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Ecological Effects of Basic Income

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Introduction

Basic Income (BI) has supporters and opponents along the political spectrum. From the radical left to the most neoliberal right, different (and often antagonistic) propositions for a Basic Income are presented. Of all political parties, the Greens are the most prone to defend the idea (Birnbaum 2010).

However, the reasons given for that support refer variously to the emancipation of individuals, fighting poverty, and increase of real freedom. Although such proposals fit the Green ideology, they are not directly linked to environmental issues and could even result in a negative environmental impact. Moreover, the green proposals for a Basic Income are not always very clear and often seem too optimistic regarding the role a Basic Income just by itself and independently of all other policies that could play a role in the promotion of a more sustainable way of living. Even green-minded supporters of a Basic Income can be caught in the trap of defending such an

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income almost for its own sake, and only then considering actual (environmental) impacts that it might have.

The question that needs to be answered is whether, despite all the support offered by the Greens, there is an actual green case for a Basic Income or just a case for a Basic Income by the Greens. In this chapter we will examine some green approaches to a Basic Income that have been presented in the past, and will discuss their pros and cons.

Basic Income and Ecology

Linking Basic Income and the environment goes back to the 1970s. In *Toward a Steady-State Economy*, Warren Johnson proposed a 'guaranteed income as an environmental measure' (Johnson 1973). He claimed that promoting continuous economic growth leads to overproduction and overconsumption, that a Basic Income could remove the need for continuous growth and job creation while still providing a flexible device for economic stability, and that Basic Income would therefore be an environmental measure (cf. Van Parijs and Vanderborght 2017: 309n99).

Separating economic security from growth seems to be a key aspect of some green Basic Income proposals, and Andersson (2010) has referred to the connection between growth and economic security as an 'unholy link' that could be broken by an adequate Basic Income. However, as we will discuss in the next section, the relationship between growth and an environmentally-oriented Basic Income is not straightforward.

A number of green Basic Income proposals are based on the fact that such an income, especially if at subsistence level, would allow individuals to experiment with different forms of living outside the productivist and growth-based paradigm (Boulanger 2009; Schachtschneider 2012; Widerquist et al. 2013: 259–310). According to them, such a Basic Income would give to individuals the security to move their activities to the autonomous sphere where the environmental impact would arguably be smaller. Outside the formal economy, people might focus more on ecological and emotional values (Fitzpatrick 2010); those living only on the Basic Income would be able to choose more leisure and less material consumption (Goodin 2001; Johnson and Arnsperger 2011); work sharing would become more feasible relative to full employment dependent on growth (Fitzpatrick 1998, 1999); and work could be more labour intensive and less natural-resource intensive (Van Parijs 2013).

A current reality is substantial inequality, which causes health problems and encourages the development of needs that are positional. A Basic

Income, to the extent that it reduced inequality, would reduce inequality-related illness, and would reduce the felt need for positional goods (Schachtschneider 2012; Wilkinson and Pickett 2009).

Green Basic Income and Economic Growth

As noted earlier, of all the political groups, the Greens have generally been most supportive of Basic Income. This suggests that Basic Income might be a policy that can contribute to ecological goals. However, there is a divide between those environmentalists who support 'green growth', and those who argue for some variation of slow growth, no growth, or degrowth (Pinto 2018). The role of Basic Income in environmental policy varies accordingly.

A Carbon Dividend/Green Growth

Among the numerous environmental threats, probably the greatest and most immediate is that of climate change. There is widespread agreement that to avoid catastrophic climate change, human beings must reduce their carbon emissions, and among the most effective policies toward this end are those that put a price on carbon. Carbon pricing can be achieved through a carbon tax, or a carbon cap with an auction of emission permits (Boyce 2016; Boyce and Barnes 2016; Boyce and Riddle 2010; Citizens' Climate Lobby, n.d.; Climate Leadership Council, n.d.; Carbon Tax Center, n.d.-a, n.d.-b; Howard 2012, 2016, 2017). Either policy will generate a large amount of revenue. One possible use of such revenue is payment of a carbon dividend, which, if granted to all residents without means test or other conditions, would constitute a partial Basic Income.

