

It's the End of Work as We Know It: End Of Work, Complete Automation, Robotic Anarcho-Communism

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ABSTRACT

In this article I explore some consequences of the relations between technique, capitalism and radical liberation ideologies (such as communism and anarcho-communism). My thesis is that the latter are going to rise to the extent that wage labor will become a scarce commodity. Through total automation, however, what may occur will not be the end of the reign of scarcity, but a new oppressive order.

It is sometimes said that the end of the so-called ethical parties in the West was the consequence of the end of ideologies (Lepre, 2006). The alleged end of ideologies (Fukuyama, 2003) would have produced two relevant consequences: 1) the decline of politics, replaced by the economy; 2) the end of any utopian inspiration, which would have been rendered impossible by the dominance of the technique, since this would represent the universal affirmation of instrumental rationality (the one that Weber called "steel cage"; Weber, 1971). It is, in any case, a fact that ethical parties, which proposed complex alternative visions of the world, have disappeared, perhaps because they corresponded to a Fordist work organization, based on production and not consumption (Boltanski & Chiapello, 1999). It is not at all obvious, however, that the end of ideologies really did exist. Just as it is not obvious - and it will be the thesis that I will try to explore in this paper - that the spirit of utopia cannot rise again and perhaps it has never gone away, together with its hopes and its dangers.

That decline and *that* end would have been epitomized by the triumph of capitalism on a global scale. Indeed, to say globalization means precisely that a single system of production and distribution of goods has established itself as an economic system valid for all and not contested by anyone (Tremonti, 2016;

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Magatti, 2009). Suffice it to say that outside of capitalism only Cuba and North Korea now remain. The procedures that define the use of goods in the most remote Chinese industrial district are now the same as those used in advanced industrial areas (Magatti, 2009).

About capitalism it has been said that it is easier to imagine the end of the world than its disappearance (Fischer, 2009). This idea indicates that many of us think of capitalism as an aspect of nature - as much as it would realize the supposed natural essence of *homo economicus* - and not as a historical product among others that, like all historical phenomena, has its own cycle that develops from the early stages to maturity, to decline, to disappearance (Pareto 2006; Kirchgässner 2010). It is banal to say that there is a profound harmony between the development of technology and capitalism. It is not at all trivial, instead, and indeed it is very debatable, to think that there is an analytical link between technique and capitalism (just as, obviously, there is no analytical link between capitalism and western democracy).

Some deny that this link exists (Severino 2011) and imagine that the technique, that is the predominance of instrumental reason, and capitalism can be forces that will simply diverge at a certain moment, making possible a gap of human history towards other social orders (socialist, or communist, or anarchist, or anarchist-communist?) Those who believe instead that there is a link between technology and capitalism could qualify this idea of their inevitable divergence as a simple and visionary prodrome to questionable and faded utopian visions (Bartolini, 2019 Consigliere 2019). In my opinion, this, however, is a rather generic criticism which must be specified, although it is not unfounded at all. This critique usually builds on the recent historical decline of alternative visions of capitalism, such as those conveyed by Eastern European countries or large socialist or communist minorities within Western societies. This competitive struggle between radically alternative different visions of the world would have definitely ended with the fall of the Berlin Wall and the dissolution of the Soviet Empire.

But what is not said is the profound solidarity that exists between the ideology of technology, capitalism and communism. This solidarity is manifested precisely in the foundations, that is, in the idea that it is possible to overcome the reign of scarcity (Demichelis, 2017; Severino, 2011). This overcoming is possible by adapting reality to the idea, as Hegel would have said, that is, more prosaically, conceiving the world within an imaginative matrix (Ackerman, 2014), which can be the steel cage of rationality, the reduction of

everything to goods, or the egalitarian efficiency of planned production. These three visions are naturally utopian, that is, they use imaginative tools for political purposes for creating an order (Galli, 2019) - which is simply the function of politics -.

