



VARIETIES OF ECO-SOCIALISM:

COMPARING THE THOUGHT OF JOHN BELLAMY FOSTER & SARAL SARKAR

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1. INTRODUCTION

There is a well-known accusation made against greens of all stripes that they are *watermelons* – green on the outside but red on the inside. Or, to use another metaphor, the green movement is a disingenuous attempt to repackage the ‘old wine’ of socialism under cover of fashionable green wine bottles. If they respond at all, greens usually dismiss the accusation out of hand, as was done recently by the Australian Greens leader Richard Di Natale (Guardian, 2016).

But there is a school of thought within the environmental movement that wears the watermelon tag proudly on its sleeve; I refer, of course, to the ‘eco-socialists’. Anyone who has been involved with environmentalism for long is likely to have encountered them. Proponents of eco-socialism may argue that while it makes sense in the short term to fight for reforms *within* the capitalist system, ultimately an effective and socially just response to the mounting ecological crisis requires abolishing global capitalism and replacing it with a world-wide socialist economy.

What may be less well known is that there is considerable disagreement within eco-socialist ranks. I do not refer to another example of the sectarian divisions that have plagued the radical left for much of its history, but instead fundamental theoretical differences within this relatively small political perspective. These differences were made manifest in a recent brief online exchange between two prominent eco-socialists: American John Bellamy Foster and German-Indian, Saral Sarkar (Ecologise, 2017). Among other things, Sarkar challenged Foster to answer the following “straightforward question”:

Does Foster think that Eco-Socialism’s immediate goal should be to initiate a policy of de-growth, a contracting economy, and a contracting population? And the long-term goal a socialist steady-state economy at a low level?

Sarkar then went on to argue, as he has done at length in his two theoretical books (1999; 2010), that it is not simply capitalism that is driving the ecological crisis, but *also* any kind of industrial society (see definition further below), whether capitalist or socialist. For Sarkar, in the context of today’s global ecological crisis, the main reason to advocate for socialism, and not capitalism, is that a “socialist policy is the best way to achieve the contraction for the sake of saving the planet” (Sarkar, 2015). This, according to Sarkar (2015), is the “compelling new argument for socialism in the 21st century”. Departing further from his eco-socialist comrades, he insists that ever rising human population is also a major contributing factor to today’s ecological crisis and an *urgent* problem that must be directly addressed.

In his reply John Bellamy Foster, who is probably the world's most famous eco-socialist theorist, disagreed that 'degrowth' was the right framework for addressing the ecological crisis as the movement fails to develop a 'critique of capitalism or the promotion of the revolutionary structural changes that would be needed in confronting the capital system' (Ecologise, 2017).¹ Foster also rejected the ideas put forward by Sarkar, that industrialism and population growth were key drivers of the ecological crisis – for Foster the core problem lies in the systemic dynamics of capitalism.

This public airing of divergent views reflects the theoretical differences one finds in the published writings of these two authors. These differences apply both to how they understand the nature of our global ecological predicament and what needs to be done to effectively address it. These disagreements are not just restricted to these two individuals, but reflect broader debates within the eco-socialist camp as well as the wider environmental movement.

Advocates of voluntary simplicity – that is, the worldwide movement of people aiming to minimize their expenditure on consumer goods and services, and direct more time and energy towards non-materialistic sources of satisfaction and meaning (Etzioni, 1999) – may wonder what relevance eco-socialism has for them. A common view among environmentalist is that socialism is not only an outdated and discredited body of ideas but also irredeemably tied to the growth-industrial paradigm (i.e. Hamilton, 2013). It is hoped the discussion below will persuade readers that eco-socialist ideas, in all their diversity, have a prominent place within discussion about solutions to our ecological crisis, even if they don't have all the answers.

The report will begin by outlining key arguments for eco-socialism affirmed by all adherents to this political philosophy. It will then look at those areas of theoretical divergence between Foster and Sarkar, as expressed not just in their recent online exchange but throughout their writings, on a range of critical issues, particularly as they pertain to the contemporary environmental crisis.² These include: the 'limits to growth' paradigm, the relevance of Marxism, the need for 'degrowth', the viability of industrialism, responses to population growth, the underlining energy dispute, and the nature of the revolutionary subject. At times the report will discuss the views of other eco-socialists, to give a sense of the diversity of opinion across many of these issues.

While the main aim of this report is to introduce eco-socialism, via an outline of two leading proponents, it does not claim to be a neutral. I will offer critical comments, where appropriate, in relation to both authors views.

2. THE GENERAL CASE FOR ECO-SOCIALISM

All proponents of eco-socialism are united on some core fundamentals. In line with the broader environmental movement, they agree that humanity faces a multi-faceted planetary ecological crisis. The distinctive argument made by eco-socialists is that this crisis cannot be effectively resolved within or

¹ As will become evident, however, throughout this report, while this criticism may be relevant to some within the de-growth movement, it is not with respect to Sarkar, who has indeed developed a critique of capitalism.

² This report does not attempt to be a comprehensive treatment of both authors work, which ranges well beyond the environmental crisis.

by the global capitalist system i.e. the socio-economic system that now effectively dominates all societies across the world.

Eco-socialists generally define capitalism as a system in which most of the major means of production are privately owned, and in which there is heavy, if not complete, dependence on market forces for the allocation of economic resources (land, labour, capital, commodities). Eco-socialists universally agree that the capitalist economy cannot be made sustainable, due to the unending drive for capital accumulation that lies at the very heart of the system. Foster (2017b) spoke for all eco-socialists when in a recent interview he declared:

The issue is clear. Capitalism is a system geared to unlimited capital accumulation and hence exponential economic growth. It therefore constantly increases in scale. With a 3 percent rate of growth, the economy would expand by sixteen times in a century, 250 times in two centuries, and 4000 times in three centuries. While the planet's capacity with respect to what we call the tap, the resource end, and the sink, the waste end, would essentially remain the same. The reality of ecological limits and the pressure that the economy places on them cannot therefore be denied.