There are competing uses for the revenue from carbon pricing, such as investment in renewable energy, tax shifting, and compensation to workers displaced by the phasing out of fossil fuels (Dorman 2016). Arguments for a carbon dividend appeal to equity and political feasibility (Howard 2012; Schachtschneider 2012). A carbon tax, like other consumption taxes, is regressive. Lower income households spend a larger proportion of their income on energy, and so will pay a higher percentage of their incomes in carbon taxes than will upper income households, even though the latter typically have larger carbon footprints. If most of the revenue is returned to residents as equal individual dividends, then a majority of households will experience a net financial gain, turning the regressive tax into a progressive

redistribution of income (Boyce and Riddle 2010; Carbon Tax Center, n.d.-a).

Since the carbon tax will need to rise steadily over a decade or more, securing strong popular support could be challenging. If the revenue were to be used to pay an equal dividend to every individual then the economic benefit of the carbon dividend would overcome popular resistance to rising taxes, and would secure support for the tax. While a carbon tax and dividend can be part of a degrowth strategy, most advocates stress that it is compatible with economic growth and expanding employment (Carbon Tax Center, n.d.-b; Citizens' Climate Lobby; Climate Leadership Council). The rising cost of fossil fuels because of the tax will shift demand to renewable energy, and, as a result, investment in wind, solar, and other forms of renewable energy will result in many new jobs (Citizens' Climate Lobby/Regional Economic Models, Inc. 2014).

There is a strategic reason for focusing on just tax and dividend, without mentioning degrowth. The possible coalition is bigger, and it could include proponents of a Green New Deal, and even conservatives concerned about climate change (Climate Leadership Council). Even the proponents of degrowth should concede that the results of a sufficiently high ecological tax would be positive in any case: a decline of CO_2 emissions, whether with or without growth (Ludewig 2017).

Robert Pollin, a green growth critic of degrowth, points out that even a 10% global contraction of Gross World Product over twenty years—a contraction four times larger than that of 2007–2009—would reduce emissions by only 10%, so the bulk of emissions reductions must come from other policies anyway. And a degrowth policy resulting in mass unemployment has little chance of being politically acceptable (Pollin 2015).

Degrowth

The case for green growth rests on the possibility of decoupling growth in Gross Domestic Product (GDP) from growth in energy and resource consumption: but there is reason to be sceptical about the possibility of decoupling on the scale required to avoid environmental disaster. Absolute decoupling has arguably never been achieved, and even relative decoupling has had very little success (Giljum et al. 2014; Nørgård and Xue 2016; Vergragt et al. 2014). For this reason, although remaining a possibility, economic growth without growth of resource consumption is an idea without strong empirical support.

While granting that some relative decoupling is possible, critics of green growth point out that if consumption continues to rise then carbon emissions will not fall fast enough by means of carbon pricing and technological innovation to avoid catastrophic global warming (Jackson 2009; Victor 2008). Victor and Sers (2018) argue that there is an 'energy emissions trap': that is, a shift to alternative energy adequate to avoid intolerable emissions increases will involve energy shortages, effectively precluding growth (see also Jackson 2009: 199). Thus, it is not enough to raise the price of carbon while continuing to pursue economic growth. It is necessary to reduce absolute consumption (Gough 2017: 146–170), and for this it will be necessary to improve our measures of wellbeing, and to recognise that it is possible to live well with less consumption of energy and material resources.

It is conceivable that a carbon tax alone, if rising rapidly, could reduce consumption of fossil fuels enough to avoid catastrophic temperature rise: but it would be likely to simply suppress demand, without effective alternatives at hand, and thus drive the economy into recession. Such a policy, without any planning for the economic, social and political effects, would not be politically feasible (Jackson 2009: 64, 128, 134–136; Pollin 2015; Pollin and Chasman 2015).

