

Are Robot Tax, Basic Income or Basic Property Solutions to the Social Problems of Automation?

Oliver Bendel

School of Business FHNW, Bahnhofstrasse 6, CH-5210 Windisch
oliver.bendel@fhnw.ch

Abstract

Automation is advancing relentlessly. Already decades ago, digitization was its partner. In the industry, innovative robots, for example co-robots, are used. Service robots begin to spread in various areas. Systems of artificial intelligence perform tasks of all sorts, even creative activities. The studies on the development of the labor market reach different results. In any case, it can be said that certain jobs will disappear and many people will have to do without their familiar work. It can also be assumed that in many areas less human work has to be performed on behalf (e.g., for customers and employers). As possible solutions to economic and social problems, an unconditional basic income and a robot tax are suggested. This paper presents, discusses and criticizes these approaches in the context of automation and digitization. Moreover, it develops a relatively unknown proposal, unconditional basic property, and presents its potentials as well as its risks.

Introduction

Automation is advancing worldwide. The use of innovative robots in the industry and of service robots is spreading. On production sites and in logistics we find, on the one hand, systems such as cooperation and collaboration robots, short-termed “co-robots” or “cobots”, which take on parts of activities and collaborate closely with people (Bendel 2018). On the other hand, machines and systems are used, where, at best, people are required for their maintenance. Service robots can be found in households, in gardens, in parks, in shopping malls and in retirement and nursing homes (Aldinhas et al. 2017). Artificial intelligence (AI) systems perform work of all sorts, office work,

medical diagnoses and therapy suggestions, and even creative activities.

Studies on the development of the labor market reach different results. Some assume that much of current human work can be automated, for example in industry, agriculture and services (Centre for the New Economy and Society 2018). Some assume that there will be altogether less labor for people (Zika et al. 2018), others claim that there will be equal or even increased demand for labor altogether (Arntz 2018). However, it is widely agreed that the remaining work is mainly related to the production, operation and maintenance of technical systems, more specifically information and communication technologies, information systems, cyber-physical systems, robots and AI systems (or to the corresponding products and results). In any case, it can be said that certain jobs are going to be eliminated and – assuming that professions in the digital sector cannot be practiced by everyone – that there will be many people without work.

Basic income (also “unconditional basic income” or “universal basic income”) and robot tax are often referred to as solutions to economic and social problems (Haagh 2018). In Germany, Scandinavia, India and other countries, the idea that every inhabitant be automatically provided with basic supplies is eagerly and vigorously supported, and fought against. In Switzerland, citizens voted on the introduction of an unconditional basic income. The initiative was rejected, but there were quite a few who supported it, namely about a quarter of the voters (Amrein 2016). This paper presents, discusses and criticizes these approaches. The author also develops a proposal for unconditional basic property, along with the idea of unconditional basic possession.

Automation and digitization raise questions of justice. Accordingly, this term is repeatedly referred to in this paper. Justice is a central concept of ethics. It is objectively understood as the basic normative principle of external

Copyright held by the author. In T. Kido, K. Takadama (Eds.), Proceedings of the AAAI 2019 Spring Symposium “Interpretable AI for Well-Being: Understanding Cognitive Bias and Social Embeddedness” (AAAI-IAW 2019). Stanford University, Palo Alto, California, USA, March 25-27, 2019.

coexistence in its cooperative and conflicting aspects (Höffe 2008). Justice subjectively understood is the moral attitude to life in relation to other people, which – in contrast to friendship, love and benevolence – is neither based on free affection nor in actions that go beyond what is owed to another person (Höffe 2008). Only a society that constantly, and permanently, upholds this principle seems to be morally justified in guaranteeing long-term stable structures. Constant injustice, which often affects the weak and the poor, leads to dissatisfaction and trouble.

Unconditional Basic Income

According to the idea of the unconditional basic income, adult or minor, discerning members of a political, functional or idealistic community receive a fixed financial amount, without obligation to repay and without direct consideration (van Parijs and Vanderborght 2017; Bendel 2016b; Häni and Kovc 2015). Unemployment benefits, social assistance or child benefits are usually no longer paid.