Eco-socialists discuss several systemic factors that explain the drive for endless capital accumulation (Smith, 2010), but the main one is simply the competitive struggle between private firms selling in a market. Sarkar (2014) explains:

In an environment of competition, the motto is: expand or perish. Since no firm wants to perish, since all must expand if they want to continue to exist, a general growth compulsion arises, also for the economy as a whole. For only in a growing economy can all individual firms hope to achieve this. And they all thirst for growth.

This does not mean the system always and everywhere experiences growth. Throughout its history capitalism has been beset by periodic economic recessions and depressions. And even when the system is growing strongly, the reality of uneven development means whole sections of the economy can experience economic stagnation, even while the wider economy expands. So today, rapid economic growth takes place in China and India while Japan has stagnated for decades. And in the era of globalization, whole regions across the advanced capitalist world have experienced a kind of forced 'degrowth' in the form of de-industrialization and persistent unemployment, even while national GDP continues to rise. Still, despite the uneven distribution of benefits and periodic downturns, the overall nature of the system is characterized by a persistent drive for growth at all costs, both at the micro and macro level.

For eco-socialists, it follows that overcoming the growth economy requires nothing less than abolishing capitalism. They propose replacing it with a new socio-economic system with three broad characteristics, often with some variation, depending on the specific theorist/s:

- 1) most, if not all, the means of production are either nationalized i.e. taken over by the state; or 'socialized' i.e. run collectively, in some way, by workers or the community.
- 2) most, if not all, economic decisions (i.e. what, who for, and how to produce) are carried out by a process of societal (ideally democratic) planning rather than left to private for-profit companies operating in a competitive market;

3) the structural economic changes needed for an ecological society are implemented in an egalitarian way, with an end goal of substantive wealth and income equality.

Eco-socialists understand that such a program is far off the political radar, both in advanced capitalist countries and across most of the global south. The recent ‘pink tide’ in Latin America which saw the election of several left-wing governments appealing to socialist rhetoric, as well as the rise of Jeremy Corbyn and Bernie Sanders and the revival of positive attitudes towards socialism, particularly among a sizeable portion of the youth (Foster, 2017a), may offer glimmers of contemporary hope. But it is generally agreed that eco-socialism, understood in terms of the revolutionary transformation of capitalist society, is currently a distant prospect across the globe.

For this reason, eco-socialists generally agree that capitalism will not be overcome rapidly, but will require an extended period of transition, involving campaigns advocating for a variety of ‘radical reforms’ (Foster 2017a; Leahy, 2017) that could conceivably be implemented by left-leaning or social-democratic governments within the framework of capitalism. To this end, they work constructively, and in coalition with a range of oppositional civil society groups. But ultimately, they insist, the ecological crisis can only be resolved once capitalism has been transcended, and replaced with an eco-socialist economic framework.

There are, of course, many criticisms of eco-socialism, some of which are very pertinent to those of us advocating for a simpler way. Eco-socialists generally agree that taking and using state power will be an indispensable necessity in the process of reconstructing society along eco-socialist lines.³ Ted Trainer has recently criticized this state-centered approach – at least in the short-to-medium term - arguing that today and for the foreseeable future, the strategic focus should be on the building of local cooperative non-capitalist economies and cultures at the micro-local level (Trainer, 2017a).⁴ Left-libertarian critics argue that, notwithstanding rhetoric about democracy, *state* socialism (if not non-statist varieties of socialism) will only empower the state in unacceptable ways – repeating the failed 20th century experiments – undermining important democratic and economic freedoms (i.e. Bookchin, 1969; Fotopoulos, 2005). These criticisms will not be elaborated on in this report. Readers are encouraged to consult such critiques as well as the best eco-socialist responses to them.

Having very briefly summarized some of the core fundamentals shared by eco-socialists, we turn now to look at crucial theoretical differences which exist between eco-socialist theorists, through the lens of Saral Sarkar and John Bellamy Foster writings.

³ It is true there are a variety of non-state socialists (anarchists, autonomist Marxists etc.), may also be ideologically classified as eco-socialists, given their advocacy of socialist economics and the importance they place on ecological restoration, but the label is most often used about a sub-branch of state socialists (i.e. socialists who support the use of state power) and, hence, this discussion is restricted to those groups.

⁴ For Trainer, the best way to defeat capitalism “is to ignore it to death, i.e., to turn away from it and start building its replacement and persuading people to come across” (2017). Taking state power, he suggests, while necessary (in some form) can only be a final phase of this revolution which can only conceivably take place *after* a profound localist-cultural transformation has taken place at the grassroots.

3. THE LIMITS TO GROWTH PARADIGM

A defining difference between the two is the relative importance they place on the concept of Limits to Growth. For Sarkar, ever since he read the famous Club of Rome Limits to Growth publication he was convinced of the reality and significance of ecological limits – both in the sense of limits to the extraction of resources, as well as limits to the sinks of nature i.e. the capacity of nature to absorb human made pollution and environmental degradation. This reality, he was convinced, required humanity to make a fundamental paradigm shift in thinking from the currently hegemonic ‘growth paradigm’ to the alternative ‘limits to growth’ paradigm (1999: 19).

If one accepts this compelling paradigm shift, then one ought to change the whole direction of research and thinking not only in economics but also in all other social sciences. It ought to call into question many if not all hitherto valid main conclusions of economics and social sciences. And it ought to lead to radical changes in policies, not only of the state, but also of all institutions, in the areas of economic, political, and social matters.

Sarkar argues (i.e. 1999; 2010; 2015) that the ecological left, including many eco-socialists, notwithstanding their environmental rhetoric, have not sufficiently made this paradigm shift. In their political analysis and policy prescriptions they are still working with assumptions that are conditional on the growth paradigm. To rub salt into wound, he believes this paradigm shift necessarily requires a rejection of Marxism, a paradigm of thought premised on growth.