What is needed therefore is degrowth 'by design not by disaster' (Victor 2008). In such an approach, Basic Income would not be simply a policy to address the inequity of a regressive carbon tax, nor simply a material benefit to compensate for the rising cost of fossil fuel. In the decades after World War II, economic growth was the necessary condition for rising wages and inclusion of a rising population in economic prosperity: but if it is now necessary for ecological reasons to slow, stop, or reverse growth, then we must learn how to share fairly a shrinking pie. This could mean abandoning the goal of full employment: or it could mean sharing the employment more widely through work-time reduction. In either case, Basic Income would ensure that each person's income would not fall below a decent minimum, regardless of willingness to work. It would also facilitate simpler ways of living, and the growth of what André Gorz has called the autonomous sphere, encompassing activities in the household, non-profit organisations, community gardens, and so on: that is, purposely activity outside the market and the State spheres (Gorz 1985, 1987). It should be stressed that Basic Income is not likely to achieve these results by itself. Other policies would be needed to entice people to use their Basic Income in sustainable ways (see the section on 'complementary conditions' below).

Basic Income and Consumption

The relationship between a Basic Income and sustainable consumption is far from obvious because greenhouse gas emissions increase with income. For this reason, a Basic Income, despite possible social and economic benefits, might have a negative environmental impact as collateral damage. Analysing the possibility of poverty eradication in a world where ecological limits (such as those on carbon emissions) are required, Hubacek, Baiocchi, Feng, and Patwardhan find that

> eradicating extreme poverty, i.e., moving people to an income above $1.9 purchasing power parity (PPP) a day, does not jeopardize the climate target even in the absence of climate policies and with current technologies. On the other hand, bringing everybody to a still modest expenditure level of at least $2.97 PPP would have long-term consequences on achieving emission targets. (Hubacek, Baiocchi, Feng, and Patwardhan 2017).

Along the same lines, Hubacek, Baiocchi, Feng, Muñoz Castillo, Sun, and Xue (2017) argue that an increase of income leads to an increase of the carbon footprint, which is why achieving global targets on reducing greenhouse gases (such as those agreed in Paris in 2015) would be difficult given the slow pace of technological progress and current levels of dependence on fossil fuels. Given that policy on poverty eradication has often been presented as depending on economic growth, the issue becomes clear: eradicating poverty might come at the expense of deepening the ecological crisis. These conclusions open two different paths: one that leads to a commitment to a redistribution of wealth (and of carbon shares) and another focused on (green) growth as a way to ensure poverty eradication.

Sager (2017) has quantified the 'equity-pollution dilemma': 'Given the higher pollution intensity of consumption per expenditure by poorer households, progressive redistribution may result in higher aggregate pollution from consumption' (Sager 2017: 5). Sager estimates that in 2009 a marginal transfer of $1000 USD from rich to poor could increase the CO_2 content of income by 5%, or 2.3% if there were to be complete redistribution. For a hypothetical redistribution of income in the US similar to that of Sweden, he predicts a 1.5% increase in household carbon pollution (Sager 2017: 5). Of course, if the tax that funds the redistribution takes the form of a pollution tax, then that should more than offset the pollution increase that would result from the transfer. This dilemma should always be factored into expected ecological effects of a Basic Income.

Assuming that a full Basic Income would not be funded entirely by pollution taxes, the more of the Basic Income that is funded by other sources, the less the increase in emissions would be offset by pollution taxes. Perhaps this dilemma could be avoided if a Basic Income were to be combined with other ecological policies.

A green growth Basic Income would not require changes in production and consumption, so the green growth case, if interested in avoiding further consequences linked to global climate change, would have to be technologically optimistic. That is, it would have to believe that technological development would allow wealthier countries to keep their currently unsustainable patterns of production and consumption because some technological solution would be developed that would compensate for the negative impacts. Supporters of such a case might even be able to support measures such as geo-engineering or nuclear power as good 'green' alternatives to ensure sustainability, and the reduction of greenhouse gas emissions and other causes of global climate change. Some green theorists follow this technological-optimistic path. In their Ecomodernist Manifesto, nineteen scientists argue that 'even dramatic limits to per capita global consumption would be insufficient to achieve significant climate mitigation' (Asafu-Adjaye et al. 2015: 21), so only technological improvement will be able to promote meaningful climate mitigation.