Unconditional basic income is intended to ensure the livelihood of the members of the community (Haagh 2018). The amount is ordinarily set relatively low, slightly above the subsistence level. Especially in times of upheaval, in times of automation and autonomization in the context of digitization, radical or innovative approaches are in demand (van Parijs 2018). Solidarity citizen income (Straubhaar 2008) and transfer limits model or Ulmer model (Pelzer 2010) are well-known variants in this context in Europe. They strive not least for the transformation and simplification of the tax system. In several countries, an unconditional basic income was paid in a pilot study, for example in Finland (Kangas 2017) and in India (Davala 2015).

Advantages of the unconditional basic income are independence from organizations and persons, an independent life style, and freedom from worry about the guarantee of a continued existence (Standing 2017). The motivation for value creation may actually increase, a life of creativity may be discovered and enjoyed, and one's lifetime could be used to cultivate one's personal interests and goals. The reduction of jobs in a world of work determined by software agents and robots is countered by a basic supply system that not only relieves those directly affected. A disadvantage is the apparent injustice through even distribution. Even people who earn good money get an unconditional basic income even though they do not need it. Some may show no interest in pursuing employment and be overwhelmed by their unstructured everyday life.

The aforementioned injustice is probably perceived also by those who would benefit from an unconditional basic income. This is pointed out in recurring reports and sur-

veys in the media and is also the opinion of right- and left-wing politicians (Butterwegge 2017). If you do not work for your money, you do not seem worthy to receive it. The reason could be a deep-seated ideology nurtured over centuries, which merely considers paid employment as work and dedicates life to it. Those who consider caring for children, relatives and others, rescuing and feeding animals, maintaining a garden or saving the forest, etc. as work, will be more likely to feel that they deserve to receive financial support. If this ideology is overcome, the problem of the missing structure of everyday life could also be solved.

Robot Tax

The question of where the money for unconditional basic income will have to come from is answered differently. One could start with making taxation more equitable, for example by drying up tax havens and by persecuting and punishing tax refugees. It is possible to trim the state slimmer, to dismantle the debt mountain and to carry out expropriation – this will be addressed below. Alternatively, one could invade countries, which is not, of course, an internationally accepted measure and is associated with fear, terror and death. Another answer could be to raise a robot tax (Abbott and Bogenschneider 2018). This seems to be a plausible approach, especially if the unconditional basic income is to absorb the consequences of automation, autonomization and digitization.

The robot tax is a characteristic of the machine tax, which in turn can be understood as a value added levy (Bendel 2016a). The idea is to tax the existence or the operation respectively of the robots' labour (possibly of software agents and AI systems) in production, in logistics and in other areas, and to supply the funds either to a social security system or, for example, to the education system. Also proposed is linking the robot tax to unconditional basic income or related models. At the same time, the question arises as to whether the work of human beings should be relieved of tax additionally.

The machine tax was already discussed in the 1950s and then again intensively in Germany and Austria in the 1970s and 1980s (Bendel 2016a). According to Becker (2018), it is a social policy concept or a political demand for the introduction of an additional contribution to social security in order to compensate for the wage losses due to the increasing rationalization of the jobs through machines and computers. Accordingly, fewer workers can produce the same economic return, but the income contribution to social security (possibly) is decreasing. Against the backdrop of the industry 4.0, or in view of the extensive automation with the help of modern, partly mobile and intelligent robots and AI systems, the economic and political demand

for a robot tax has come into being, which must not automatically be associated with social security (Reinheimer 2016).

An argument against the robot tax would be that it is not clear what exactly should be taxed (Bendel 2016a). Which robots and systems are affected? What is the specific task? The innovative power of companies could be slowed down, and the tax would probably inhibit the development and use of robots that complement and relieve people, and thus block opportunities for people to get away from the burden of everyday work. This is also a question of justice. An argument in favor of the tax would be that the robot is recognized as a risk to full employment in the full-time model and that a social policy response to the increasing automation has to be found. Not every solution is, of course, the solution to a problem.