The asymptotic realization of the first two utopias is simply *globalization*, which is so much the global extension of instrumental rationality, epitomized by the kilometers of optic fiber that travel the globe and which promise to arrive soon even in the most remote Andean village, how much, and really for this reason, a global access to all goods in any part of the world and the institutionalization of these practices at an international level (Drori, Meyer, Hwang, 2006). And what happened to all the antagonistic social utopias? Believing that they are irretrievably waning is an act of superficiality for several reasons (Tronti, 2013). First of all for an eschatological reason. The idea of the end of scarcity and equal access to both essential goods and the superfluous ("bread and roses", according to the lyric expression of Marx, where it seems to be clear what bread is - the primary needs - but it is not at all clear what roses are - the desires that each of us cultivates within the confines of our mind and that finally come true? - is the secularized re-proposition of the Edenic myth, where the *eschaton* is placed inside of a progressive movement that manifests itself as the destiny of humanity. Secondly, because communism shares the trust of technology and capitalism to leave the realm of needs and enter the realm of desire expansion (Hardt, Negri, 2002). Is it saying that communism, momentarily defeated by history, survives in capitalism itself? No, of course and rather: communist or, more precisely, anarcomunist forms of reflection can rise again in the utopia of the end of work and the end of scarcity. In fact, the end of work is one of the versions of the end of scarcity, heralded by the rejection of work (Negri, 2012).

Capitalism owes its success to many factors, among which psychological mechanisms do not seem to have to be considered among the relevant ones. Indeed, we can certainly collectively decide to be more productive than our predecessors have been, but this in no way assures us an increase in economic growth rates. What instead explains the success of capitalism is a change in the social relations of ownership, which overwhelm individual psychological intentions. In fact, in pre-capitalist systems everyone is potentially a producer who has direct access to the means of production and subsistence, but in these systems survival does not depend on a structural way regarding the efficiency of the process of production of the goods. A harvest can be very good one year and

very bad another year; however, these are non-systematic and contingent constraints on social reproduction processes.

The capitalist mode of production, which communism sees as inefficient and therefore antagonistic, although this antagonism is the premise of its realization, frees the economic agents from the direct production of the means of subsistence. To access these means of subsistence, the economic agents must turn to the market. The market has existed at least since cities of a certain size existed, but it is only with capitalism that dependence on the market becomes general and tendentially universal. Since the economic agent no longer coincides with the producer of the means of subsistence, everyone must have the universal means of exchange (money) to access these goods. Since everyone has to turn to the market, this very fact generates competitive pressure among the producers to which they try to respond in various ways: hoarding of goods, monopoly cartels, dumping practices, customer retention, process innovation, product innovation.

The most effective medium-term means of selling goods and facing competitive pressure in the absence of monopolies (which globalization contrasts (Sharzer, 2012)) is naturally technological innovation. Technological innovation has a direct influence on the dynamics of commodity prices, which tend to approach asymptotically the cost of production (Rifkin, 2012). Profits among competitors also tend to become equal. The logic of accumulation can therefore be sustained only by untiring innovation. This is why we are obsessed by growth rates, because low indices are elements of crisis, even of the existential state of entire nations. And we are obsessed by the low indices of our growth because these meet the idea that capitalist development, at least in what were called affluent countries, is reaching its full maturity.

New technologies create and emerge from new forms of work organization: labor markets are restructured creating new professions, destroying old ones, proletarianizing skills that were once highly valued (as happens for many intellectual professions). Work is naturally a commodity like any other, and for this reason the appeals that are still seldom heard, more and more rarely now, to the dignity of work are a mixture of pathetic and reactionary posture. Labor costs tend to decrease unless it is a highly specialized profession or a top position where it is necessary to possess a series of skills that are not only professional but also political in the broad sense, which require you to be part of a network of relationships, that like any relational structure of a certain complexity tends to perpetuate itself (Ricolfi 2017).

One of the tools to increase profits is to reduce labor costs and, as it is well known, that there is no better reduction in labor costs than its elimination. The elimination of jobs is as much a factor in increasing profits and reducing costs as it is an effect of technological innovation. This innovative wave also affects the intangible economy. Let us think of the luxury sector, so important for our Italian national economy: the main competition to this industrial sector does not come from another luxury competitor, but from the economy of the fake, which is able to counterfeit goods almost perfectly with the introduction on an industrial scale of 3D printers (Euipo 2019).