On the other hand, the degrowth case for a Basic Income would prioritise challenging the consumerist society. Sceptical about the role of technology on its own in finding solutions that would avoid ecological catastrophe, this case would aim at structural changes in production and consumption patterns, and specifically a reduction of total consumption in wealthier countries. Moreover, the degrowth case would aim to define a new way of living, outside the economic growth paradigm and based on other measures of prosperity.

Robert and Edward Skidelsky (2012) argue for an economy that is able to ensure the satisfaction of basic needs such as personal development, community, health, recognition, real friendship, life, and security, but that does not require growth (compare Gough 2017). They ground this list of basic needs in the results of inquiries all over the world in which people had to answer questions about what was really important in their lives. The authors defended a Basic Income as a social policy that would support the required economy, would provide for a good life, and would maximise human happiness at the same time as being compatible with conceptions of a liberal state that allows people to decide for themselves what will make them happy. Whether the State is responsible for enabling individuals to pursue a good

life or to realise capabilities, a Basic Income could assist the process (O'Neill 2018), and could enable society to revise the roles of work and labour in a post-productivist world, and in particular could break the link between work and income in the cause of creating a more convivial and frugal way of living.

Not all forms of consumption must be reduced for the sake of environmental protection, especially because some of them serve already that purpose in the first place. It makes a big difference in terms of resource usage, whether someone spends 10,000 € for guitar lessons or for a new car; and it makes an even bigger difference whether this person buys a small car with low emissions, or a SUV. Ecological taxes, such as a carbon tax, and the Basic Income that they could pay for, could be two matching parts of the financial underpinning that a shift to lower consumption would require.

A Basic Income will generally result in some redistribution of income, so its impact on consumption patterns has to be examined. Part of consumption above the poverty line is what we call status consumption: the consumption of positional goods, which are used to express one's social position in relation to others. The expectation that consumption would be lower if inequality were to fall has some empirical support: survey evidence shows that 48% would accept lower income (and consequently lower consumption) if their neighbours were also to have less (Solnick and Hemenway 2005). If a Basic Income were to reduce inequality then consumption could be lower, because consumption of positional goods would decline; but it could also be higher, because low income households tend to spend a higher percentage of their incomes. The expectation that consumption would be lower if inequality were to fall is based on an assumption which is supported by some empirical survey evidence (Solnick and Hemenway 2005).

Basic Income and the Labour Market

Assuming technological progress and rising labour productivity, slower growth (not to mention degrowth) might generate higher unemployment (see Chapter 4 of this Handbook). Basic Income is essential to ensure that everyone has an income whether or not they are working. It also makes it attractive to engage in other non-employment activities, which are typically 'far more labour-intensive and less natural-resource-intensive than formal production is' (Van Parijs 2013: 270).

For real freedom to be 'at as high a level as is sustainable' (Van Parijs 2013: 271), the level at which the Basic Income is paid will need to be at the highest possible feasible level, but that in itself does not tell us whether it will

be below or at a sufficiency level. If it is below sufficiency level then it will not enable individuals to exit paid employment and it will tend to increase consumption, whereas if it is enough to live on then it will not (Gorz 2002, 1999; Mylondo 2010, 2012; Birnbaum and De Wispelaere 2016).

> By breaking the link between income and the labour market it would allow individuals, *if they so wished,* to abstain from the race to accumulate ever more material goods and help combat the identification of freedom with consumerism. (Pateman 2004: 96, our italics)

Whether a Basic Income of a particular level would enable someone to leave the labour market would be specific to the individual. Some US residents would find themselves liberated from the need to seek employment with a Basic Income of $500 per month, whereas others would feel compelled to work for wages when earning $2000 per month. Needs vary from person to person and across the lifecycle.

