

From growth to degrowth to a steady state economy: a (more) liberal path is possible

Abstract

In this paper we discuss three main institutional obstacles to a transition towards a steady state economy, focusing our attention on one: the dependence of the current redistributive and fiscal systems on full employment. In the degrowth literature, we identify three possible approaches to the removal of this obstacle. In the first, the state is the main actor; in the second, the market; and the third is a blend of the first two. We defend that, compared to a state-centred approach, a market-centred approach would be less expensive, easier to manage, provide individuals with more freedom and wellbeing and generate a similar or higher degree of equality at the aggregate level. A blended approach, although superior to a state-centred approach, would be still more costly and less transparent than a market-centred approach, while producing the same outcome in terms of wellbeing and equality. The core claim of this study is that, under the right institutional conditions, the market could play a central role in fostering a transition towards a steady state economy and, contrary to widespread opinion among degrowth scholars, such a transition does not necessarily require a more active intervention from the state.

Keywords: UBI, Basic Income, Degrowth, SSE, Transition, Liberalism, Welfare

Introduction

Long ago the environmental crisis stopped being an apocalyptic fantasy and became a tangible reality. Capitalism has exceeded the biophysical limits of the planet. The growth model, which requires a continuous expansion of production and consumption to maintain its stability, cannot handle the environmental problems that its very existence unavoidably produces (Wiedmann et al., 2015). For decades the increasing efficiencies brought about by technological innovation, together with a shift from the industrial sector to the service sector in developed Western countries, have fuelled the illusion of an absolute decoupling between economic growth and ecological impact. In fact, technological innovation has been depicted as the messiah that would supposedly solve all our problems: it would reduce inequalities, increase wellbeing and bestow sustainability upon us all (Naam, 2013). Unfortunately, it is a false messiah. Despite all its promises, in recent decades increases in global consumption and production have significantly outpaced the savings from technological improvements (Magee and Devezas, 2016). Absolute decoupling (that is, an absolute decline in resource use over time while the economy grows) is simply not occurring (Fritz and Koch, 2016; O'Neill et al., 2018), and there are very good reasons to think this will not change in the future (Jackson, 2017). A well known 'rebound effect' makes any reduction of the market costs of natural resources produced by growing efficiencies translate into an increase of the aggregate throughput, rather than a decrease (Sorrell, 2009), and even the apparent reduction of the CO₂ emissions of some service economies is due largely to the practice of moving the environmental impact of their internal consumption to other countries, where the products that satisfy that consumption are manufactured (Kallis, 2017).

All in all, the environmental impact of the Global North is growing, not degrowing (Gutowski et al., 2017), and at the global level the emissions of CO₂ have increased more or less steadily since the 1980s (Friedlingstein et al., 2014). The same is true for the total global resource appropriation of biomass, fossil energy carriers, metal ores, tailings and industrial/construction material (Krausmann et al., 2009).

To make things worse, the growth model is failing in redistributing the wealth it produces. While economic growth after World War II was undeniably a key factor in reducing inequalities, the correlation between growth and inequalities is now reversed, and the latter are growing together with GDP (Jackson, 2017). This has led to the current situation, with about 99% of the global wealth belonging to just 1% of the population (Oxfam, 2017). Global inequalities are also intertwined with the environmental crisis, with the richest 1% estimated to emit 30 times more than the poorest 50%, and 175 times more than the poorest 10% (Oxfam, 2015). Meanwhile, a growing number of studies have shown that, beyond a certain threshold of economic development (reached long ago in the Global North), there is little correlation between per capita GDP and people's happiness (Jackson, 2017; Proto and Rustichini, 2013; Kahneman and Deaton, 2010).¹ With economic growth being positively correlated with global inequalities and environmental unsustainability and poorly correlated with human wellbeing, it is not surprising that a growing number of scholars have started to see degrowth as a solution to achieve sustainability at the global level (D'Alisa et al., 2015; Hueting, 2010; Martínez-Alier et al., 2010; Schneider et al., 2010).

The term degrowth is used in different ways by different authors (Cosme, 2017; van den Bergh and Kallis, 2012). In this paper, we shall define it as the process of *material* downscaling of a society and the resulting reduction of its environmental impact on the planet's ecosystem.² Defined as such, degrowth cannot be a long-term goal for human societies, but merely a means to achieve a state of environmentally sustainable equilibrium with planetary ecosystems. If

¹ Beyond that, happiness is mainly positional. It depends on how one is positioned in the social and economic pyramid of status. Thus if the inequalities grow, aggregate wellbeing can reduce despite a growth in the per capita income (Easterlin, et al., 2010).

² This definition is similar to the one given by Kallis (2011).

degrowth is the means, a steady state economy (hereinafter SSE) is the final goal (O'Neill, 2012).³ We shall define an SSE as a *functionally stable* economy in which “a constant stock of capital [is] maintained by a low rate of throughput that is within the regenerative and assimilative capacity of the ecosystem” (Daly, 2008). The idea is that the countries that are overdeveloped (in terms of environmental impact and aggregate wellbeing) should degrow to reach a socially, economically and environmentally sustainable SSE, while the countries that can still increase their per capital wellbeing through growth should do so while at the same time ecologically transforming their economies (Kerschner, 2010). The two paths are dependent on one another (because the degrowth of the overdeveloped countries would free the ecological space needed for the development of the underdeveloped ones) and share the same final goal (a global SSE).