Bound to the permanent revolution of the creation of desires that need new technologies to be satisfied and new technologies that in turn feed the creation of new unknown desires, capitalism invents new forms of work organization, new forms of social organization, together with new methods of capital accumulation. The decline of the Fordist labor organization, the promise of just-in-time goods require automation in their own structure. The automation of the financial flows governed by the bots is its logical consequence and since the 2008 crisis we have seen a significant increase in the global power of the companies that without the internet could not exist both in the flow of physical goods and in the flow of that commodity that is information.

Are we within a new paradigm shift that redesigns our relationship with technology and our relationship with capital? The success stories of the sharing economy that are told to us (while failures we almost never hear of) are stories that cannot be told without the presence of automation. There is no Uber nor food delivery without geolocation and satellites in space. Meanwhile, the new labels are multiplying: gig economy, on-demand economy, the fourth revolution, new Renaissance and new Enlightenment, as if the technique produced new beliefs by itself and new religious-like beliefs. After all, the birth of every new desire is a manifestation of transcendence, not in some vague mystical sense and within an unanalysable cloud of feelings, but in the precise sense that it is a projection of human being in a future time, for example in the future time in which I will be able to acquire the latest electronic gadget, or rent the robot that will provide health care to an elderly relative or to myself, or the bot that completes tax declaration for me or the sex robot with the features of Adriana Lima with whom I can have an exceptional sex and also go to the theatre with.

It is in the nature of the desire itself to rise again so long as the material conditions for its reformulation exist (but these material conditions cease only

with the deterioration of the cerebral support of our mind) and since desire is projection out of oneself, that is one's own transcendence in the future time, no wonder the fourth revolution triggered eschatological yearnings. These yearnings are internal to the same relationship between human and technical, since this is a kind of hybridization relationship, indeed: it has always been so since small groups of hunter-gatherers wandered in the savannah and tried to get food by killing their prey with tools of luck. Without the technique our victorious colonization of the planet would not have been possible at the expense of less fortunate species, which we dominated, plundered and exterminated.

It is therefore perfectly understandable for utopias to thrive on deep human-machine hybridization, i.e. not on the kind of hybridization that allows to have a pacemaker in your chest, but on the one that floods your bloodstream with nano-robots that repair your internal organs and guarantee a life of indefinite length, at least as long as you can feed them with energy and get enough money to buy them (O'Connell, 2017). Since for us who live in the rich West it has become increasingly difficult to exercise the transcendence of desire through the purchase of goods, not because the goods are not there, but because they are in an exorbitant number (and this is evidenced by the progressive transition from a stakeholder economy to a sharing economy), we need to find a last territory to penetrate with the alliance of technique and capital. This is happening with the economic colonization of the human body, which is becoming a market where to intervene with targeted enhancements (Buchanan 2017; Balistreri 2011). I think this is inevitable, as it is inevitable that a trend that is already underway at this time will intensify. Some emphatically call it "disappearance of work", a disappearance curiously in tune with radical communist theories (Ovidi, 2016). The emphasis, however, seems to be justified for once. If there is disagreement on the forecasts, as it is evident, there is instead a general agreement on the fact that many jobs are destined to gradually disappear. The jobs that involved a great expenditure of physical fatigue have already been replaced by machines for a long time, but even jobs that use a large number of operators are destined in short to cut the quantity of labor force (think for example of the work done by dustmen in our cities). However, this trend has also heavily invested jobs that seemed to have a high cognitive content. Professionals such as bank operators and legal professions have been affected by a wave of automatism and widespread diffusion of knowledge generated by computerization. Some months ago a robot gave an introductory lecture on a course in moral philosophy in an American military academy (Atkinson, 2018). In China (Meixler, 2018), there are

holograms that read the news on television (are they so from our voice assistants who update us on the latest news?).

John Maynard Keynes in the Thirties of the Twentieth century predicted that in the near future the time we would have spent in work would be drastically diminished and the era of abundance of time – the only commodity that we cannot replace – would come (Keynes, 2009). Keynes's optimistic forecast has not been realized so far, especially for the expansion of capitalism, first in production and then in consumption, with a movement that is still ongoing at the global level. However, there are tendencies that may indicate that that prophecy had a solid foundation (Ricolfi, 2019). One of these trends indicates that human labor, replaced by automation, will no longer be a plentiful commodity, although it could generally remain a low-cost asset.