Even assuming that the activities in the autonomous sphere are more ecologically sustainable than in the other two spheres, if we want to increase the possibilities that individuals will want to live in a more frugal way, it will not be enough to give them an income—even if sufficient—and expect 'good' ecological behaviour to follow automatically (Fitzpatrick 2010). The question is whether individuals will actually *wish* for a non-consumerist way of life.

A Basic Income might have yet another positive effect regarding the shift from 'employment' to 'work': the demoralisation of the labour market. If having paid employment becomes less socially relevant—and this will arguably be the case with a sufficiently high Basic Income—then exit from a paid job market will be easier, and individuals will have more free time and energy to participate in activities outside the market sphere. Thus, by supporting the shift to post-productivism, and facilitating the exit from the job market, a degrowth Basic Income would support sustainable consumption and the related reduction in greenhouse gas emissions.

Ian Gough (2017: 184–188) opposes Basic Income as 'neither feasible nor desirable', but favours instead reduced working time as offering 'a direct and effective route to just post-growth'. Once we examine his arguments, it is apparent that Basic Income and reduced working time should be seen as complementary rather than conflicting. His feasibility objection, that a 'full' Basic Income at say 50% of average income (for the UK) would be too costly and would require very high tax rates, fails to distinguish between the gross cost and the net cost (Widerquist 2017). Once the Basic Income is subtracted from the additional taxes that would be paid by net contributors, the net cost can be seen to be much lower, and would of course be the

same as that of a Negative Income Tax (Van Parijs 1995: 35–37, 57). Gough himself favours a minimum income guarantee, which would be means-tested and subject to a work or participation requirement. Given the higher administrative costs of this, and the possibility that government funded employment would require subsidy, the overall cost of the conditional scheme could well be higher than the net cost of Basic Income. Assuming that most recipients of a Basic Income would voluntarily engage in the sorts of non-waged work that would be required for a Participation Income, the difference might come down to whether it is worth the administrative cost and bureaucratic interference of a Participation Income in order to exclude the few slackers who would otherwise benefit from a Basic Income.

The point is well taken that

> from a human need perspective, participation in productive and reproductive activity, as well as contributing to collective welfare, is a crucial component of self-respect, contributes to cognitive development and provides the site for purposeful socialisation. (Gough 2017: 185)

A Basic Income would enable both withdrawal from the paid labour market and also participation in the autonomous sector, in care work, and in forms of productive work that are attractive for non-monetary reasons but would otherwise be unaffordable.

It is unfortunate that Gough confuses Basic Income with its most conservative versions, such as that of Charles Murray (2016). An ecological Basic Income would not divert attention 'from collective goods, services and investment', or re-commodify existing welfare states, but would be an important part of the 'mixed package of policies' favoured by Gough, including collective in-kind provision of health care, education, and other basic needs, reduced working time, policies to reduce consumption, and investment in renewable energy.

The Impact of Different Forms of Funding for Basic Income

Income Tax

While other forms of tax could fund the Basic Income, income tax is a natural fit to fund a Basic Income adequate for basic needs, and to ensure that the more affluent are net contributors and the less affluent are net recipients.

Because the scheme could be progressively redistributive, it might have the ecological effects that we have already discussed. A more thorough comparative assessment of the ecological effects of income tax vis-a-vis other forms of taxation is beyond the scope of this article.

Pollution and Resource Taxes

In the green growth strategy, a partial Basic Income is one possible use of a carbon tax (or a cap and auction scheme), the principal purpose of which would be to internalise the environmental costs of pollution. The Basic Income would serve social justice by remedying the otherwise regressive nature of such a tax, but beyond this purpose there is no intrinsic reason in a green growth strategy for a Basic Income sufficient to meet basic needs.

In a degrowth strategy, on the other hand, pollution taxes are likely to be only one source of funding, because even the most optimistic assumptions about the revenue from a carbon tax show that it would fall far short of a full Basic Income.