While most scholars agree that degrowth should involve a redistributive downscaling of the biophysical size of the global economy (Schneider et al., 2010; D'Alisa et al., 2014), how this redistributive downscaling should be produced is to a good extent still an open question; given the existing association between economic and material growth, a material degrowth would also produce a degrowth of the global GDP (Wiedmann et al., 2015). This means that one of the main challenges we are facing is to find a way to make such degrowth socially and economically sustainable. Fortunately, what makes growth environmentally unsustainable and what makes degrowth economically and socially unsustainable are not the same factors. Unlike growth, whose unsustainability is rooted in unpassable physical limits, the obstacles to degrowth are institutional in nature.⁴

We can identify three main obstacles: 1) the dependency of the financial system on a constant expansion of the money supply; 2) the public debts of most states; 3) redistributive and fiscal systems centred around wages coupled with an economy that requires less and less employment to keep up with the current levels of production and consumption.

Due to space constraints, in this paper we will only briefly comment on the first two obstacles to focus on the third one, while at the same time acknowledging that, without first removing each and every one of them, any attempted transition would be politically unfeasible, and potentially catastrophic for the world economy (Tokic, 2012).⁵

The path proposed here to tackle the third obstacle has three main advantages compared to other similar proposals: 1) a relatively low level of complexity (i.e. it solves a wide range of problems with a limited number of solutions), making it both easier to communicate politically and to test empirically; 2) a high level of compatibility with the ethics of political liberalism (individual rights, egalitarianism, universalism, etc.) (Gray, 1995); 3) low costs of implementation.

While we agree with most of the literature on degrowth that the role of the state is essential to trigger the transition to an SSE (Cosme, 2017), we also think that a (resource capped) free market has the potential to be a central actor in it. The left-wing, anti-market stance of many degrowth scholars (see e.g. Demaria et al., 2013; Buch-Hansen, 2014) carries the risk of both reducing the breadth of the debate on degrowth and SSE and scaring off those liberal political and social forces that recognise the problems brought about by the current environmental, economic and social crisis. We argue that, from a liberal perspective, a universal basic income (hereinafter UBI)⁶ would work better than any job redistribution policy to make the transition

³ There is a growing academic consensus on this issue (Schneider et al., 2010; O'Neil, 2012).

⁴ Of course, there exist cultural obstacles as well. They are not, however, the focus of this dissertation.

⁵ This, of course, does not mean that a cultural change is not needed, but rather that it requires a coherent reorganization of the institutional configuration of our societies in order to be successful. Such a reorganization would create the conditions for ecologically needed cultural changes (i.e. the spreading of sustainable lifestyles) to occur in a socio-economic context that is compatible with their unfolding. Some of the reforms discussed in this paper have also the potential to drive those changes at both the social and individual levels.

⁶ A UBI is a monthly stipend given without conditions to all citizens of a nation (Raventós, 2007).

to an SSE feasible. This, however, is only true if other complementary institutional reforms (see next sections) are also carried out.

The paper is organised as follows:

Part 1 analyses the dependency of the current economic system on full employment and the reasons why such a dependency constitutes an obstacle to an (economically and socially) sustainable transition to an SSE.

Parts 2 to 5 discuss possible reforms that would remove the obstacle and make a transition possible, focusing on the institution of a UBI.

Part 6 briefly illustrates how, were the three obstacles to be removed, a transition could be carried out.

In the conclusion part, we consider the main challenges to our proposal as well as the areas of this study that require further development in the future.

1. Institutional obstacles to a transition

Between the middle of the 20th century and today, a mix of technological innovation and an increasing exploitation of the global reserves of fossil fuels has tripled the average productivity of work (The Conference Board, 2016).⁷ Capital has become more and more important as a productive factor, while the need for human work has decreased. Most of the fastest growing companies are now capital-intensive and show profit margins that make traditional companies with a much higher number of employees pale in comparison (Frey and Osborne, 2015). With other factors held constant, a reduced demand for workers in the context of a constant labour supply leads to a contraction of wages. Until now the solution has been to increase the size of the economic cake in the hope to counterbalance the mounting technological unemployment (and the growing inequalities). However, further economic growth, apart from being environmentally and socially undesirable, is seeing its link with employment weakening, and each marginal increment of global GDP produces feebler and feebler boosts to employment rates (De Masi, 2017). As a consequence, the idea that the new highly specialized jobs needed to manage an increasingly automatized world economy would be able to compensate for the loss of jobs triggered by technological innovation has been eventually rejected even by mainstream economists (see e.g. Brynjolfsson and McAfee, 2011).

A degrowing or steady state economy implies less work, not more. Even though the transition from fossil fuels to renewable sources of energy would likely boost employment levels in the short run due to the lower EROI (Energy Return On Investment) of non-fossil energy sources (Bonaiuti, 2017), this would hardly matter in the middle and long term: in the middle term a degrowth of the Global North would inevitably reduce aggregate production and consumption, and thus employment; in the long term, in a fully operative SSE, technological innovation would slowly increase the workers' productivity and, in the absence of economic growth, this would translate to less and less employment.

Even though we are heading towards a future with less work, two institutional factors make full employment essential to the stability of the current economic system. If not addressed, they will produce more and more problems in the following decades. These are:

- A redistributive system centred on wages (i.e. a system in which wages are the main source of income for the majority of the population);
- A fiscal system centred largely on the taxation of work.