The first objection to the robot tax is of a technical nature. The machines are often networked systems that work together via various interfaces and collect and deliver data; they communicate with other machines in order to be able to perform a task appropriately or at all. Machine-machine communication is a principle that is increasingly used in industrial settings, by service robots, and by automatic cars that are meant to drive around safely and without traffic jams. In a task that seems to be carried out by a robot, dozens, even hundreds of systems can be involved. For this reason, it is difficult to tax the machine work justly and sensibly.

The first objection is also of an organizational nature (which depends on the technical implementation as well). Thus, in the use of co-robots, as mentioned above, there is a close contact with humans. People and machines take turns constantly, especially in collaboration, everyone does what they do best, and people do the less dangerous, less strenuous and least repetitive jobs, while the robot is not afraid of danger or trouble. It is difficult to say who takes which part, and cooperation and collaboration can change continuously, depending on the production target and the production speed.

The first objection is related to the question which types of robots are involved. It is possible to distinguish between software and hardware robots. The former include software agents, web crawlers, social bots, and chatbots. Even if they are not accepted as robots as such, it has to be taken into account that they can play a role for hardware robots, for example as dialog systems that are integrated into them. So should we also tax software agents and chatbots, and what if they are part of hardware robots? Is there a need for a double taxation?

The second objection is a question of justice in as far as we are accustomed to rewarding commitment, inventiveness and devotion, especially in the economy. Politics awards promotions and prizes, the media report on innovations and put the entrepreneurs in the spotlight. The robot

tax obviously punishes companies that are looking for new technical and economic ways. One could argue that in this way one hinders the social progress and adheres to a status quo.

The second objection also touches on the issue of justice, because the subject of a task is committed to its execution, since it cannot find a way out through progress, and the regulatory, which is applied to the economy to affect, so to speak, the weakest link in the chain, namely the worker. This may sound cynical, because, according to the common view, many people are threatened with unemployment through automation, but it is precisely the question of what kind of work and unemployment one deals with. One is not unemployed, one might say, but free from work (Kurz and Rieger 2013).

Expropriation

The concept of expropriation is not new. It has already been present in Marxism. “Expropriation of the expropriators” is the magic formula (Marx 1919). One dispossesses the one who has expropriated, or takes land ownership and capital from the ruling class. The injustice inherent in the magic formula is easy to see. However, the injustice of the unequal distribution of property is also easy to see, and in many countries of the world, two to ten percent of the population possess as much as the rest of the country’s inhabitants. It is even the case that 26 people have as much money as the poorer half of humanity (Oxfam 2019).

Expropriation can therefore be an effective means of fighting against poverty and of doing away with the unfair distribution of resources. However, there must be clear limits. One approach would be to expropriate not the rich, but only the super-rich. This could be combined with the approach of not completely expropriating them, but, for example, only half, while freely movable and immovable means would be taken into account. Not only private and business people could be targeted, but also big-tech companies like Amazon, Apple and Facebook, and institutions, such as churches and sects.

In the end, one could pursue a similar objective as with the poor, who are tolerated only to be exploited, and as for the developing countries that are supported so that they can be exploited as not only the dependency theories claim (Peet and Hartwick 2015). One lets the super-rich live, so that one can fleece them, one even lets them remain extremely rich, so that they continue to earn a lot and one can continue to exploit them. The same goal may also be achieved through taxes, but the current models seem not to be suitable in their vast majority (Oxfam 2017).

Ultimately, one has to ask whether expropriation is really so unjust. Billions of assets can be got almost only by illegal means or by exploitation of human labor. In the

future, one could even achieve this without the use of manpower and the creation of a robotic labor force. Either way, it might be morally justifiable to take a good portion from the persons who have taken so much for themselves. Of course, illegal means, if they exist, should be eliminated, although the expropriation would suffer as a result.

Unconditional Basic Property

An alternative idea to an unconditional basic income is that of basic property or unconditional basic property, according to which every person gets a plot or a building or something else at their birth or at their majority (Hertel 2016; Bendel 2016), with few or no obligations. That would be a kind of welcome gift upon arrival on earth. This idea will be discussed in more detail below.