Foster’s view is noticeably different. To be sure, he acknowledges the reality of severe ecological limits facing humanity; indeed, this is a central focus of his work. But he is less enthusiastic about framing the ecological crisis in terms of ‘limits to growth’. Foster is a leading champion of eco-Marxism which, as he and colleagues Brett Clark and Richard York argue (2010, 421-2), far from being made redundant, *adds* a revolutionary dimension that the limits to growth discourse otherwise lacks. For them, in the ‘universal, dialectical’ view of eco-Marxism:

The problem of constructing a viable social and ecological metabolism becomes – in contradistinction to the *Limits to Growth* argument, which targets the abstract concept of “growth” rather than the capital system itself – a central aspect of wide ranging revolutionary process.

As we look at the various themes below, it will become clear that the difference between the two lies not so much in disagreement over the reality and urgency of ever intensifying ecological limits, but rather their contrasting understanding of how *severe* these limits are and, even more importantly, the *implications* for eco-socialist theory and practice.

4. MARXISM

Foster has devoted a lot of scholarly energy to demonstrating that Marx offered prescient insights into the ecological destructive dynamics of capitalism (Clark et al, 2017; Clark & Foster, 2016). He shows that Marx utilized the scientific concept of ‘metabolism,’ – used to describe the “exchanges of matter and energy...between organisms and their environments” (Foster, 2016) – to argue that capitalism was

generating an intensifying 'metabolic rift' between humans and nature. Specifically, Marx pointed to the growing urban and rural divide under capitalist industrial agriculture. As a result, soil nutrients were dumped into urban waste streams rather than being recycled back into the soil, generating pollution and undermining soil fertility.⁵ "All progress in capitalist agriculture," Marx wrote, "is a progress in the art, not only of robbing the laborer, but of robbing the soil" (Marx, 1954:506-7). Today this rift has intensified as grain crops imported from thousands of miles away are used as animal feed within industrialised feedlots, only to end up as "colossal quantities of waste" draining into watercourses (Higgs, 2014, 10).

But while Foster highlights Marx's early environmentalism, he is far less persuasive in showing that Marx was aware of fundamental ecological limits, in the sense defined above. While Marx certainly recognized that resource shortages could have a major impact on capitalist economies (Perelman, 1993) he seems to have thought that this "reflected the inability of capital to master the environment" and "was confident that under socialism such problems could be overcome" (Perelman, 1993: 70). But ecological limits will apply as much to any future form of socialism as they do capitalism (Kallis 2017). Sarkar (2010, 278), argues that Marx made the mistake of assuming a general constancy of nature. However, we know that if humans over-exploit renewable resources, they can be permanently degraded or destroyed, and in the case of non-renewable resources, such as fossil fuels or mineral resources, these are a finite by definition and are thus constantly being drawn down with every use.

In his exchange with Sarkar, Foster appealed to Marx's understanding of socialism, which Foster summarizes as:

A social formation in which the associated producers rationally regulate their metabolism with the earth in such a way as to promote genuine human needs, while at the same time economizing on the expenditure of energy.

But this statement simply begs two fundamental questions. First, what is meant by 'genuine' human needs? Whatever such needs consist of (assuming they can be objectively defined) what we know today is that satisfying them must not breach the biophysical limits of the earth. Obviously, Marx, writing in the 19th century cannot offer us any *concrete* guidance this. It is very likely to mean the end of taken for granted consumer habits, unknown in Marx day, such as, flying overseas on holidays, buying ever larger electronic gadgets, driving an automobile, or eating food out of season (see i.e. Alexander, 2012; Trainer, 2010). A difficult message that is only softened by the realization that frugal ways can be a source of great life satisfaction (Trainer, 2013). Second, while it is true we must 'economize on the expenditure of energy,' the crucial question is, *by how much?* Here, the devil is in the details, and again nothing in Marx offers guidance on what might be a sustainable energy allocation for all 7+ billion people on the planet.

But it's not just that Marx cannot offer us much contemporary guidance on the ecological challenge. Marx, along with the majority of 19th century thinkers, understandably adopted the enlightenment growth paradigm in which 'the fundamental problem was how humankind could, with the help of science and its technological applications, maximise growth' (Fotopoulos, 2005). Central to Marx's

⁵ It could, however, be argued that Marx was reacting as much to the ecological destruction of industrialism *in general*, rather than capitalism specifically – after all urbanization has usually – if not inevitably, led to a divorce between food production and consumption in *all* industrial societies including i.e. the USSR.

thought, after all, was a view of history focusing on succeeding modes of production, in which at pivotal historical junctures, the existing mode of production acts as a barrier to the further development of productive forces. This would give rise to intensifying class conflict (or else 'ruin of the contending classes') and transition to a 'higher' mode of production. And so, Marx famously praised capitalism for its productive powers, declaring in the preface to Capital Vol 3 (Marx 1981: 368) that:

The development of the productive forces of social labour is capital's historic mission and justification. For that very reason, it unwittingly creates the material conditions for a higher form of production.

And given that was capitalism's historic mission, it followed this was also communism's historic mission. It is sometimes argued that these views were confined to the more youthful Marx, and not his more mature writings, but this is not in fact the case. In one of his later writings, the Critique of the Gotha Programme, written in 1875, the same emphasis on enhancing the productive powers of humanity is clear:

In a higher phase of communist society, after the enslaving subordination of the individual to the division of labor, and therewith also the antithesis between mental and physical labor, has vanished; after labor has become not only a means of life but life's prime want; *after the productive forces have also increased* (my emphasis) with the all-around development of the individual, and all the springs of co-operative wealth flow more abundantly -- only then then can the narrow horizon of bourgeois right be crossed in its entirety and society inscribe on its banners: From each according to his ability, to each according to his needs!