These two institutional factors (in this paper referred together as the 'third obstacle') make any decrease in the employment levels translate into a reduction of public revenues, a decrease in

⁷ The data refers the OSCE countries + Japan in the period between 1950 and 2016, with the exclusion of Hungary, Czech Republic, Estonia, Latvia and Israel.

aggregate demand and thus even more unemployment, paving the way to recession (Jackson, 2017).

The other two obstacles to a transition have to do with the current configuration of our financial systems. In any market economy in which the money supply is kept stable, the growth of the aggregate production leads to a general reduction of the prices, or deflation (Tokic, 2012). In the presence of wage-centred redistributive and fiscal systems, deflation represents a sure-fire recipe for recession. The reason is simple. The falling prices make future purchases more desirable than current ones, persuading people to save their money, thus causing a contraction of aggregate consumption. The lower levels of consumption damage the private sector's profits, leading companies to reduce their workforces. Thus the unemployment levels rise, producing a further contraction of consumption (in the absence of a redistributive channel alternative to salaries). In one word: recession. To make matters worse, in the presence of wage-centred fiscal systems, the reduced employment translates into lower fiscal revenues, making the adoption of counter-recessive measures by the state more challenging. This explains why deflation in growth economies is traditionally considered to be the worst of all evils, and should be avoided at all costs (Bernanke, 2002). It also explains why our economic system developed mechanisms that make it extremely difficult for such a scenario to become reality. These mechanisms share one purpose: keeping the economy in a state of constant inflation (Gallino, 2011). Indeed, if prices rise indefinitely, current purchases are always cheaper than the future ones, thus disincentivizing savings and redirecting private spending towards consumption. In the situation of endless growth of production that characterizes our economies, the only way to achieve constant inflation is through a similarly endless (albeit controlled) increase of the money supply (Gallino, 2011). Without growth, such an expansion of the money supply would in turn create a situation of hyper-inflation which would lead to recession.

There is, of course, another important reason why monetary expansion constitutes a core element of our economic model: the presence of a constant flow of new money into the economy encourages the banking system to keep interest rates on loans low, stimulating investments and consumption and promoting economic growth. And since money is brought into existence as debt that accrues interest, the latter requires a constant expansion of the money supply in order to be paid (Sorrell, 2010), strengthening the interdependence between inflationism and economic growth. Monetary expansion is thus seen as the ideal solution to make the public debts of many countries sustainable. More money in the economy stimulates growth, leading to more consumption, more investments, more jobs and therefore higher fiscal revenues for the state. In turn, higher fiscal revenues allow the states to reduce their public debts or at least contain them. Contrariwise, an economic recession would leave them with no choice but that of increasing the taxation (thus worsening the recessive phase), cutting on public spending (hence damaging people's wellbeing) or increasing the debt even further. In other words, our economies are imprisoned in a debt trap in which financial sustainability has continuous growth as a condition, making a policy of monetary expansion seemingly unavoidable. In this situation, the mechanism of the money multiplier, coupled with a lax international regulation of the financial sector, opened the way, in the second half of the 20th century, to the creation of new and highly sophisticated speculative instruments, which exponentially increased the economic leverage of banks and financial institutions and thus their influence on the material economy, increasing the instability of the economic cycles and spurring more and more frequent crisis (Jackson, 2017).

To sum things up, the current economic system depends on a constant growth to counterbalance the inflationary pressure caused by a constant monetary expansion, pay off the public debts and sustain employment levels that are threatened by technological innovation. High employment levels are in turn made necessary by wage-centred fiscal and redistributive systems.

To be feasible, a transition to a steady state economy needs to address the highly intertwined issues of the environmental crisis, the economic and institutional instability of the growth economies and the widespread inequalities that characterize them. The conflicting goals of sustainability and full employment have led degrowth scholars to advance proposals whose aim is to either dissociate economic stability and employment (e.g. through a UBI) or redistribute the lower and lower amount of human work needed to keep the economy in function (e.g. job redistribution policies). We will now discuss the advantages and disadvantages of both types of proposals.

2. Two paths: dissociation vs redistribution

If a large part of the current consumption is superfluous – in terms of wellbeing – and unsustainable – in terms of its environmental impact –, then the human work needed to produce the products and services that satisfy that consumption should also be considered superfluous and unsustainable. It is not perceived as such because our redistributive, fiscal and financial systems require this work for economic and social stability. Given this reality, it is surprising that, while the effects of superfluous consumption on wellbeing have been studied extensively by degrowth scholars, the effects of superfluous work on wellbeing have been mostly neglected, and have been rarely studied even by happiness theorists (Koch et al., 2017). For some reason, degrowth scholars tend to talk of individuals when they debate consumption, but they immediately switch to the aggregate, supra-individual level of analysis when they debate work. This way, the loss of wellbeing brought about by work on the individual worker is underscored, and work can be easily considered as something ‘good’ no matter what (see e.g. Kallis, 2017). Nonetheless, it is to a large extent by omitting the effort and time needed for work from the cost-benefit analysis of the economy that the illusion of ‘wellbeing-through-consumption’ preserves its power. Only after this omission can per capita GDP appear to be a direct reflection of the level of well-being among the population. In other words, once work as a human experience is removed from the equation of wellbeing (or only analysed in its positive, bright side), even marginal increases in wellbeing generated by consumption can appear as a net gain for society, and the absence of benefits from over-consumption can be seen as a ‘small’ compromise for the preservation of the system’s stability. Focusing on the links between superfluous consumption and wellbeing has caused us to ignore the proverbial elephant in the room: a significant part of many people’s lives is spent working in unpleasant and purposeless jobs. Rather than as a *good* we should consider work as a *means*. Our goal should be the maximisation of present and future (long-term) wellbeing with as little human work as possible.⁸ To accomplish such a goal, we need to remove the dependence of the current redistributive and fiscal systems on full employment. This is the first obstacle to a socially and economically sustainable transition to a steady-state model, as well as to the long-term sustainability of the latter.