It has been speculated, and this is interesting from a theoretical point of view, that, where personal cares are concerned, there the loss of working positions will be less pronounced. "Caring for the person" is a rather vague definition, however, as it includes a series of very different professions ranging from paramedical professions to medical services to security services. With regard to health care it has often been said that human contact cannot be replaced by the cold steel of devices that implement algorithmic structures in their limbs made of metal and plastic. However, many researches show that things are much more complex. For example, both cancer patients in pediatric wards and elderly patients in nursing homes develop an emotional attachment to robotic machines that take care of their needs and that simulate a form of human interaction. (Vallverdú, Casacuberta, 2015). The majority of these patients know well that they have to do with machines, but this does not prevent the development of a form of emotional empathy from the human being to the machine (Fasola J., Matarić, 2013). Is it an empathy that is developed by intellectually unsophisticated people or is there half of the other? I think that in question there is the mechanical nature of our thinking. I believe that it is precisely this implicit recognition that does not make it at all strange to have an empathic motion towards the machines and to dialogue with our voice assistants. We too, like them, are machines, although biological.

We have always been ready to have relationships with machines. It is in our nature as beings that trade with the artifacts produced by the imagination - those artifacts without which we would be miserable - interact with machines (Liu, Sundar, 2018). It is precisely this hybridization with machines that makes possible that invention that we call capitalism. On the other hand, this invention

and this hybridization actually make the same unemployment possible, since it is with capitalism that a surplus of the population incapable of obtaining paid employment appears on the social scene. It remains true that as far as capitalism is the exploitation of wage labor, it is much better to be exploited and to obtain the means of subsistence than to be exploited and to be condemned to poverty. Historically the dimensions of this surplus have been variable and subject to contraction and expansion coinciding with economic cycles. The typical scheme so far has been this: in the moments of growth the workers are taken from the surplus of employed and inserted in the cycle of paid work. In this way the labor market is restricted to lower unemployment levels. In the declining phase of the economic cycle, due to production surplus combined with higher inflation, wages are cut to guarantee the amount of profits, workers are fired and kept in reserve for the next economic expansion.

It is clear that this explanation does not fit our current situation, which is in many ways completely new. Just think of the ten-year stagnation of workers' wages and inflation that has been stable for a long time and the defeat of the solidarity movements of wage-earners (what was once called the working class) all over the world. As far as the problem of the labor market and its dynamics is concerned, what the attention of analysts focuses on is the surplus of outgoing workers caused by the spread of new technologies. Naturally, technological innovations can make old production processes more efficient even without the introduction of robotic technologies, such as happens in agriculture, but even in that sector it is probably only a question of time. Perhaps in a while we will find robotic pets and exoskeletons of military derivation picking tomatoes or harvesting grapes in our fields. The substance always remains the same: capitalism needs less labor to produce the same amount of goods and aggregate value.

Automation has been here for some time and seems to be the threat on the agenda for millions of people. Estimates are very variable and assume a job loss of between 47% and 80% (Srnicek, Williams, 2016). The counter-arguments to these forecast estimates refer to historical series. Capitalism has shown ever-increasing productivity and employment levels have remained mostly stable. The jobs that have been lost have always been more or less replaced by the creation of new markets or the creation of new professional figures. There is therefore no reason to think that the same cannot happen even in the new contingency, which would be nothing else than the last epiphany of capitalist creative destruction (Schumpeter, 2008). Technology eliminates many jobs, but also creates new

professional positions. Someone has calculated that thousands of new professional figures have been created since the beginning of computerization. It may be objected that this argument does not take into account how much elements such as government interventions to support employment, economic policies, the reduction of the working week and so on have supported the decrease in the surplus of the labor force. But things change profoundly in a scenario where new technologies invade our lives so quickly that a significant portion of the population is unable to keep pace with innovation and is therefore expelled from the labor market or relegated to marginal positions. Technologies are becoming increasingly common by reducing the total demand for human labor. Even the creation of new productions would not reduce the surplus of unused human labor, because the technologies would be so flexible as to adapt to new situations in an automatically incremental way. The result of all this would be a structural increase in unemployment, with a surplus of workers who will never return to the employment market.