Thus, notwithstanding Marx's genuine concerns about the impact of capitalism on the natural world, the assumption that history progressed via the ever-higher development of productive forces – and that this was a pre-condition for the achievement of the 'higher phase' of communism – seems deeply embedded within his worldview and, up until recently, most of his followers. This leads Sarkar (1999; Ch 6) to conclude that no form of Marxism, however revised, can survive the necessary limits to growth paradigm shift. As he puts it (1999: 200):

A socialism that does not presuppose development of the productive forces up to the level of the advanced industrial economy would not be a Marxian socialism. It is difficult to see how Marxian socialism, so deeply embedded in the growth paradigm, can lend itself to ecologisation... But it is not our task to save Marxism.

Obviously, Sarkar does not believe the end of Marxism implies the end of socialism. But for him, a scientific form of socialism for the 21st century must fully integrate the insights of ecological science into its theoretical system – and this requires, not just adding patches to the theoretical Marxian socialism, but adopting an entirely new theoretical synthesis which he labels 'eco-socialism'.

On this question Sarkar is out of step with almost all other eco-socialists who continue to promote some form of Marxism. A plausible defense, for example, has recently been put by Michael Lowy (2017). Lowy acknowledges that in many ways Marx is outdated, especially with respect to his view of history. But he nevertheless makes a plea for the ongoing relevance of Marxism. For him, an ecological movement "able to confront the contemporary challenges, cannot exist without the Marxist critique of political

economy and its remarkable analysis of the destructive logic inherent to the unlimited accumulation of capital” (Lowy, 2017, 19). If this is all that is meant by ‘Marxism,’ then I guess all eco-socialists, perhaps even Sarkar, could agree on its importance. But we should be clear that this is very different to how Marxism has been historically understood and practiced.

5. DEGROWTH

The subject of degrowth was central to the recent exchange between Sarkar and Foster. By ‘degrowth’ I refer to the emerging social movement which advocates for ‘an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions’ (Schneider et al, 2010: 512).

In their exchange, Foster (ecologies, 2017) criticizes the degrowth school for failing to explicitly identify capitalism as the central impediment to achieving an ecological society.

The whole concept of degrowth has been distorted by the fact that it is generally used to put the dominant concept of economic growth on its head, arguing simply for downsizing the system, or putting it in reverse, without engaging in a full critique of capitalism or the promotion of the revolutionary structural changes that would be needed in confronting the capital system.

Foster expresses a view on which *all* eco-socialists are agreed: degrowth cannot be achieved – at least not in a socially and politically acceptable way – without confronting capitalism. But it does not follow that degrowth itself is unnecessary; it ‘only’ means that achieving it requires confronting capitalism. We should therefore go back to Sarkar’s original question to Foster, cited above, to clarify the issue. Does Foster believe that a *socialist* form of degrowth is necessary? And, if so, how radical should that downscaling process be?

Foster’s answer to this question is unclear. In a recent essay he wrote on the subject (2011), he contrasts the well-known proposals of Herman Daly for a steady-state economy, with those of degrowth advocates:

Degrowth as such is not viewed, even by its proponents, as a stable solution, but one aimed at reducing the size of the economy to a level of output that can be maintained perpetually at a steady-state. This might mean shrinking the rich economies by as much as a third from today’s levels by a process that would amount to negative investment (since not only would new net investment cease but also only some, not all, worn-out capital stock would be replaced). A steady-state economy, in contrast, would carry out replacement investment but would stop short of new net investment.

This is a helpful summary of two contrasting proposals for addressing the ecological challenge, however, in this essay Foster stopped short of advocating either model. To be clear, advocates of degrowth agree that the long-term goal is a steady-state economy without GDP growth. However, especially in the presently over-developed industrialized nations, they believe there needs to be an interim transitional phase of planned economic contraction in which capital, in the financial sense is actively destroyed (see

i.e. Sarkar, 1999, 2014-15).⁶ More recently, in his exchange with Sarkar, Foster (2015; Ecologise, 2017) agreed that “we need to move toward a steady-state economy in Herman Daly’s sense of no net capital formation” but he gave no indication, either here or elsewhere in his writings, that he thought an interim phase of planned economic degrowth is necessary. This clearly contrasts with the position of Sarkar, who is very forthright in his call for planned economic contraction (1999, 202):

To achieve sustainability the industrial economies must contract, with the aim of reaching a steady state-economy. This contraction would entail accepting a lower standard of living (but not happiness) than today.

Sarkar, in common with many degrowth theorists, believes there will ultimately be no choice about degrowth (i.e. contraction), as intensifying resource and ecological devastation will, before long, impose this fate on the global economy – a process that has arguably already begun in some crisis ridden regions of the world (see i.e. Ahmed, 2017). The choice as he sees it is not *if* we should have degrowth, but how it will be carried out – i.e. by design or disaster.

A major part of Sarkar’s case for degrowth relates to his view on the non-viability of modern ‘renewable’ energy technologies – a view discussed further below. But it is also based on his belief that economic contraction is the only way to achieve the radical resource reductions required for sustainability. One of Sarkar’s key criteria⁷ for a sustainable economy is that it be ‘based mainly on renewable resources and uses only non-renewable resources when absolutely necessary’ (1999, 137). Given that today over 70% of the global economy’s 70 Gigatons annual resource throughput is made up of non-renewable resources (Material Flows, 2016),⁸ this means radical resource cuts are required, especially within industrialized nations where the vast bulk of these resources are used.

Sarkar rejects the idea that this can be achieved, as is commonly believed, via an efficiency revolution (1999, Ch 4). On the contrary, he argues, at some point there is inevitably a trade-off between improved *resource* productivity, as is needed to achieve radical resource cuts, and improved *labour* productivity. This has dramatic economic implications, because historically rising labour productivity has been the secret behind continuous economic growth.