Regarding this obstacle, in the degrowth literature two approaches have emerged, although to our knowledge a distinction between the two has never been made explicitly. One approach revolves around the idea of achieving full employment through a redistribution of the dwindling amount of work available rather than through an increase of the levels of production and consumption (i.e. through growth). We shall call this approach ‘redistributive’. The other approach revolves around the idea of a progressive dissociation between personal survival and work on one hand, and between economic stability and full employment on the other. We shall call this second approach ‘dissociative’.

In the following subsections we will argue that 1) compared to a redistributive approach, a dissociative approach is both economically more efficient and better at achieving a high level of aggregate wellbeing and 2) while a dissociative approach would make a redistributive approach

⁸ This does not include all the productive, scientific, artistic and cultural activities performed by human beings because of a personal choice (and not due to an economic necessity or a social obligation).

redundant, the opposite is not true. Although we agree that a state-enforced reduction of the per capita working hours in the developed world would come with many advantages (Kallis et al., 2013), these would be fewer and more costly than the ones brought about by the implementation a dissociative approach.

The main dissociative policy we will focus on here is the introduction of a vast scale UBI. We will first proceed to illustrate why a pure dissociative approach centred on the UBI constitutes a better alternative to any pure redistributive approach. Then we will discuss why a pure dissociative approach is a better alternative than a blended approach.

2.1 A less expensive, less bureaucratic and easier-to-manage approach

The first advantage of a dissociative approach compared to a redistributive concerns its greater economic efficiency. To understand why this is the case, it is essential to first assess the weaknesses of the current welfare systems. While acknowledging the presence of different models of welfare in different countries (Hall, 2001), for the sake of analytical clarity our analysis will focus on two traits common to most of them (Mastropaolo, 2011) and how the introduction of a UBI would interact with these traits. These common traits are 1) the presence of a network of selective welfare policies⁹ and 2) the presence of a system of social security centred on public pensions.

The selective welfare of most developed countries requires, for its management, enormous human and financial resources as well as the presence of a massive apparatus of control for the screening and selection of those eligible to public aid (and to counter the attempted frauds by those who do not fulfil the requisites to access it). The result is that only a small percentage of the money destined to public aid ends up in the pockets of its final beneficiaries (Lansley and Reed, 2019), the rest being used to maintain the bureaucratic structure built around them. On the other hand, public pensions, apart from being highly expensive for the state, heavily rely on a stable number of active workers for their funding, making a reduction of the aggregate employment in the economy more difficult.

By creating a safety net against poverty, the implementation of a UBI would make most selective welfare policies and public pensions superfluous, making their abolition politically feasible (OECD, 2017).¹⁰ This includes the suppression of any form of unemployment benefits (which, as a positive side effect, would result in the elimination of the poverty trap triggered by these benefits) and all selective welfare policies linked to poverty. Being a universal and non-conditional measure, the UBI would require much less bureaucracy and, unlike the selective welfare that it would replace, the difference between the money invested into it and the actual benefits for the population would be minimal (Murray, 2008). If we consider superfluous work as a loss in terms of wellbeing, as we should, the lower number of public workers that the UBI requires compared to the current welfare configuration ought to be counted as an important benefit of a dissociative approach.

One of the main problems of a redistributive approach (such as working hours caps), compared to a dissociative approach, is that it does not constitute an alternative to the current welfare system, but simply adds to its complexity and cost. A pure redistributive approach would require an increase in public spending to fund a new public apparatus whose task will be to enforce the working hours caps and/or other policies of job redistribution. Further, for many sectors, and especially for intellectual professions, enforcing a job redistribution policy would require the implementation of other policies, such as limits to the opening times of commercial activities and offices (Kallis et al., 2013). This would mean higher costs in terms of bureaucracy and more public workers, ironically resulting in an increase and not in a decrease of the number

⁹ With this expression I refer to the conjunction of public services, subventions or benefits whose supply and access by individuals depend on the compliance of the latter with specific requirements (economic, social etc.). Examples of these are unemployment benefits, family allowances and the economic aid to the poorest fragments of the population.

¹⁰ The abolition of public pensions would of course have to be implemented gradually, in order to protect the rights of the old taxpayers.

of hours worked at the aggregate level (although with a decrease at the individual level). Because communication technologies and internet have blended working time and free time, it would be easy for employers to circumvent any limitations. Finally, there would be unavoidable costs to monitor the inevitable growth of the off-the-books, illicit employment. On the contrary, a UBI could be made financially sustainable by simply cutting on tax expenditure, social security and selective welfare (OECD, 2017), which in turn would be made largely superfluous by the introduction of the new measure.