Background

Firstly, it is striking that we are being thrown into a divided world, in which there are territorial borders and private properties. This was not always the case. The early humans often simply took the land they needed. When they came to populated areas, they had to arrange themselves as individuals or groups with the people who lived there which they did in a peaceful or warlike manner; but uninhabited areas were often freely available, and even if a state was already the owner, it was mostly possible to purchase plots, even entire areas at favorable conditions. In other cases, invasions and warlike acts of states led to the seizure of land and the expulsion of the natives.

Borders do not always mean the exclusion of the public – cities have a mandate to cultivate places and make them available to the whole population, and countries and municipalities have the duty to preserve and protect forests, meadows and lakes so that they serve the general public for recreation. In some countries, the sea or the beach must be accessible in principle and a private property should keep a little distance. Of course, the super-rich have always found ways and means to avoid these rules.

The Basic Idea of Donation

Compared to this early situation, perhaps idealized and simplified, today's human beings are, apart from family property, inheritance, etc., largely destitute and without possessions at their birth. For decades, humans must not only earn their living (which was always the case for the majority of people), but also try to change their own ownership structures. There appears to be a certain injustice in this fact.

Basic property seems to be an answer to this injustice. Moreover, it eliminates a former injustice, because while thousands of years ago it was a question of sex, coinci-

dence, happiness, power and violence, everyone would be given a gift at birth or at their majority.

The Type of Donation

Of course, the question arises immediately as to the kind of donation. So far, land and buildings have been mentioned, without specifying their size (which does not seem necessary in the present article). In principle, both lead to certain problems and new injustices.

In the case of a plot, the first question is where it should come from, since the world has been divided up already and belongs to either the public or the private sector. One obvious solution is a nationwide expropriation, which could cause, however, considerable turmoil. An alternative is the decision to reserve spacious, uninhabited land for future generations. Of course, there are not many areas available, and some of them are difficult to use because they consist of desert, swamp, virgin forest or mountain ranges.

A challenge is, therefore, the location of the land or building. This will be discussed more generally at this point. One suggestion would be that the property or habitation is in the country or in the region where the birth takes place. Families could easily stay together and plan for their future, as long as they are not constantly on the move. It is also important that someone takes care of the land and building and protects them. However, this concept could again lead to space and distribution problems. Another possibility is to have an AI system make the assignment. Personal factors could play a role, as well as facts regarding the availability and distribution of territories. One could also leave it all to chance.

Another question is whether it is allowed or even a necessity to trade with the donated possession. That seems, basically, sensible. In the course of time, one could develop different preferences and needs and want to exchange one's land or house in the North against a plot or building in the South (or vice versa). A sale could also make sense if someone moves in with somebody else, who needs money more than land property or home ownership, or in the event of an emergency. There is a danger that, due to unfortunate circumstances or negligent actions, one will lose ownership forever. However, one would only have reached today's level where there is no basic property.

There are, of course, other ways of transfers, for example monetary gifts, gifts of gold, silver and precious stones, valuables of all kinds, etc. One of the central problems here is of course theft, and even an individual marking of the goods is not able to solve all problems. Here also one would have reached today's level, where there is no basic property at all. The donation of shares would be another interesting approach, but it is also associated with various problems.

Property vs. Possession

A variant of basic property is the basic possession (of land or buildings). The transfer takes place temporarily, more specifically for a lifetime, and with reference to a concrete person (so that an inheritance is excluded).

A guiding principle is that any property has its limitation in the death of the individual. With the concept of inheritance and transfer, one partly revokes this idea, and distributes assets and real estate for generations. But one does not profit from this oneself – the despicable Mammon is particularly despicable, because one cannot infinitely feast on it, no matter how one has acquired or used it.

One can feast infinitely on nothing, but the planet will whiz another few million years through space and from the point of view of ethics – including environmental ethics – a lot speaks in favor of saving it (Bendel 2016c). In other words: It should not only be a question of man having a good life, but also the animal, and that this animal grows up in a stable environment, which in turn means that we must protect the environment.