As he notes (1999: 155):

Increasing labour productivity meant increasing production, higher wages, a higher standard of living. In contrast, increasing resource productivity would mean more person hours per unit of production, hence increased labour costs, lower wages and a lower standard of living. To illustrate the point: to renovate a house or to repair a watch is to avoid waste of resources; but they are labour intensive. You cannot have both higher resource productivity and higher labour productivity.

⁶ Sarkar distinguishes between the financial destruction which will inevitably accompany either the mandated shut down of firms or their phase down in line with resource quotas etc, with physical capital in the form of ‘infrastructures, plant, machines, mines, forests, and agricultural land, which would still be there. In the case of the latter, ‘since their full capacity would not be required, they would be used alternatively. Some of them, especially machines, would be stored for latter use (1999, 215).

⁷ Sarkar outlines five criteria – see 1999, Ch 4.

⁸ And, of course, many renewable resources are being extracted at non-sustainable rates as well i.e. fish, soil etc, tropical forests etc.

This frank insistence that sustainability will require income-wealth reductions – even for the workers!⁹ – is rarely found among eco-socialists, including John-Bellamy Foster. For instance, in a recent editorial piece for *Monthly Review*, Foster wrote (2017):

One thing all socialists should be able to agree upon is that a sustainable future now depends on strengthening the power of labor globally, including *higher wages* (my emphasis)¹⁰ and full employment.

Counter-intuitively Sarkar's advocacy of degrowth allows him to make, in my view, a more compelling case for eco-socialism. This is because it directly deprives capitalism of its strongest argument: namely, its dynamic tendency to drive forward economic growth. If the goal, however, is no longer to grow the economy but to contract it, then socialism has a crucial advantage over the capitalist model. In the following passage, Sarkar spells out three reasons – elaborated on in greater detail in his books (1999; 2010) – for why a socialist economic model will be essential for a socially just and orderly process of degrowth (Sarkar, 2012, 325):

1) The contraction of the economies of the world must occur in an orderly way. Otherwise there will be unbearable breakdowns of whole societies. An orderly contraction can only take place in a planned economy, not in a capitalist market economy. 2) Only a socialist political order can achieve, by means of egalitarian distribution of the costs and benefits, a broad acceptance of the necessary contraction, 3) Only in a planned socialist economy can the problem of unemployment be solved, which would otherwise become more and more acute in a contracting economy. To this end, a planned economy can consciously use labor-intensive technologies and methods, which, in addition, result in less use of resources.

Sarkar's advocacy of degrowth leads to other important theoretical differences with Foster and indeed most other eco-socialists. For example, Sarkar makes a clear distinction between the institutional arrangements necessary for the 'transitional' phase of contracting the economy, and those applicable to the end goal phase of a steady-state economy operating with greatly reduced economic turnover. In the former phase (1999: 223):

A strong state would be necessary to ensure a planned and orderly retreat. But a strong state, even when democratically constituted, does not quite agree with the ideal of democracy, which includes democracy even in the economic sphere, and popular participation in all spheres of politics. This contradiction must be tolerated in the transition period.

⁹ To be clear, he stressed, in line with socialist values, that this reduction in 'living standards' must be done in an egalitarian way, in which the wealthy take on the heaviest burden of sacrifice and in which the goal is an egalitarian society of modest wealth and minimal income inequality.

¹⁰ In fairness, Foster may have had in mind here the working class in the global south, as opposed to global North, who are surely deserving of higher incomes to survive and meet needs. On the other hand, it can be argued that in a well-run simpler eco-socialist society, material needs could be adequately met via largely subsistence local cooperative economies in which only very low incomes are needed (see Trainer, 2010).

Only when the simpler steady state economy has been reached, Sarkar argues, will it be conceivable for ordinary people have some direct say in planning decisions be possible. This view contrasts with many other eco-socialists (and i.e. eco-anarchists) who argue for a radical-participatory form of democracy in necessary and achievable throughout both phases (see i.e. Smith, 2017; Trainer 2010). This is a crucial area for further debate and discussion among eco-socialists and the wider environmental movement.

6. INDUSTRIALISM

For Sarkar, to be an authentic eco-socialist necessarily requires one to oppose industrialization.

The determinant element in the concept eco-socialism is the prefix eco. And that means the rejection of industrialism. To be a good socialist one only needs to rejects capitalism. But to be an eco-socialist one must also reject industrialism as a future perspective for mankind, and agree to a program of de-industrialization (often clumsily called de-growth) – of at least the overdeveloped countries to start with.

Before we can assess this view, we need to be clear on what is meant by industrialization. Here the term industry is being used to refer to large-scale manufacturing and technological production. Industrialization therefore refers to a process in which an economies dependence on industrial activity in this sense, increases over time. It is often claimed that the deindustrialization that has occurred across (over)developed economies in the globalization era means these nations have moved into a ‘post-industrial’ phase. However, these nations are still highly dependent on manufacturing products and processors – and the associated non-renewable resources – which they increasingly import from industrial centers in poorer nations (Weidmann, 2015). Another complication is that many supposedly non-industrial activities (i.e. agriculture, mining etc.) are in fact highly integrated with, and dependent on, manufactured high-technologies. For example, today we talk about industrial agriculture, given that farming today is increasingly dependent on many industrial technologies, across the supply chain. As such any macroeconomic downscaling in industrial activity is likely to also result in the downscaling (or at least reduction in productivity) of many so-called ‘non-industrial’ activities such as agricultural, mining and many services etc.

In Sarkar’s view, the inevitable corollary of calling for degrowth, is deindustrialization in the sense defined above. No matter how challenging, it is a plausible view. A recent academic paper (Gutowski et al, 2017) demonstrates that there is a very clear positive historically relationship between industrialization (i.e. the ratio of industrial activity relative to GDP) and per capita GDP. And given the same paper also demonstrates (2017, 9) a clear positive relationship between GDP per capita and rising material footprints, there is a compelling case that achieving radical resource reductions – necessary for sustainability – will require large scale deindustrialization.