Attempts to analyze these scenarios have certainly never been lacking at least since the industrial revolution began in the eighteenth century and have been a recurrent material of theoretical reflection, but it is the computing power of the machines with which we are now hybridized which can represent the real turning point. The expression "technological unemployment" is, in fact, not new and was coined by Keynes himself. However, its scope could be fully revealed in the near future, given that it could result in the permanent expulsion of large masses of individuals from the market of work. Some imagine that this turning point of our relationship with machines will be constituted by what is referred to as the technological singularity. The term has been made famous by Ray Kurzweil and indicates the time when the increases in knowledge may no longer be understandable to humans (Kurzweil, 2005). This idea does not involve so much an idea of superintelligence as in Bostrom (Bostrom, 2016), but rather the overcoming of a critical mass in machine learning processes.

This was also Turing's idea that John Lucas understood well. We begin by building very simple machines (Turing, 1950; Lucas, 2009). Are we sure that when we increase their complexity (an increase that in many respects can be considered exponential) there are no surprises in store for us? Turing's answer was positive and it was an answer based upon an analogical idea. Consider a stack of uranium and graphite blocks. If you continue to add uranium and graphite you will eventually cause nuclear fission and a self-sustaining chain reaction, something that could not be made to happen by superimposing two blocks of

uranium and two blocks of graphite. Having reached a certain critical dimension, this is the idea, something completely new is produced. Currently most of the human intelligence and the totality of machine performance is under-critical. Turing forces us to imagine that beyond a certain mass of cognitive connections we could produce a qualitative leap that no human brain will ever be able to perform. This critical mass could be achieved once the machine learning algorithms began to identify connections that are invisible to us and share their knowledge. This would produce a capacity for solving problems that we humans could never reach in any way. It is not at all clear if this is possible, when it will happen, if a reflexive conscience in our sense will also be necessary, whose reflexive consciousness will be, if it will be possible to speak of machines as individuals and not rather as a sort of hive.

As a matter of fact, in no way the possibility of universal automation implies the presence of a conscience, any more than our ability to automatically coordinate muscles, joints, tendons, and breath, vision instead requires a continuous self-reflexive reconnaissance. Machine learning and deep learning are already largely processes predisposed to self-learning and thanks to the computational power together with the huge amount of big data, what is called a second era of machines is expected. Non-routine jobs with fine manual skills along with increasingly efficient communication technologies will be performed by machines and replace the human being relatively quickly. Not only will the driving of individual cars and cars for collective transport - trains, subways - and for freight transport will be increasingly operated by robots, but basically all the works. The scenario that opens up is so exciting - for some - and worrying - for others -: work will become the real scarce commodity and what that will be could be increasingly paid poorly. This is also due to the fact that the trade unions will not have the power, nor residual that they currently retain.

facing the 'end-of-work scenario' what future can we imagine? It is well known that those who, from within the IT corporations, simply give this perspective as a real scenario, have also proposed some solutions. One in particular seems interesting, namely the universal income (Ackerman, Alstott, van Parijs, 2006). The problem to which the universal income proposal aims to solve is the lack of wage labor. If people no longer have an income, who will ever buy the goods? It could be said that capitalism risks to be the victim of its own resounding success on a global scale. I believe that this scenario will force us to a powerful exercise of ethical-political imagination, since our collective existential coordinates based on wage labor and money provided by national or

supranational institutions, state organization will in all probability cross, and they are already going through now, a phase of substantial redefinition if not of massive decline.

Technologies behind the second machine revolution, in fact, are not compatible with protectionist policies nor can they be easily subjected to traditional intellectual property regimes. Let me explain with an example. We have all heard of cryptocurrencies, a monetary value based on advanced cryptographic techniques (Vigna, Casey, 2016). These calculation techniques generate data in a cooperative manner among those who produce money – through the so-called mining – without any centralized control. The most famous of the cryptocurrencies is Bitcoin – due to a mysterious character known as Satoshi (O'Hagan, 2016) –, who for a period was simply the cryptocurrency, until in 2013 a very young computer scientist, Vitalik Buterin, proposed an alternative ecosystem of distribution and data creation known as Ethereum, based on a critical analysis of Bitcoin deficiencies (Buterin, 2014). Ethereum is also connected to a specific cryptocurrency, Ether4, which, as with other cryptocurrencies, is extracted through encrypted mining protocols. The immense computing power of the Ethereum network is given precisely by shared participation of individuals. According to experts, this environment is ideal for peer-to-peer applications, without any physical place where a central server or programs are installed. Decentralization naturally also promote all file sharing activities that violate traditional property rights. And they violate them in a particularly effective way, because there is not a single point of vulnerability of the system. The rhizomatic dissemination of the network also removes it from the jurisdictions of individual states.

