hotels law, which makes renting an entire apartment for less than 29 days illegal (Tam 2013).

Technological unemployment and the state: structural analysis

Technological unemployment limits the demand for unskilled labor. It will also further centralize capital because the owners of the robots will be able to extract more profit from their machines in comparison to production based on human labor where profits need to be shared with workers. However, the demand for skilled maintenance staff will increase, as will their salaries. This will divide society into a small group of owners of the means of production, the specialists in the realm of technology development and maintenance, the class servicing these groups, and the majority of population – those who cannot sell their labor on the labor market. Beck writes about a ‘Brazilianization of the West:’ the active population in full-time employment being a minority (Beck 2000).

The effect of these changes (induced by the wage increases for those who work and the withdrawal from the market of a significant part of the population) will be a re-organization of state-society relations. Elinor Ostrom (1996) argues that the administrative capacities of the state are related to the demand for labor. If labor is not commodified, state capacities are lower as well because a state cannot extract revenue from taxes. This also implies fewer opportunities to commodify services (state or private depending on the result of the power struggle between citizens and market actors) because citizens cannot pay for services, either in the form of direct payment for services from insurance contributions or in the form of taxes, which would be redistributed to provide a universal welfare provision. According to Elinor Ostrom, the implication of underemployment is that citizens should co-produce services, so that the weakening of state resources is balanced by the involvement of citizens. When the labor can be commodified, it makes more sense to shift the provision of public services to public administration, which can extract more taxes from productively employed labor. In developing countries, the demand for labour is lower and there is high level of underemployment, resulting in the under-resourced state having limited capacities and citizens participating more in the co-production of services managed by the state. She presented examples of co-production in Brazil (Ostrom 1996). The administrative capacities that can free citizens from participation in the production of services of general interest will weaken also in the developed countries because there is less and less employment and precarious work contracts give firms a way to avoid paying social contributions. The false assumption that the current economic system is based on an encompassing commodification and resulting full employment (Standing 2011; Williams 2003, 2004, 2005, 2007) conceals the growing provision of noncommodified general interest services.

Since the number of workers will decrease, the inequalities between those employable and those on basic incomes will grow. The small group of employable specialists may prefer to live in enclaves to separate themselves from the rest. The trend towards spatial segregation is already visible in gated communities. The earning population may relocate to certain places, which will create deserts of tax revenue. Detroit’s trajectory illustrates this trend. Detroit’s population fell, which was followed by cutting its public workforce by more than 30%. Streetlights, buses, and ambulances have been reduced due to financial bankruptcy (Foroohar 2013). National level redistribution of basic income may encourage such a spatial segregation and deprive some local governments of funds and tax revenues. The lack of revenue from taxes of a large part of citizens will create two categories of citizens. These trends may foster a development of a two-tier service and subsistence provision system. The technological elites will organize their services provision within gated communities (Van der Steen et al. 2011) and exclusive clubs. The rest will develop a system of service provision based on decommodification and mutualism. Since classical employment will be too expensive to provide the services of general interest, which are labor-intensive but not very lucrative, it will be necessary to provide these services in an alternative way.

Imagining new models of service production

The part of society that does not earn enough to participate in the private sector service provision can shift its time to producing services instead of paying for them. This would imply no delegation of services to the state or market. In the social economy model, civil society directly organizes production of services and goods without transferring them to economic actors dependent on profit. In the following, I will present three types of such service platforms.

Example I: spontaneous and generalized exchange model

Instead of professionalization and employment in service provision, voluntaristic and spontaneous forms of organizing services can be imagined. There are already examples of Internet platforms which enable people to engage in exchanges. Couchsurfing is the largest portal, which enables tourists to be accommodated for free at someone's place. Other organizations of this type are Servas International, Global Freeloaders, Hospitality Club, and BeWelcome. These platforms are based on the principle of generalized reciprocity: offering is not a condition for being hosted by others. However, offering accommodation helps to build a reputation thanks to the references left by others. Such a platform for spontaneous and generalized exchange in providing services may function also in the exchange of other services (Molz 2007). Actually, the couchsurfing platform is used also for organizing activities and exchanges among inhabitants of the same location. This system could evolve further and enable the exchange of many kinds of services. Market, state, and civil society actors may provide coordination platforms for such a system to function. Paula Bialski argues that couchsurfing creates loose and varied "neo-tribal" relations (a concept of Michel Maffesoli) (Bialski 2006). These neo-tribes may evolve into more organized and reliable forms of service provision. Car sharing, Airbnb (providing hotel services), and time banks enable non-professionals to offer services for competitive prices, for free, or using time as exchange currency, with quality and safety ensured by a system of references and reputation.

Example II: time bank model

Henzler and Späth (2011) argue that it is impossible to ensure services paid by private insurances or the state because the ratio of elderly to the employable population is increasing rapidly. Therefore, there will be not enough people to work in this sector and to make contributions to pension funds. A similar problem is caused by technological unemployment. These trends operating together will require the development of alternative service provision systems.

In Germany, where state provisions cannot meet the demands for elderly care and market services are too expensive for most pensioners, elderly people have started to organize an elderly care system parallel to the state and market. There are over 50 such initiatives in Germany. The Bavarian Ministry of Social Affairs sponsored two such cooperatives with a starting grant of 30,000 Euros each (Köstler and Schulz-Nieswandt 2010; Pennekamp 2013).