Of course, if the current wage-centred fiscal systems are kept in function, the decrease in the employment levels triggered by a degrowth transition in the Global North would translate into lower revenues for the states, making the financial sustainability of a UBI problematic. A progressive shift of the fiscal focus from labour to physical, technological and financial capital is thus necessary, if only because the latter is becoming the core engine of the economy (Korten, 2009).

A dissociative approach centred on the UBI would have the additional advantage of much more transparent and predictable costs. Its overall cost could be in fact obtained by the simple formula 'total adult population x amount of the UBI' (plus minimal bureaucratic costs for accounting and coordination), making any attempt of fraud by bureaucrats and politicians exceptionally difficult.

Finally, it must be noted that, at least initially, a UBI would need to be linked to citizenship. This is because a truly universal access to the new measure, although desirable from an ethical standpoint, would likely generate an incontrollable migratory flow towards the countries which first implemented it (Howard, 2004). Linking the UBI to citizenship solves the problem, but at a high cost: a number of selective welfare policies would need to remain active to cover the needs of the immigrant population that does not have access to the UBI. This would in part diminish the economic efficiency and the positive effects of the latter. With the introduction of a UBI in a growing number of states, the immigrant population covered by the selective welfare could be progressively reduced, to concentrate only on the immigrants who come from countries where a UBI is not yet available (whether their countries' basic income would cover them abroad or not, they would still have an opportunity of survival in case they decided to go back).

2.2 A market-based regulatory system

In addition to a reduction of the complexity, size and cost of the welfare system, a dissociative approach centred on a UBI would allow for a general deregulation of the labour market. Measures such as minimum wage would no longer be needed because, provided a sufficiently high UBI, nobody would accept work for less than a decent wage. The deregulation of the labour market would free further money for the state (due to a simplified bureaucracy), and make the economy more efficient.

A free market mechanism could then control the amount of work needed in the economy. The UBI, working as a security net for the unemployed, would produce a more elastic labour supply, which would conversely increase the bargaining power of the workers. The individual workers would be free to choose how much time they dedicate to work. If the demand for workers could not be met, salaries would naturally rise, convincing more people to look for a job in the market. On the contrary, if the labour supply is higher than the demand, salaries would decrease, convincing more people to leave the market (Fig. 1). A UBI would make the latter choice feasible for the first time.

As we discussed earlier, on the short term a transition from fossil fuels to renewable energy sources could reduce productivity and increase the amount of human work needed in the economy (Sorman, and Giampietro, 2011); however, in the long term, technological innovation and a decline of the global levels of production triggered by a degrowth of the Global North would likely more than compensate for it. Therefore, without any intervention from the state, the supply of workers would end up becoming higher than the demand, decreasing salaries or,

worse, creating an elite of rich hyper-specialized workers and capital owners amidst a population who merely scrape by on a modest UBI.

Fortunately, there are ways to avoid such a situation without renouncing to the benefits of a dissociative approach. The simplest is to develop an institutional mechanism by which every time the supply of labour overly exceeds demand, the size of the UBI is increased. To avoid any political exploitation of the mechanism,¹¹ a non-political, technical body could be appointed to the task of modifying the amount of the UBI depending on the state of the economy. The increase would convince more people to leave the labour market,¹² counterbalancing the fall of the salaries and redistributing among the population the growing quota of profits generated by technological capital (Fig. 2). Furthermore, other factors equal, those who leave the market first are likely to be those with the lowest inner motivation to work, increasing the average productivity of the workers and thus the system's efficiency. Meanwhile, the growing importance of technological capital in the global economy would make its taxation an essential source of revenues to fund a higher UBI. This way, the efficiency of the economy is preserved: only the more productive would work and employment will be minimized. As we will see later on, in the context of a fully implemented dissociative approach, this will produce more and not less aggregate wellbeing.

Of course, at some point in the future, unpredictable events¹³ may call for more workers in the economy for a definite amount of time. This would require a lower UBI to allow supply and demand to match. The amount of the UBI should thus be left to fluctuate above a certain threshold, set to guarantee a minimum level of wellbeing and economic independence for everybody. This is perhaps the situation in which a non-political regulatory body would be more useful, as any government that decided to lower the UBI would be likely pay for it in terms of political consensus.

Compared to a redistributive approach, the system has a significant advantage: it is easier to manage, being a single measure and not a plethora of small, highly bureaucratized policies. This reduces its cost and makes it transparent to the population, decreasing the chances of political corruption.

In addition to the already mentioned factors, there is also the fact that a redistribution of the working hours would simply not be flexible enough to address the uncertain effects on the labour market of both degrowth and a transition from fossil fuels to renewable sources of energy. Any highly bureaucratized job redistribution policy would be slow to adapt to the rapidly changing economy triggered by such changes. In the time needed by the state to calculate where to set the new working hours caps (or similar policies) in order to maintain full employment and market efficiency, the conditions of production would have likely changed, requiring a constant tweaking of regulations, which in turn would translate into both higher costs for companies and an environment of constant uncertainty that would hurt economic stability. Moreover, a constant change of regulations would require complex and massive alterations in the structure of public and private organizations (turnover schemes, job responsibilities, etc.). These changes would be costly in terms of money and time for the organizations that would have to implement them as well as for the public apparatus tasked with verifying their correct application. On the contrary, the correct adjustment of a UBI would only require market and social surveys to assess that the demand and supply of workers match at a level of wages that allows for both a fair distribution of wealth and a cost of work sustainable for the private sector. Thus, apart from being cheaper and easier to implement, a UBI would be also more flexible and easy to manage, making it a better policy for a time of rapid change.