Peter Barnes (2014) has estimated that a 'base income'—insufficient for basic needs, but enough to raise many families out of poverty and provide more economic security—could be funded from taxing the rents from the use of common resources, broadly construed to include natural resources such as atmospheric carbon storage and electromagnetic spectrum use, but also shared social assets such as new money creation, intellectual property protection, and securities transactions (Barnes 2014: 94). Such a base income is understood as a resource dividend, that is, each person's share of common natural and social wealth. By itself, such a policy would not guarantee any particular use of the income, although pollution taxes, such as a carbon tax, would encourage a shift to renewable energy, and resource taxes generally, by raising the cost, would encourage conservation of the resources. Hence from an ecological perspective, such a base income might need to be complemented by other policies to encourage ecological spending. Resource taxation would not necessarily generate enough revenue to fund a full Basic Income; but Flomenhaft (2012) has found that a 'resource poor' state like Vermont could generate enough revenue from resource taxation for a full Basic Income if the resources required could be reappropriated into the commons for the rents to be available for taxation, and if some revenue could be redirected away from other uses and towards Basic Income.

Like a carbon tax, taxation on other resources can serve to discourage overuse, but to the extent that this goal is served, the revenue will decline, at least in the case of fossil fuels. For example, ultimately there should be no revenue from fossil fuels, because they will have been priced out of the market entirely. There is a concern that if a carbon tax is used to fund a Basic Income, there will be some interest on the part of the Basic Income recipients in halting the tax increase at the point of maximum revenue, rather than continuing to raise the tax in order to further discourage consumption.[1] To address this possibility, policy makers should consider a phase-in of other sources for the Basic Income when the carbon tax revenue declines.

In the case of renewable resources, the tax rate has to rise continuously, so that the revenue will be constantly large enough, and the pressure to make further changes both of technologies and lifestyles to reduce resource consumption will continue. Theoretically this process will end in a balance between acceptable resource usage and sufficient resource tax revenue to finance a Basic Income. In practise culture, technology and environmental problems will never come into a steady state, so we can assume that we shall always have to adapt the resource tax rates (Schachtschneider 2014). There will always be a tension between the ecological goal of reducing consumption, and the Basic Income goal of raising revenue. The optimal level of taxation to sustain the highest revenue stream might be less than the optimal level to achieve maximum ecological benefits.

Value Added Tax (VAT)

Walker (2016) has proposed funding a basic income of $10,000 per annum for all working age adult citizens in the US from a Value Added Tax (VAT) of 14%. Although by itself this would be a regressive flat tax, when combined with the Basic Income everyone earning up to $81,000 per annum would be financially better off. The VAT could discourage consumption, and so might be seen as an ecologically friendly source of funding, but this possible effect could be overshadowed by increased consumption resulting from redistribution.

[1]Expressed to one of the authors by Jurgen De Wispelaere, in conversation.

Complementary Conditions for Green Effects Through Basic Income

A Basic Income would offer individuals the security to experiment with alternative, more sustainable ways of life. This is an important Green argument for a Basic Income. Nevertheless, the income on its own might not be enough to ensure a shift from unsustainability to sustainability. In this section, we shall focus on some possible complementary conditions that would enhance the green effects of a Basic Income: education, reduction of working hours, and a maximum income.

Education

A first and important aspect is education. In his defence of a Basic Income, Christian Arnsperger (2010) argues that, confronted with the capitalistic way of life, individuals are trapped in a form of life, and that current and future generations will have the 'inevitable task' of creating and putting in place a more frugal way of life. To do so, two things would be required: (a) radical educational reforms for teaching how to live outside a productivist and consumerist framework, and (b) a Basic Income. One of those two actions without the other would not be successful, so they should be implemented in parallel. A Basic Income would allow those who had acquired 'existential lucidity' to experiment with new ways of life that would be more frugal, cooperative, alternative, and non-capitalist.