The Elderly Cooperative Riedlingen (*Senioren-genossenschaft Riedlingen*) was established in 1990 in Riedlingen (a village of about ten thousands inhabitants). The cooperative had 650 members in the beginning of 2013. It enables people whose time is underemployed but who still are able to work to 'earn' services' before they will need them themselves. One hundred and twenty meals are prepared every day and distributed to elderly members. The price of a meal is 5.9 Euro. Active members earn 6.8 Euros per hour and they or their heritors can withdraw earned money. Services cost 8.2 Euros per hour. If a service provider decides not to withdraw money for their work, this person can claim the same amount of assistance time later. The services are guaranteed because the organization is able to pay for them from its revenues in case there are no volunteers available in the future (Henzler and

Späth 2011, 54-56). Since time is the main exchange currency, it makes the system independent of inflation and potential wage hikes due to the scarcity of labor.

Example III: subsistence cooperatives model

Activist Enric Duran inspired and founded the movement of Integral Revolution. He borrowed 492,000 Euros from banks to finance activist and publishing activities. Resulting from this initiative the Catalan Integral Cooperative (*Cooperativa Integral Catalana*, CIC) started its activity in May 2010 and others have followed since then. Today the CIC is the most developed one, having 800 active members and there are similar centers in other regions of Spain and in France and Belgium. The Integral Cooperative of Toulouse (*Cooperative Intégrale Toulousaine*, CIT) was established following the example of the Spanish Catalan Integral Cooperative and uses its online network for organizing. This organization evolves according to members' preferences and the interpretation of the main principles. The cooperative is only a framework for individual and group initiatives. The CIT explains that the ultimate goal of the cooperative is to establish a parallel social security system operating according to different principles and values than market and state provision. The principles are self-management, self-organization, direct democracy and spontaneous reciprocity. For example, instead of paying insurance fees, people would be organized in mutual help networks and would help a member in need. Their health care system will put more emphasis on preventive measures, such as access to organic nutrition. The production and consumption takes place based on relations of trust between producers and consumers. For instance, one of the members of the CIC prepares healthy organic meals for ten other members. Their price is the same as non-organic options because he buys vegetables directly from the producers. Up to 20 percent of the price for his end product can be paid in social money.

The CIT also wants to establish a community economy (*économie communautaire*), in which there is no personal belonging but objects are shared and used whenever one needs them and then returned (Gavroche 2013; NA 2010). Tasks which are not attractive for any of the members will be shared by all members. For instance, instead of having a few people carry very heavy objects, the process will be organized in such a way that many people can be involved in carrying the object. Splitting tasks into smaller chunks involving larger numbers of people could help to redistribute the unattractive work to be done.

The platforms described above represent a different way that services of general interest can be organized in the future. Instead of engaging in employment relations and specialization, people can pursue more flexible ways to meet their needs. While the consumers (those who could afford them) have much power and choice in the traditional employment and commodification of services, service providers in the alternative forms of service provision can choose who they want to work for and when. The engagement is much more spontaneous. In this system, important principles are interpersonal chemistry and reputation. The latter may also include features like friendliness or vibes. Cooperatives for the elderly function in a less personalized way thanks to the involvement of money. Still, the providers can choose freely their activities. The entire system is a cheaper alternative to the market and state provided services. However, the output is much less professionalized, which may imply lower quality and safety. Much higher numbers of people are involved in the tasks, which requires more coordination. Internet platforms provide tools for people to manage the exchanges.

New challenges in the re-organized state and economy

While basic needs were met within families in the period of pre-state service provision, in the post-state period service provision it will take place in affinity groups and based on the principle of generalized exchange. The weakening of intergenerational ties will force people to search for

assistance within affinity groups. The new system of service provision will require building many ties with very heterogeneous people. Robin Dunbar (Krotoski 2010) argues that one can have a maximum of 150 friends. Much time will be spent on coordinating exchanges, searching for opportunities in online networks, building reputation by participating in exchange networks and maintaining a network of loose ties.

The reorganization of services poses new challenges. Further research is needed to anticipate the consequences of a reorganization of service provision after a basic income is introduced. The de-commodification of service provision and their mutualization requires a different way of organizing everyday life. It has implications on the relations between individuals. This can be illustrated with the example of the communist state in which the commodification and monetary exchanges had much less importance for daily life. Access to goods and services was not defined by material resources solely as it is in the capitalist system. Certainly, those having more money were able to buy more goods and exchange local currency for dollars, which made Western goods also accessible. However, shortages of goods implied that people had to have good relations with the vendors or organize themselves. They needed to cooperate and exchange – social relations were much more important and decided one's quality of life. However, there was also a lot of fraud, for instance, in the management of housing cooperatives.

The structural change imposed by technological unemployment will also have an impact on the relations among people and will require more social capital. Similarly to the present form of capitalism in which emotions are increasingly exploited, in contrast to the previous stage of capitalism in which workers' bodies were mainly exploited, the emotional burden will grow in the future of declining employment. Samson (2004) argues that the demand for highly human skills such as friendliness will grow proportionally to the increase in the automation of work. Also outside of the job market the relevance of these highly human skills will increase. The ability to work with other people and form relations within cooperatives will be required. The ability to make a good impression and be outgoing will be needed in the generalized exchange services. People will need to invest more time to work on their personality, working through psychological or emotional blockades with self-awareness and psychoanalysis. While the lack of hierarchies and the voluntaristic character of work will liberate people from some forms of oppression, new types of inequalities will be produced. Those with erotic capital (Hakim 2011) and more ability to build relationships may meet their needs with more ease.

If the criterion of success is reducing inequality, then a well-developed welfare state is a better solution in comparison to a basic income. Government services can better meet unequal needs (Bergman 2004). Indeed, one can imagine that those more extroverted and having social capital and skills will be able to make meeting their needs cheaper through cooperation, whereas other unemployed people may be left with limited resources and underdeveloped state services. Further research should focus on the potential inequalities and the possibilities to deal with the individual disadvantages once service provision depends principally on mutual exchanges and cooperation.

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