11 A government that decided to increase the UBI when not be economically advisable, would still likely gain in terms of political consensus.

12 Or to pursue (more risky) entrepreneurial projects.

13 For example a natural disaster or a big infrastructural project.

2.3 Boosting individual freedom, wellbeing and equality

There is evidence (Pencavel, 2014) suggesting that there the relationship between productivity and daily working hours follows a hill-shaped curve. However, this is not necessarily an argument in favour of a redistributive approach. First of all, the hill-shaped relationship is not the same in all sectors of the economy. Generally speaking, more skill-intensive jobs share a steeper decrease in marginal productivity than menial jobs (Hunt and Katz, 1998). Simply implementing a tax system that does not privilege full time over part-time or vice versa would let the free market naturally allocate longer hours to those sectors that would benefit from them, and a part-time model in those sectors in which the latter model is more productive. On the contrary, a working hours cap or similar redistributive policies would need to be either 1) uniform throughout the market, and thus increase the productivity in some sectors and decrease it in others or 2) set different caps in different sectors depending on the (supposed) relationship between working hours and productivity within each sector, thus significantly increasing the cost of the bureaucratic apparatus needed to manage the redistributive regulations.

Furthermore, even if successful, a redistributive approach would damage the wellbeing of both those with a low internal drive towards work (who would be forced to work more than they would like to) and those with a high internal drive towards work (who would be forced to work less than they would like to, or encouraged to move off the books). On the contrary, by providing people with a secure income independent from work, a UBI would transform work from an economic necessity to a personal choice. If nobody has to work to survive, the human labour still needed for the optimal functioning of the economy (that is, for the maximization of wellbeing among the population) can be automatically allocated, by the law of demand and supply, to those who are *intrinsically* most motivated and skilled to carry it out.

It is worth noting that, in the analyses of the benefits of job redistribution policies, the degrowth literature tends to consider (sometimes explicitly, sometimes implicitly) the increased wellbeing for those who like to work less as a positive outcome, but fails to consider the decreased wellbeing for those who like to work more as a negative outcome (see e.g. Kallis et al., 2013). If the workers' work is creating superfluous consumption for others – and thus provides no benefits for them in terms of wellbeing –, then the money they receive for that work might as well be given to them for free: the outcome in terms of aggregate wellbeing would not change (or it would be even more positive, if those 'useless' jobs were reducing the workers' wellbeing). This is a powerful argument in favour of a UBI, and one that is rarely considered by degrowth scholars. Given that workers are generally more efficient when they feel happy (Oswald et al., 2008), a redistributive approach could actually cause a reduction in the average productivity in the market, thus increasing the number of hours worked in the economy as a whole (despite the decrease at the individual level). This is even more so if we appropriately consider the bureaucratic work needed to maintain the huge public apparatus associated with state-led job redistribution policies to be superfluous; it might not seem to be superfluous work in the context of the current wage-centred redistributive and fiscal systems, but it certainly would be in the institutional context that a dissociative approach centred around a UBI would bring about.

Overall, a top-down, legally enforced reduction of working hours would present numerous shortcomings compared to a dissociative approach:

- 1) It would require an expensive bureaucratic apparatus to enforce the redistribution measures (e.g. preventing people from working off the books, or working more hours than allowed).
- 2) It would force those who have a high temporal preference for work to work less, and those who have a very low temporal preference for work to work more, thus reducing the wellbeing of both.

- 3) It will require to maintain in operation the current systems of selective welfare and social security to assure that those who cannot find a job do not end up in the street (no matter how well thought out the reduction of working hours is, it is bound to leave some people out of the job market).
- 4) It would not be sufficiently flexible to adapt to the rapid changes in the economy triggered by a transition to an SSE.

All this with, at best, no positive effects on the overall productivity within the economy. Compared to a dissociative approach, a redistributive approach is thus more costly, less efficient and produces less wellbeing at the aggregate level. It would also fail to solve many of the problems that a dissociative approach would solve (Bastagli et al., 2016):

- 5) It would not make economic stability independent from full employment, thus making any environmentally necessary long-term policy that would reduce employment more difficult to implement.
- 6) It would not solve the problem of poverty (and all of its consequences for criminality, public health, etc.). To be fair, a UBI linked to citizenship would not completely resolve it either, but this would change in the long term, as more and more countries introduced the measure, covering a growing portion of the world population.
- 7) Its costs would be less transparent and less predictable, thus making political corruption and fraud more likely and financial sustainability harder to achieve.

Finally, a blended approach that coupled a UBI with some form of job redistribution would allow for the removal of most selective welfare and social security policies (and their related costs), but it would still incur the problems stated at points 1 and 7. This is why a blended approach, despite being 'better' than a pure redistributive approach, would be still less desirable than a pure dissociative approach.