In the case of basic possession, not only inheritance, but also trade and sales would be excluded. At best, subletting could be possible; one could – for example – temporarily provide a rented apartment to persons against remuneration.

The Question of Justice

It has been found that unconditional basic income provokes skepticism even in the individuals who would benefit from it. It is conceivable that unconditional basic property with all its challenges would face less resistance. Especially if it can be taught that the earth has been divided among the powerful and influential, and that this is not necessarily a law of nature, sympathy for the idea could arise. We were thrown into the world, and it is hard to see why not everyone can have the same starting conditions. This idea of justice can be discussed in business ethics.

In this respect, it is amazing that basic property has not found a larger following so far. People have resigned themselves, apparently, to a fundamental injustice, and the majority of the population, fed with alms and exploited, does not seem to mind spending the best hours of the day and the best years of life taking this as a matter of course.

Population Limitation

Especially when land and buildings are given away, the question arises of when the system reaches its limits. It would be possible to pair it to a targeted and categorized population threshold. This could serve, in principle, the protection of the environment and animal welfare, the protection of natural resources and the preservation of livelihoods. This mission is pursued by the movement of

the Antinatalists (de Giraud 2006). Their arguments are fueled by studies which claim that to have children is more or less on the same level, in view of the life cycle assessment, as traffic, airplane travel and the consumption of meat (Wynes and Nicholas 2017).

Birth control by the state is a vision of horror. The one-child policy largely failed in China and has been replaced by a new order (Feng et al. 2016). Exactly this policy from the Far East has shown the inhumane aspects of such a concept, especially since certain gender prejudices existed in the population, which caused a disproportionate increase of the male population. What happens, however, if one lets more children to be born, if even many children are allowed under certain conditions?

A concrete suggestion could be that everyone can bring one child directly or indirectly into the world. A couple would thus be able to have two direct descendants, a family consisting of three adults, accordingly three. For each additional child, so the idea, a child tax would have to be paid, which in turn would finance measures in environmental protection or in social care. The amount could orient itself at the unconditional basic income. A drawback would be that especially wealthy people could afford large families. Specifically the owners of factories in which automation has progressed could put as many children into the world as they like. This may seem unfair or inappropriate.

Free distribution of contraceptives, increased social justice, better education and increased prosperity are also remedies that can reduce the birth rate and lead to less controversy than a direct birth limitation or the selling of indulgences of a special kind. However, such measures need a lot of time and could be ultimately too late. An unconditional basic income also may contribute to the target, as well as unconditional basic property.

Global Mediation

Some of these tasks can only be solved if not a single nation takes care of them, but a community of states. A world government or a commission for the future could take care of them as well as a (still to be defined) world bank. This would be, regardless of UN, World Bank, etc., a new, revolutionary step. Global mediation would thus be theoretically required. This mediation should have all means available to implement the tasks.

The political feasibility of such a project is completely uncertain. Currently, the world's powers, which would be vital for the reorganization, are rather distant from each other. The tendency toward national solutions is increasing, not only in Spain, Belgium and Denmark. At most, regional and global disasters could contribute to the insight – or on the contrary could cause panic.

The practicability of global mediation is difficult as well. There are enormous logistical and administrative efforts required. Lands and buildings must be designated, freed and distributed, while always being adapted to the current death and birth rate. Moreover, one is faced with the challenge of an increasingly economically and socially fragmented world. Not everywhere the described automation takes place, and not everywhere at the same pace as with us.

Lastly, it is a question of massive interventions in personal rights, particularly in the case of birth control. The question is whether the survival of our species and our environment including all animals would not justify personal limitations. The answer is not easy, especially in the light of the fact that in the past, in the case of freedom and security, one often preferred security against freedom and has therefore created a monitoring system in many countries.

Summary and Outlook

Especially in times of increasing automation and autonomization in the context of digitization, as they arise in the modern working world and in industry 4.0, radical or innovative approaches are required. In the present article, it was shown that the unconditional basic income has both advantages and disadvantages and that a robot tax could fail due to technical and organizational difficulties.