Working Time Reduction

Another way of reducing environmental impact would be to reduce the legally permitted maximum working hours (Gough 2017; Kallis et al. 2013; Knight et al. 2013; Schor 2005). Schor is sceptical that unregulated markets and technological innovation alone can achieve environmental sustainability. 'Rates of diffusion of green technologies have been disappointingly slow' (Schor 2005: 48). For poor countries, cutting-edge innovations are costly. Consumption growth is likely to involve further use of natural resources, and higher incomes have been found to result in a rebound effect, where more efficient energy use results in 'rising vehicle ownership and miles driven, larger homes, and a growth in appliances' (Schor 2005: 48). She argues that it is necessary for the affluent of the world to reduce

consumption. One way to do this would be to divert productivity increases from increased consumption towards greater leisure, through work time reduction. Thus, work-time reduction may be a necessary complement of a green Basic Income.

Van Parijs and Vanderborght, on the other hand, point out difficulties with legislated work time reduction. First, if accompanied by a reduction in income, it could drive the lowest paid workers into poverty. This is an effect that could be mitigated by a Basic Income, but still the costs would fall on those least able to bear them. Or, if pay was maintained, then labour would become more costly, which would lead to more involuntary unemployment. There are also dilemmas between fair allocation of the privilege to work (if only some occupations were subject to work time reduction) and bottlenecks with regard to scarce talents (if all occupations were included), and between 'nightmarishly expensive and intrusive bureaucracy' to achieve fair implementation and (if limited to wage workers) a proliferation of fake self-employed workers undermining the goal of shared work.

A Basic Income would achieve at least some of the same effects while allowing for labour market flexibility and individual choice. Workers who wished to reduce working time could do so.

> The employment capacity thereby freed up by current incumbents can be occupied by those currently unemployed, especially as basic income's universality enables the unemployed to start off with part-time jobs or to accept low pay for jobs with significant training components. (Van Parijs and Vanderborght 2017: 48–50).

It is difficult to know how close the reduction in working time brought about by a Basic Income would be to a legislated work time reduction (Kallis et al. 2013).

A Maximum Income

A third complement to Basic Income would be to legislate for a maximum income and a very high taxes on profits. The argument is that if the race for profit were to become less interesting, or the need for positional goods less compelling, then the need for perpetual growth would become less appealing. Daly has argued that 'we will not be able to shift from growth to steady state without instituting limits to inequality' (Daly 1996: 215). For this reason, Daly defends both a Basic Income and a maximum income (Christensen 2008).

Defenders of degrowth often favour a maximum income. Liegey et al., for example, claim that a Basic Income 'might not go far enough and will work as a palliative of a deeply sick society', and for this reason they also call for a maximum income (Liegey et al. 2013: 38). Samuel Alexander (2015), in his entry to the degrowth dictionary, follows a similar line, and claims that Basic Income and maximum income could help to achieve egalitarian goals without relying on growth. Thus, by contributing to reducing inequalities, both policies would contribute to reducing overconsumption (Wilkinson and Pickett 2009), and would therefore reduce inequality (Lorek and Vergragt 2015). A maximum income is a policy that might find approval among more diverse political interests than we might think (Casassas and De Wispelaere 2012).

The Impact of Alternative Policies

Opponents of a Basic Income sometimes propose in-kind transfers (such as food or education vouchers, or the free usage of public services) as an alternative (Bergmann 2004; Gough 2017: 163; Heath and Panitch 2010; Portes et al. 2017). Proposals for in-kind transfers are sometimes made for environmental reasons. Calder (2010) proposes free public transport, which would serve both social and environmental justice, and thus, he argues, would be consistent with a green case for Basic Income. Gough (2017) cites evidence that public consumption results in fewer emissions than private consumption, and that publicly funded welfare states emit less carbon than privately funded alternatives. In-kind provision, however, does not preclude a Basic Income as a complementary policy, unless all basic needs are to be met through in-kind provision.

Other proposals for in-kind services include a basic amount of some essential goods, normally followed by an exponentially higher taxation on the consumption of such goods above the 'bad-use' level (Ariès 2007; Gough 2017: 161–164; Liegey et al. 2013). Once again, the definitions of the 'fair' and 'sufficient' levels of consumption are extremely difficult to assess because only a part of daily goods needed by everyone in pluralist modern societies could be reached with such provision, and the discussion about that problem is generally absent from proposals for such schemes.