3. Triggering the transition

That the economic system's dependence on full employment (or on a close approximation of it) ceases is an essential step towards an economically and socially sustainable transition to an SSE. Such dependency is linked to the recessive cycle which, in the presence of wage-centred fiscal and redistributive systems, inevitably follows every fall of employment levels. The reform of the redistributive and fiscal systems described above would solve this issue. Supported by a UBI, the unemployed would conserve, at least in part, their purchasing power and savings, thus weakening the recessive cycle. Moving the focus of the fiscal system from income to capital would contribute to the financial sustainability of the UBI in the long term (OECD, 2017), while at the same time breaking the traditional bond between public spending, fiscal revenues and employment levels. The new safety net granted to everybody by the UBI would also free the political agenda of the governments from the necessity to pursue full employment, allowing for the implementation of long-term policies that reduce employment and increase the environmental sustainability of human societies.

Since in an SSE a more or less fixed level of material production would be attainable by a progressively smaller workforce aided by steadily improving technologies, technological unemployment would be eventually converted from a social problem to a source of liberation for human beings. However, even though the dissociative reforms would remove one of the three main obstacles that currently make a transition to an SSE impossible (the other two, namely an inflation-based financial system and the public debts of many states, are not discussed in this paper due to space limitations), they would not by themselves produce such a transition. For one thing, declining working hours, increasing people's leisure time, historically have produced more resource consumption and economic growth, not less (Kallis et al., 2012). There is no reason – other than an unlikely cultural revolution – to think that this time it would

be any different. Once the three obstacles are removed, a transition would thus require the implementation of limits to the scale of the economy – and to the total amount of raw materials that can be extracted and consumed. This would force human societies to recede within the ecosystemic boundaries of the planet, and ensure that technological efficiency can reduce material use in the long term (Daly and Farley, 2011), countering the rebound effect.¹⁴

Of course, the profound interdependence among states in a globalized world would make the transition of individual economies to a steady state model unrealistic (Jackson, 2017). In free market conditions, commercial competition between isolated steady state economies (in which the economic actors would be required to act within well-established ecosystem limits) and the current growth economies (in which those limits can be ignored with impunity) would give a significant competitive advantage to the latter; and not due to a greater efficiency of the growth economies, but rather because of their practice of externalizing their environmental costs, effectively making future generations pay for them. In such a scenario, the result would likely be an uncontrollable capital flight towards the growth economies and a consequent premature failure of the new economic model.

This is why the scale limits must be enforced at the global level in order to be effective (Jackson, 2017). In other words, an international agreement on the necessity of a change must be reached, and the transition must be implemented in a coordinated way beyond national borders: since the transition will likely require many years, any agreement must also be binding for all the states which take part in it, in order to avoid possible defections when the government of a subscribing state changes. One possibility in this sense is to require every state to fall within a personalized ecological impact quota (EIQ), set in such a way that the sum of all quotas adds up to a sustainable global ecological impact in the long term. The individual quotas, annually updated, should be set with a wide array of variables in mind, such as the population size of each country and the level of energetic efficiency of their respective national economies (possible variables to consider are discussed in O'Neill, 2011). These quotas should be calculated at the level of consumption, not at the level of production, in order to prevent the overdeveloped countries from avoiding their responsibilities by relocating to third countries the material costs and CO₂ emissions linked to the creation of the products they consume (Peters et al., 2011).

In order to recede into the limits of their EIQ, the overdeveloped countries would need to initially degrow, thus freeing ecological space that the underdeveloped countries could use to reach a more satisfying level of development – in terms of wellbeing – for the respective populations (Martínez-Alier, 2009; Schneider et al., 2010). This must come in exchange for the obligation to the progressive ecological conversion of their economies. Once both the underdeveloped and overdeveloped economies reached the maximum wellbeing allowed by their respective EIQ, they would need to convert into fully-fledged steady state economies.

In the absence of significant changes in people's lifestyles, a degrowth of the overdeveloped economies can only be achieved through profound changes that reshape the economic and productive structure of the individual countries (possibly with the implementation of population control policies).

Potential general measures include:

- Norms that regulate the resource throughput in the economy (e.g. a comprehensive cap-auction-trade system to keep the rate of resource throughput within the ecosphere's carrying capacity; Daly and Farley, 2011)

¹⁴ Despite some scholars arguing against it (e.g. Trainer, 2012), a SSE is compatible with a (resource capped) free market. A free market is still the best tool to ensure an optimal allocation within the economy, leaving to the state the role of keeping the economy within the correct scale and redistributing to the population the profits of technology and innovation.

- Regulations of the productive sector inspired by the principles of efficiency and durability of both products and material capital (Jackson, 2017). This could be coupled with active educational efforts to induce a shift from a consumption culture to a usage culture and with taxation policies that discourage resource-intensive consumption.
- Long-term public investments in green sectors, clean technologies and renewable sources of energy (Jackson, 2017). A green new deal might be desirable, at least in the short term. However, its goal should be neither full employment nor growth but rather the establishment of the infrastructure needed for the transition to a post-fossil, environmentally sustainable economy. The project would likely require more workers in the short term, but this additional employment should be considered as a cost, not as a benefit. As we saw earlier, given a fully implemented dissociative reform, in terms of aggregate wellbeing the fewer workers the economy needs, the better.
- Despite the fact that the pace of demographic growth is declining, with the world population expected to stabilize at around 9 billion by 2050 (Kallis et al., 2012), the demographic issue should not be underplayed. Policies that aim to reduce the population size deserve more consideration by degrowth scholars. The objection that such policies would not be compatible with individual rights could be easily applied to resource caps and arbitrarily reduced working hours, which are in contrast widely discussed in the degrowth literature. Furthermore, it must be noted that a UBI would eliminate the main problem with any traditional system of birth licences (Boulding, 1964), that is, the possibility that the latter could generate sales of licences motivated by situations of extreme poverty. But there is another reason to contemplate the possibility of population control policies: if a new ‘promethean’ technology were to be discovered (such as a new, more efficient way to harvest solar energy), it would likely stimulate a population expansion of such magnitude that it would not be environmentally sustainable without damaging people’s wellbeing (Kerschner, 2009). Introducing the idea of population control policies *now* in our legislations would make their implementation more politically feasible in the future, in the event that such policies became an absolute necessity.