The proposal for unconditional basic property (including the idea of basic possession) was presented and discussed. Fundamental objections were found, but also general benefits. One should not underestimate that the spreading of the idea could draw attention to the current system's obvious flaw, which can be summarized somewhat shallowly: the world is starkly divided among the rich and powerful. The danger is that automation and autonomization will increase inequality and injustice. That, however, is exactly the point at which objections from social and scientific sides are raised.

Other approaches may be developed in research projects, financed by the public sector, but also by companies. Even already known proposals could not be dealt with here, such as the one that every citizen participates as a shareholder in companies in which people no longer work (Reiter 2018). Completely new approaches could oblige the industry to provide every citizen with a service robot that takes care of them, in simple and in difficult situations. It is, however, the question whether such an additional population – which also requires space and resources – would make sense. Ideas on transhumanism and superintelligence have also to be considered (Kurzweil 2006). The biological, chemical, and technical modification of human beings could solve certain problems. If AI is no longer an enemy, but a com-

ponent of the organism, there could be a paradigm shift. Whether this is a perspective that many people would warm up to is rather unlikely.

References

- Abbott, R. B.; Bogenschneider, B. 2018. Should Robots Pay Taxes? Tax Policy in the Age of Automation. *Harvard Law & Policy Review*, Vol. 12, 2018. 145 – 175.
- Aldinhas Ferreira, M. I.; Silva Sequeira, J.; and Tokhi, M. O. et al. eds. 2017. *A World with Robots. International Conference on Robot Ethics: ICRE 2015*. Cham: Springer International Publishing.
- Amrein, M. 2016. Die Grundeinkommen-Initiative auf einen Blick. *NZZ*, 5 June 2016. <https://www.nzz.ch/schweiz/volksabstimmung-vom-5-juni-das-grundeinkommen-auf-einen-blick-ld.14519>.
- Arntz, M.; Gregory, T.; and Zierahn, U. 2018. *Digitalisierung und die Zukunft der Arbeit: Makroökonomische Auswirkungen auf Beschäftigung, Arbeitslosigkeit und Löhne von morgen*. Study supported by the BMBF. Mannheim: Zentrum für europäische Wirtschaftsforschung. <http://ftp.zew.de/pub/zew-docs/gutachten/DigitalisierungundZukunftderArbeit2018.pdf>.
- Becker, J. 2018. Maschinensteuer. *Gabler Wirtschaftslexikon*. Wiesbaden: Springer Gabler. <https://wirtschaftslexikon.gabler.de/definition/maschinensteuer-37000>.
- Bendel, O. 2018. Co-robots from an Ethical Perspective. In Dornberger, R. ed. 2018. *Information Systems and Technology 4.0: New Trends in the Age of Digital Change*. Cham: Springer International Publishing. 275 – 288.
- Bendel, O. 2016a. Robotersteuer. *Gabler Wirtschaftslexikon*. Wiesbaden: Springer Gabler. <http://wirtschaftslexikon.gabler.de/Definition/robotersteuer.html>.
- Bendel, O. 2016b. Bedingungsloses Grundeinkommen. *Gabler Wirtschaftslexikon*. Wiesbaden: Springer Gabler. <http://wirtschaftslexikon.gabler.de/Definition/bedingungsloses-grundeinkommen.html>.
- Bendel, O. 2016c. *300 Keywords Informationsethik: Grundwissen aus Computer-, Netz- und Neue-Medien-Ethik sowie Maschinenethik*. Wiesbaden: Springer Gabler.
- Butterwegge, C. 2017. Das bedingungslose Grundeinkommen ist ungerecht. *Deutschlandfunk Kultur*, 8 January 2017. https://www.deutschlandfunkkultur.de/armutsdebatte-das-bedingungslose-grundeinkommen-ist.2162.de.html?dram:article_id=375838.
- Centre for the New Economy and Society. 2018. *The Future of Jobs Report 2018*. Geneva: World Economic Forum. http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf.
- Davala, S.; Jhabvala, R.; Standing, G. et al. 2015. *Basic Income: A Transformative Policy for India*. London, New York: Bloomsbury Academic.
- de Giraud, T. 2006. *L'art de guillotiner les procréateurs: Manifeste anti-nataliste*. Marennes: Le Mort-qui-Trompe.
- Feng, W.; Gu, B.; Cai, Y. 2016. The End of China's One-Child Policy. *Studies in Family Planning*, Volume 47, Issue 1, March 2016: 83 – 86.
- Haagh, L. 2018. *The Case for Universal Basic Income*. Cambridge, Oxford, Boston, New York: Polity.