There are at least two reasons why Ethereum is particularly loved by tech-libertarians. The first is the possibility of storing databases of any kind that are made available to anyone, after appropriate validation, that is to anyone who is part of the cooperative data production chain. The second is the possibility of programming conditional logical operations with specific triggers of the genre "if this happens, then activates a device, a program, etc.". This possibility for some has made the idea of the "smart contract" real. The idea of "smart contract" has been developed in theoretical form by Nick Szabo twenty years earlier. Smart contract is a contract between private individuals that does not need the coercive authority of the State to be made effective (Szabo, 1996). Smart contracts must be thought of as boxes of encrypted data that open only if certain conditions are activated, for example an electronic key, and immediately

become executive because they automatically respond to those conditions. According to Szabo, smart contracts solve the problem of trust between the parties, making it a pure logical procedure that does not need human intervention. Some enthusiasts see in Ethereum and in smart contract the tools for the development of a post-capitalist and post-human economy where transactions do not need the form of the State to be implemented. But what is the need for a digitized contract in the archives accessible only through (Ethereum) blockchain? Are there not already contracts that according to the Cornell Law School definition define "commitments that can be performed by law" (Greenfield, 2018)? And besides, aren't these contracts already in fact digitalized in the contemporary world? All this is true, but traditional contracts are subject to the constraints and ambiguities of natural language and for this they must appeal to a resource represented by the holder of coercion, that is the State, to be respected.

In the traditional world contract is a legal phenomenon extrinsic to the course of events, which may or may not occur. In the automated network of Ethereum the contractual constraints are viewable by anyone who is part of the network and if the conditions that satisfy the contract are executed they are paid in Ether. Will this be enough to avoid disputes and legal disputes whose fair outcome is guaranteed by a third authority? The contractual automation alone has only a very partial value and is not feasible except for limited applications, such as the starting of a car or the automatic key of a door or a safety (electronic) box. But let's think about a job: would it also be the case of a company that restructures a bathroom, a caregiver who looks after a loved person, a company that provides services? What would happen if one of the contractors failed to fulfill the obligations of the contract? It would be inevitable to turn to a third party, and this would show that the contract is not automatic at all.

However, to object to this would mean to misunderstand what the advocates of radical technologies really have in mind when they talk about the automatism of contracts, because it is clear the only context where these automatisms could be effectively implemented successfully. This context is that of a completely automated society, where human labor no longer exists in the forms we have known so far, it is completely carried out by machines and, in case, it can continue to exist in the form of a pleasure game. Complete automation is a sort of categorical imperative, since work in its current form is essentially alienation of human creative abilities, which prevent a real self-identification of those who work with themselves, with very rare exceptions that are in fact confused with

leisure activities and personal *Bildungsroman*. Only complete automation can give a glimpse of a fairer future. The end of alienation coincides with a reality where the processes of integration with the natural world are completely mediated by machines capable of reproducing, self-programming, continuously monitoring the state of the planet, ending the reign of scarcity finally replaced by the freedom of need in a condition of fully automated luxury communism, as it has also been called, but which would be more correct to call “fully automated luxury anarcho-communism” for its distrust of the state (Srnicek, 2016; Srnicek, Williams, 2016; Srnicek, Williams, 2018).

Does all this also resemble to a disturbing totalitarian nightmare? I think we can say two things. The first is that these are resurgent utopias, produced in the past, each time a technological breakthrough was announced. The visionary communism of Marx and Engels in the communist *Manifesto* is no less utopian than what they contemptuously called “utopian socialism” and like all utopias its claim is to put itself to a level of efficiency superior to the ideas embodied in the actual present. It was not just a humanistic critique of capitalism, but rather the pretension that there is a better possibility of using productive processes and of employing the human labor force. For the utopians of complete automation, liberation from work is therefore an ethical imperative that must be rationally fulfilled.