Nevertheless, Sarkar rejection of industrialism finds very little support among other eco-socialists. Again Foster, speaks for most when, in a recent interview, he declared:

We can’t entirely abandon industrialization: we must change it. We can’t retreat to some historical era where we were somehow more in harmony with nature: we have to go forward as a society.

In the online exchange with Sarkar, Foster argued that blaming the ecological crisis on industrialism is too “abstract,” and represents an unhelpful shift away from analyzing “concrete social forms”, such as capitalism. He then went on to make the following argument:

The same logic if carried farther would lead one to argue that, since pre-industrial societies also destroyed their environments, industrialization is not a sufficient explanation. We should therefore attribute the environmental problem to human *society in general*. And, then, since humans are social animals, society itself can be considered an insufficient explanation, so we should attribute the ecological problem to the very existence of *human beings*. Ergo there are simply too many people.

In response to this criticism Sarkar would plead guilty as charged! As we will see below, he believes human population growth is indeed one of the main drivers of the ecological crisis - but, of course, not the only driver. In line, with the famous I=PAT equation, he argues that high consumption and industrialism are *also* key drivers of the ecological crisis – irrespective of whether they are pursued within a capitalist or socialist framework.

The premise of Foster’s argument is that the concept of ‘industrialism’ is too abstract to be helpful.’ But there does not seem to be anything unclear about the common definition I have provided above. Moreover, historians can concretely identify both the time and place that mark the beginning of the industrial era i.e. the industrial revolution in Britain. And while it’s true that industrialism can take many forms, this is also true of capitalism, but this does not dissuade Foster from talking about capitalism in general.

Foster’s argument would have been more convincing had he instead focussed on Sarkar’s *wholesale* rejection of industrialism. This seems quite challengeable given we can surely conceive of a sustainable society which pursues a *low level* of industrialisation – greatly downscaled, for sure, from today’s level but nevertheless drawing on *some* industrial activity. Another eco-socialist Richard Smith, for example (2017) recognizes that there must be a process of deindustrialization in the Global North. But he also thinks a future eco-socialist civilization will be able to draw on some modern industries and technologies, albeit on a reduced scale and operating within the context of new socialist production system in which the focus is not on maximizing turnover, but producing quality and durable products.¹¹

In any case, the necessity of deindustrialization, at least in some form, raises fundamental challenges for socialist theory. Under the influence of Marxism, it has long been thought that a socialist society can only succeed within the context of a highly developed industrial society. On the contrary, drawing on the work of theorists such as Otto Ullrich, Sarkar argues that a highly-industrialized society may act as a *hindrance* to the achievement of authentic emancipatory form of socialism.¹² With its large scale and centralized institutions, Industrialism inevitably creates conditions of domination and hierarchy, incompatible with the democratization of society – a problem that plagued 20th century attempts at socialism. The ‘bigness’ of institutions means they cannot be easily surveyed, and thus administered by

¹¹ Similarly, eco-anarchist Ted Trainer argues (2010) that the sustainable society can and should retain the best of what modernity offers – including retaining those form of industry and high technology that make sense – combined with a return to many simple pre-industrial technologies and ways, such as craft production, hand tools, do-it-yourself repairs, and mud brick housing. Whether one could call his future ‘simpler way’ vision a form of ‘industrial’ society, is largely a question of definition.

¹² A similar argument has recently been made by degrowth theorist Georgious Kallis (2017).

ordinary people. On the other hand, downscaling and simplifying the economy would enable the economic planning process to take a more decentralized and democratic form, thereby potentially avoiding some of the inefficiencies experienced with central planning during the 20th century socialist experience. As Sarkar notes (1999: 215):

Once the contraction process has been completed and the steady state reached, the tasks of planning and managing the economy would become much simpler – if only because the volume of production and the diversity of goods would go down by a factor of ten (in the first world). Centralised planning with its concomitant problems can then be limited to a minimum.

Quoting Ullrich, Sarkar arrives at the striking conclusion – entirely reversing the Marxist schema – that “there is not a *lower* limit to the size and scale of the productive forces consistent with socialism, but rather an *upper* limit” (Ullrich, 1979: 102).

7. POPULATION

Of all the issues addressed in this report, the subject of population growth is likely to be most controversial. Ever since Marx and Engels vehemently rejected the ideas of Thomas Malthus’ on population in the 19th century, the issue has been heated.¹³ Most eco-socialists have argued that population growth is either a non-issue, or of secondary importance compared to the ‘real’ challenge of abolishing capitalism. Again, Sarkar takes a different view from his comrades. For him, population growth is not only a major driver of today’s ecological crisis, but *today*, strategically the most critical issue for activists to focus on. This is because it is the one factor on which progress could be made in the near term – in coalition with a range of mainstream forces – without having to first achieve a seemingly distant socialist revolution (Personal Communication, 2018).

In response, Foster does not deny that ‘population growth places more burdens on the carrying capacity of the earth’ (Ecologise, 2017). Elsewhere he has said (1998) it is ‘one of the most serious problems of the contemporary age’ (1998). But, for him, it is ultimately a ‘dependent variable’. (Ecologise, 2017) By this he means that it is a *symptom* of poverty and associated ‘factors such as employment, health, education, women’s rights, etc’ which are created by the process of uneven capitalist development. He argues (1998) that the demographic transition theory (DTT) ‘emphasizes the way in which population growth depends on economic and social well-being, is therefore a more reliable guide to these issues than Malthusianism’.