Häni, D.; and Kovc, P. 2015. *Was fehlt, wenn alles da ist?: Warum das bedingungslose Grundeinkommen die richtigen Fragen stellt*. Zürich: Orell Füssli.

Höffe, O. 2008. *Lexikon der Ethik*. München: C. H. Beck.

Kangas, O.; Simanainen, M.; and Honkanen, P. 2017. Basic Income in the Finnish Context. *Intereconomics* (2017) 52: 87.

Kurz, C; and Rieger, F. 2013. *Arbeitsfrei: Eine Entdeckungsreise zu den Maschinen, die uns ersetzen*. München: Riemann Verlag.

Kurzweil, Ray. 2006. *The Singularity Is Near: When Humans Transcend Biology*. London: Penguin Books.

Marx, K. 1919. *Das Kapital. Kritik der politischen Oekonomie*. Gemeinverständliche Ausgabe, besorgt von Julian Borchardt. Berlin-Schöneberg: Nezeitlicher Buchverlag.

Oxfam. ed. 2019. Public good or private wealth? *Oxfam*, January 2019.

<https://oxfamlibrary.openrepository.com/bitstream/handle/10546/620599/bp-public-good-or-private-wealth-210119-en.pdf>

Oxfam. ed. 2017. An economy for the 99%. *Oxfam*, January 2017.

https://d1tn3vj7xz9fdh.cloudfront.net/s3fs-public/file_attachments/bp-economy-for-99-percent-160117-en.pdf

Peet, R.; and Hartwick, E. 2015. *Theories of Development: Contentions, Arguments, Alternatives*. New York: Guilford Publications.

Pelzer, H. 2010. *Das bedingungslose Grundeinkommen. Finanzierung und Realisierung nach dem mathematisch fundierten Transfergrenzen-Modell. Eine kurze Zusammenfassung*. Stuttgart: Lucius & Lucius.

Reinheimer, S. ed. 2017. *Industrie 4.0: Herausforderungen, Konzepte und Praxisbeispiele*. Edition HMD. Wiesbaden: Springer Vieweg.

Reiter, J. 2018. Digitaler Kapitalismus: Robo Advice statt Robotersteuern. *Die Kolumnisten*, 15 February 2018. <https://diekolumnisten.de/2018/02/15/digitaler-kapitalismus-roboter-advice-statt-robotersteuern/>.

Standing, G. 2017. *Basic Income: A Guide for the Open-Minded*. Yale: Yale University Press.

Straubhaar, T. ed. 2008. *Bedingungsloses Grundeinkommen und Solidarisches Bürgergeld – mehr als sozialutopische Konzepte*. Hamburg: Hamburg University Press.

van Parijs, P. 2018. *Basic Income and the Left: A European Debate*. London: Social Europe Edition.

van Parijs, P.; Vanderborght, Y. 2017. *Basic Income: A Radical Proposal for a Free Society and a Sane Economy*. Harvard: Harvard University Press.

Wynes, S.; and Nicholas, K. A. 2017. The climate mitigation gap: education and government recommendations miss the most effective individual actions. *Environmental Research Letters*, Volume 12, Number 7.

Zika, G.; Helmrich, R.; and Maier, T. et al. 2018. Regionale Branchenstruktur spielt eine wichtige Rolle. *IAB-Kurzbericht*, 8/18. <http://doku.iab.de/kurzber/2018/kb0918.pdf>.