In resource-capped free market economies, firms would be encouraged to keep their profits high through qualitative rather than quantitative growth, shifting to less resource-intensive production. Constrained by the resource caps, the most resource-efficient, environmentally sustainable firms would prosper and the most inefficient and unsustainable ones would disappear (Lawn, 2011). If the distinctive characteristic of capitalism is creative destruction (Schumpeter, 2009), the distinctive characteristic of the new SSE would be a continuous qualitative improvement.

Despite the states’ prominent role in fostering the development of green technologies and infrastructures, as well as in the enforcement of regulations on material input and output, in an SSE the need for state intervention could actually be lower than today. First, because the complexity of the current welfare systems would be greatly reduced. Second, because the public expenses needed to counter the scale-related negative externalities of the current growth model would no longer be necessary. Third, because the states would no longer need to intervene to maintain full employment.

A house (a society) needs a floor (a UBI) to be welcoming and a roof (resource caps) to endure the weather for a long time. If the socio-ecological limits of the house allow for it, there is no reason not to grant the residents the highest possible free will (a freedom to work or not to work) in between floor and roof. Why appoint someone to decide who should paint the walls and how to do it? Let the residents choose *whether* they want to paint and *what* to paint. We do

not need to limit creation within the house: we only need to have rules to ensure that such creation is sustainable and freely accessible, thus preventing the house from collapsing or becoming unwelcoming for the residents.

Conclusion

In this paper, after acknowledging the existence of three specific institutional obstacles to a transition towards an SSE, we focused our attention on one of them: the dependence of the current redistributive and fiscal systems on full employment. We saw that there are three possible approaches to the removal of this obstacle, namely a redistributive approach, a dissociative approach and a blended approach that fuses the previous two. We showed that, compared to a redistributive approach, a dissociative approach is less expensive, is easier to manage for the state, provides individuals with more freedom and wellbeing and generates a similar or higher degree of equality at the aggregate level. A blended approach, although superior to a pure redistributive approach, would be still more costly and less transparent than a dissociative approach, while providing the same outcome in terms of wellbeing and equality. We thus concluded that a dissociative approach would be the best way to eliminate the dependence of our redistributive and fiscal systems on full employment.

In the last section of the paper, we briefly outlined how a transition to a SSE might look after the three obstacles are removed. In doing so, we focused on the fact that, contrary to a widespread opinion in the degrowth literature (Cosme, 2017), such a transition does not necessarily involve a more active intervention from the state.

We defended that a rejection of growth and overconsumption implies a rejection of waged work as the main means of personal survival. The new vocabulary of degrowth, we argue, needs a new vocabulary of work: on our political agenda there should be the maximization of intergenerational human wellbeing with as little human labour as possible. The academic debate on degrowth would have much to gain from both the abandonment of the idea of work as something inherently 'good' and from a higher consideration of the role of efficiency (i.e. the economic ratio between costs and benefits) in policy planning. Efficiency, if coupled with an equal distribution of wealth, is positive because it allows for more wellbeing with less human effort. The reason it allows for more wellbeing is indeed related to the fact that in many sectors of the economy – especially those connected with the production of superfluous goods and services – increased effort by the workers equates to decreased aggregate wellbeing. To account for this, the loss of wellbeing caused by human work should be internalized as a cost when possible degrowth policies are analysed and their benefits compared. Doing so would allow us to see many proposals that would increase the amount of human work needed in the economy under a different, less blissful light.

Apart from a more in-depth examination of the connections between the three obstacles and the ways to dismantle them, future research should investigate the impact of the cultural and institutional characteristic of each country on both the potential effectiveness and the political feasibility of a dissociative approach. Given the right institutional and cultural context, a blended or even a pure redistributive approach might be more likely to succeed *in the short term*. However, multiple paths, in order to be fruitful, need to converge on a shared goal and a common, long-term plan to achieve it. This is because a transition to a global SSE will require stronger global governance and binding international agreements (Jackson, 2017). The latter could be difficult to achieve given the way contemporary democracies are structured: short term electoral cycles incentivize policies with an immediate positive effect that is visible to the electorate, no matter their long-term negative effects, while national and local matters tend to generate more interest and concerns than global problems (Romano, 2012). Future research should address whether or not the transition to an SSE is politically feasible within the currently existing democratic regimes and, if not, how to change them in order to facilitate the transition. For instance, institutional changes that stimulate citizens and elected governments to tackle essential long term issues and develop policies that take wider spatial and temporal

arenas into account (Deriu, 2012) could facilitate a transition. Finally, the definition of possible institutional paths towards those changes is another key issue that future research should address.

Funding:

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Conflicting interest:

The author declares that there is no conflict of interest.

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