But Sarkar is not convinced. He argues (1999, 132), the DTT was formulated under the assumptions of the growth paradigm in which it is assumed that the 4+ billion people living in poverty will one day achieve affluence. But once we make the limits to growth paradigm shift, this assumption no longer holds. To be sure, he agrees that capitalist poverty is a key driver of population growth, but insists that the ecological crisis is too urgent for us to wait until a distant revolution does away with capitalism and imperialism. If we wait until then and population continues to grow ‘then the ecological balance will be

¹³ For those interested in considering the debate further, an interesting exchange took place few years ago between eco-socialists, regarding the issue. See here: <http://climateandcapitalism.com/2011/06/23/deep-ecology-versus-ecosocialism-part-two/>

restored by nature itself – through hunger, war, civil war, chaos, disease, epidemics – which nobody wants’ (Sarkar, 1999, 135).

Foster, in turn, points out that while poor countries typically have the highest population growth rates, they also have the lowest per capita carbon footprints, and are thus far less responsible for climate crisis (Ecologise, 2017). But while true, this overlooks the reality that the ecological crisis is much larger than just climate change. If we look at other indices, population growth looms large as a key driver. Consider, for example, the rapid rate of non-human species loss being caused by human land-use change. While, in part, this can be attributed to export driven agribusiness and logging operations, it is also a result of rising demand for food and land, driven by rising human numbers (Friedmann, 2017; Sarkar 2017b). Nafeez Ahmed (2017) documents the role that rapid population growth has played – along with peak oil and water shortages – in creating the underlying biophysical condition driving conflict and societal breakdown across the Middle East. Sarkar (1999, Ch 4) also makes a powerful case that feeding 7+ billion people via organic farming methods (i.e. without fossil fuels), would require an even larger land footprint and thus exacerbate the already alarming biodiversity crisis, as well as put further pressure on indigenous people’s trying to live on their ancestral lands.

The debate becomes even more contentious when we consider *policy prescriptions* for slowing or reducing population. Few eco-socialists are likely to oppose widely endorsed measures such as educating woman, improving access to contraceptives and family planning assistance. But, for reasons beyond the scope of this piece, Sarkar argues that these measures are inadequate. In addition, he advocates (1999, Ch 4) a secure and universal old age pensions to reduce the economic incentive for poor families to have large families – a policy to which, again, few socialists would object. But he goes further and in ways that almost all socialists *do reject*. He advocates direct population control via raising the minimum legal age of marriage and, most controversially, a legal maximum of two children per couple mandated by the state. Importantly, he recommends that this be carried out by male vasectomy, to address feminist concerns about the implication of birth control in patriarchal societies.

8. ENERGY

Underpinning all the above disagreements is a deeper one regarding the energy crisis. Energy is widely known as the ‘master resource’ as it underpins all economic activity, as can be seen via the tight positive correlation between world GDP growth and energy consumption (Tversberg, 2017a). Both men agree that, to avoid unleashing catastrophic global warming humanity must achieve a rapid transition off fossil fuels over coming years and decades. This is a very difficult task, especially given fossil fuels currently account for more than 86% of global primary energy consumption – a figure that has changed little in decades, notwithstanding huge investment in alternative energy sources (IEA 2017). The need for rapid transition off fossil fuels, raises the question about the viability of these technologies, such as wind, solar PV and Concentrated Solar Thermal (CSP). Can these forms of energy provide the same quantity and quality as fossil fuels have, as is required to sustain the industrial-consumer way of life?

In a recent piece, Sarkar (2015) identified disagreements over energy issues as lying at the heart of many disputes among the ecological-left. The following passage is worth quoting at length:

If one is an optimist, if one believes...that 100% renewables is not only achievable, but it's also EASILY achievable, then why should one at all object to further economic growth and advocate a steady-state economy...? After all, then there would be no CO2 emission any more, and if some are allowed for any reason, that would be reabsorbed soon, would not hang on in the atmosphere. Then the problem of global warming would not exist anymore! Then there would not be any environmental pollution at all, for, with cheap and abundant renewable energy, any waste can be easily recycled... and we can then even have further economic growth (why remain stuck up in steady state at the present level?...But if energy optimism is unfounded, then we must soon begin the process of economic contraction. Then, and only then, is an egalitarian or socialist policy the best way to achieve that contraction for the sake of saving the planet. And that is the compelling new argument for socialism in the 21st century.

Sarkar's reasoning is not entirely correct. Would the ecological crisis *really* be solved if renewable optimism turned out to be valid? True, access to abundant energy would increase reserves of many non-renewable resources (on which, also, modern 'renewable' energy sources also depend), by enabling the mining of lower grades of ores, albeit at a steeply rising energy cost. But what about renewable resources such as fish, fresh water, tropical forests, healthy soil etc., which are currently being depleted faster than they can be replenished? And the biodiversity crisis? Wouldn't the current – let alone future projected – uses of energy consumption only intensify many of these problems? The ecological crisis, as Steb Fisher observes (2013), can be viewed as a function of our access to energy: "we have too much and, as we use it, we damage ecosystems." This is one reason why a compelling case can be made for degrowth regardless of the debate surrounding renewable energy potential.

In any case, Sarkar goes on to argue that renewable energy optimism is unfounded. Drawing on the work of ecological economist Georgescu-Roegen (1978), he argues that renewable energy sources (i.e. sunshine, wind etc.), despite being abundant, suffer from a major energetic drawback in comparison with fossil fuels. Whereas fossil fuels are highly *concentrated* and thus energetically dense, solar energy is comparatively diffuse. As Kallis notes (2017, 6), the former is like a lake, whereas the latter is like rain. What this means is that substantial amounts of energy, materials and, perhaps most significant, land area (Capellán-Pérez et al, 2017), would be required for modern renewable technologies to provide the forms of energy demanded in large quantities by industrial societies i.e. electricity and liquid fuels.