Alf Hornborg (2017) proposes that each country should establish a complementary currency for local use only, and that it should be distributed to all local residents as a Basic Income. Merrill et al. (2019) suggest the creation of an ecological income in the form of a local convertible

complementary currency which could be used in local shops, with public authorities and the community deciding which businesses could be part of the scheme. Experiments have taken place, such as 'Basic Income Circles' (BGE-Kreise) in Germany. Every local circle gave their members a monthly income in its own local currency (often in the form of cryptocurrencies), with the scheme funded by taxing economic activities undertaken with that money. But almost nothing happened. The local currencies were not valued highly enough in daily practice, because the currency was not sufficiently universal.

Another interesting idea from Tony Fitzpatrick (2007) is to convert or mortgage Basic Income streams into occasional capital grants. Such conversion into a capital grant should only be permitted if it would serve post-productivist goals such as care, sustainability, or other desirable ends. But precisely identifying businesses and shops to be accepted as suitable for post-productivity goals is nearly impossible, due to the diversity of lifestyles in pluralist modern societies—as it is with the definition of material basic needs.

Strategies for the Implementation of Green Oriented Basic Income

Most funding conceptions are based on the idea of financing a Basic Income with money taken from present public budgets and programmes. Contemporary social welfare systems, with their historically generated balances of giving and receiving, would be changed suddenly into radically new ones: so politicians and citizens hesitate to switch from current systems even if they perhaps agree with the fundamental idea of a Basic Income as the core of an emancipatory and less bureaucratic modern welfare state. To put it in other words, path dependency will place constraints in every social context on the introduction of a Basic Income: on the level, on how it is funded, and on how it intersects with previously existing programs.

A significant increase in ongoing taxes even for a partial Basic Income would cause a big legitimation problem. Perhaps that dead end can be avoided if the historically new principle of social security can be combined with a historically new funding principle, which can be legitimated not only as a funding source but also as a necessary steering instrument for hitherto unsolved environmental problems: the taxation of scarce environmental

resources such as the atmosphere, of water pollution, and of the development of natural land for businesses and housing and the extraction of minerals, and so on.

New paradigms can be more easily established when prototypes and small pilot schemes have taken place. So, for instance, an eco-bonus, that is, the sharing of the revenue of a resource tax equally with all citizens, could be a prototype of a Basic Income funded via ecological taxes. Starting with a small amount could be the way for an incremental implementation of a Basic Income. It could be introduced slowly and parallel to the ongoing social security scheme in order to establish the principle. Every citizen would receive unconditionally a share from the common inheritance of society (Schachtschneider 2014). The Alaska Permanent Fund Dividend—the sharing of revenues from Alaska's state-driven oil exploration—shows that the principle of sharing the revenues of natural resources can be popular, even if the motivation for its introduction was not an ecological one (Widerquist and Howard 2012). An eco bonus for an ecological reason already exists in Switzerland, although the amount is very low (approximately $100 per annum). The law implemented in 2007 says that if the CO_2 emissions are higher than they should be according to the national emission reduction plan, then a tax on various fossil fuel usages has to be raised the revenues from which have to be paid to the population via a reduction in the contributions to the obligatory public health service (Federal Office for the Environment 2016).

Funding a Basic Income with eco taxes would avoid ecologically oriented Basic Income proponents having to decide whether they should plea for green growth or degrowth. In any case, the environmental benefit would be useful (Ludewig 2017). We can achieve reduced resource use either with green technology (green growth) or with cultural change (degrowth), and in practise there will be a combination of both: so there is a chance to form a political coalition of these two main fractions of environmental discourse and movement. Moreover, to use economic instruments for environmental policies could be the main road for liberals concerned about environmental problems. However, such a coalition will meet with resistance both from those who think that a focus on a carbon tax is insufficient for uniting a left coalition of environmentalists, workers, and marginalised groups for radical system change (Klein 2015), not to mention from conservatives who favour a carbon tax and dividend, but oppose any dampening of economic growth (Halstead 2017).

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