This ethical imperative must be realized not only because work is alienation, but also because the reality of climatic emergency make us responsible as a human species of the planet's destiny. This incumbent, urgent, and according to some unsolvable problem, faces the exhaustible and non-renewable resources of the planet, the growing demographic curve, the repeated global financial crises. Capitalism is not only unable to fulfil its promises of a growing well-being, but not even to guarantee the current level of income and consumption for the middle class. The solution that should be experienced is then a leap out of technique-based capitalism.

Technique and capitalism are allies, but there is no analytical link between this two visions of the world, but only contingent, and for this reason the utopia of complete automation needs a voluntary and optimistic surplus that does not seem to have any solid foundation in theory and little foundation in experience. Let us try to imagine some implications of this vision. Complete automation would be necessary for the convergence of environmental crisis and crisis of capitalism (financial crisis, employment crisis and so on). But what does complete automation mean? That machines will do all our jobs or that machines

will schedule which jobs to do? To take this utopia seriously I believe that one should lean towards the second solution, because one could not know what jobs to do if one did not know at the same time which jobs should not be done. For example, machines would decide whether a tree can be cut or not, based on the ecological footprint that its survival would entail. To do this obviously all the computers on the planet should share all the information, otherwise how could one decide which information is relevant and which is not? However, since an input is needed to generate the information output, it must be clear that the choice of the input is an option of value. Which one exactly? Let us assume it is a general safeguard of the planet. For the sake of the argument we can concede that the total control of the machines in a completely automated world will be able to calculate the ecological footprint of every human being for the near future and also that of those who are not yet born. Maybe it will be decided not to give birth to those who could make a great contribution to the preservation of the planet. Do you understand the paradox? The automated government of things will generate more government and more control and will not produce more freedom.

Why then should we want automation? I think the answers are basically two. The first is the usual one: relieving fatigue, getting a low-cost workforce. The second is to realize desires through machines: listening to the music we want when we want, designing the house we want, having sex with a robot that mimics our erotic dreams. But those who imagine complete automation do not think at all in these terms, but in a holistic perspective. The algorithmic planning of production and environmental control does not result in the reign of freedom, but in a reduction of our desires alienated from capital. Will it be a forced reduction? Technological optimists and accelerationists think it will be the introduction to the realm of end of alienation, just as young Marx thought. A period in which man will naturalize himself and nature will be humanized, through the exponential power of algorithms and the interpretation of big data? Will this be the end of capitalism and the realization of (anarco-)communism?

For Marxists communism is the bet that the social organization freed from the exploitation of man by man will be able to be more rational than capitalism, which in its economic cycles is periodically run over by crisis of overproduction, to which in fact the financial crises generated by speculative bubbles must be compared. In this consideration, communism has always been in entirety and deeply solidarity with the technique ("Communism is the Soviet power plus the electrification of the whole country" in Lenin's aphorism used for the

electrification campaign of the Soviet Union), but it was so because of the belief that there was a substantial difference between the human needs really human, that is non-alienated needs, and the non-human induced needs, which instead are alienated and are generated by capital to expand its hold on the world, that is to make the world its own appendix, as indeed it is in the destiny of that conception that imagines that everything can be reduced to a commodity. Is this a legacy that is also present in those who imagine a future robotic communism? I believe that something like this should be present, because otherwise the multiplication of desires allowed by a human being empowered by technique (since it must be clear that the technique is not only liberation from work, but also multiplication of desire) would make it possible to reproduce once again, conditions of inequality.

Communism called for a gathering, as one sings in the Italian socialist song *Bandiera Rossa* “the immense host of the exploited”. These exploited ones were those that the communist parties intended to group in a structure that would bring out their class consciousness (the incipit of *The International* evoked this progressive task: “Servile masses arise, arise / We’ll change henceforth the old tradition / And spurn the dust to win the prize.”). Now these servile masses could be that of those who are deprived of work and have no chance of finding it except in the form of disqualification and tasks still lacking interesting technological content, but where this content could settle at any moment in their jobs. I think it is a basic anthropological fact that we are that entity that lives in disproportion between its imaginative capacity and the possibility of realizing its desires. This disproportion is intensified by the technique which is precisely one of the tools through which we try to implement our desires. The fully automated luxury anarcho-communism is a utopia that thinks it is possible to give new class consciousness to the immense future ranks of the unemployed, but it could clash with this anthropological fact and show itself for what it is: yet another dream of total social engineering.

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