It is surprising that Sarkar places less emphasis on an arguably even more significant biophysical drawback of renewable energy: namely the fact that the main renewable sources, solar and wind, are intermittent, making it difficult to get reliable power as they are weather dependent (see i.e Sinn, 2017). Due to this basic biophysical reality, a future 100% renewable energy *system* would need to invest in either large amount of excess plant capacity to ensure there was always enough supply to meet demand, or otherwise invest in huge, and currently non-existent, energy storage systems. There is a compelling case that both solutions will prove either technically or economically unviable, especially *if* the goal is for renewable energy the quantity of energy required to reproduce present day consumer-industrial societies (Trainer 2017b; Tversberg 2017b; Moriarty & Honnery, 2016)

But while there are indeed strong reasons to doubt renewable optimism – if by that we are referring to the claim that renewable energy can affordably run today's global economy – Sarkar undermines his

case by arguing against *any* reliance on these technologies (Sarkar, 2017c). To be clear, he agrees that future human societies must depend entirely on renewable *sources* of energy (i.e. sun, wind, biomass etc), as they have always done prior to the fossil fuel age. But he does not think modern renewable *technologies* (i.e. PV, wind, CST) will prove to be viable – even in the context of a far more energy frugal, future eco-socialist society.

Sarkar makes two arguments for this radical position. First, he makes the valid point that these so-called ‘renewable’ technologies, are currently nothing of the sort because they require the extraction of many, often very scarce, non-renewable resources, including fossil fuels. Therefore, these technologies are non-sustainable in the long run. Space does not allow a full response, but critics have responded by arguing, firstly, that the energy for mining the raw materials and building the RE hardware can in future be provided by the renewable technologies, thus eliminating the need to use fossil fuels in the process of mining and manufacture (Diesendorf, 2017a). Secondly, they suggest a combination of resource substitution and scrupulous recycling (Diesendorf, 2017b; WWF, 2014) could ensure that any critical resource shortages will be delayed, if not forever, then for an acceptably long enough period (i.e. centuries) to permit the *limited* usage of these technologies.¹⁴

Sarkar’s second, and more important argument, is that renewable technologies cannot provide a sufficient energy return on investment (EROI) to reproduce them and thus provide an adequate energy surplus to fuel the non-energy sectors of industrial economies. For this reason, he argues, these technologies are ‘non-viable’ in an energetic sense. The only way such technologies are currently financially viable is that they receive a hidden energy subsidy in the form of fossil fuels, the use of which is crucial for the mining, manufacture and maintenance of renewable technologies. Without this subsidy modern renewable technologies are a ‘a waste of time, effort, energy and, most important of all, scarce resources’ (Sarkar, 2017c).

But Sarkar’s argument is not convincing. For the argument to be valid, it would need to demonstrate that the EROI of all renewable technologies are either less than 1 – and therefore by definition ‘non-viable’ in the energetic sense – or, if positive, then so low that they could not provide sufficient net energy to fuel the non-energy sectors of the economy. This question can only be answered *empirically* with reference to the contemporary scientific research into the EROI of different technologies. But Sarkar’s case is entirely *theoretical*. That is, it is based on appeal to the (real) physical drawbacks of renewable energy, discussed above, as well as the plausible, but not decisive, claim that the EROI of these technologies will inevitably decline in the future given ever increasing amounts of energy will be needed to extract the depleting non-renewable resources required for the construction of these technologies. These theoretical considerations are certainly important, but again the EROI question can only be settled empirically. And while it is true there is currently much debate in the scientific community about the EROI of various renewable technologies, there is still widespread agreement that, at least when deployed in appropriate locations,¹⁵ they yield a positive EROI and are therefore ‘viable’ in the energetic sense (Dupont et al, 2018; Raugui et al, 2017; Weisbach, 2012).¹⁶

¹⁴ It should be stressed that these arguments are only persuasive if they are made in the context of the need to move to a far more energy frugal society.

¹⁵ It should be noted that the EROI depends massively on the location of deployment, given the variance of wind speed and solar radiation across various locations. As with all resources, the most energetically lucrative locations are used first.

¹⁶ Far more important that the EROI of *individual* technologies, is the EROI of a future 100% renewable *system*, taking into account the need for large amounts of storage and/or excess plant to deal with the problem of intermittency. Unfortunately,

Ultimately Sarkar's case would be far more persuasive if he restricted himself to making the more modest claim that renewable energy – due to the biophysical drawbacks reviewed above and their dependence on non-renewable metals and minerals etc. – will only be viable within the context of an alternative socio-economic system, based on far more frugal energy requirements. In this more restricted form, the argument has strong, if not currently decisive, empirical support (Trainer 2017b; Moriarty & Honnery, 2016). There is also a very strong case that renewable energy systems – notwithstanding their current rapid growth – will simply not be able to be scaled up sufficiently over coming decades for humanity to stay within a safe carbon budget, unless there is a concurrent process of economic degrowth (Hickel, 2016). To this one could add the pragmatic argument that the chances of persuading the modern green movement of entirely rejecting renewable technologies are remote in the extreme. It is hard enough persuading them that renewable optimism (in the sense defined above) is likely to be flawed. Even if Sarkar's pessimistic view regarding non-viability turns out to be valid, eco-socialists would be wise, today, to ignore this possibility and proceed on the assumption that renewable technologies have the potential to sustain future (low-energy) societies.

In any case, one can see that the debate over renewable energy has huge implications for socialist theory. If it is true that renewable technologies can deliver far less net energy than fossil fuels, it follows that modern industrial-affluent societies will have no choice but to go through a process of economic contraction, whether that is carried out by design or disaster.

What does John-Bellamy Foster have to say about the potential difficulties associated with transition to renewable energy? Unlike many in the climate movement, including some eco-socialists, he is certainly aware that “obstacles to such a transition are much greater than is usually assumed” (2013) However, his main reason for thinking this is *not* due to the inherent physical drawbacks of renewable energy. Rather the main challenge, as he sees it, lies in the unprecedented task of transitioning to an entirely new 100% renewable energy system, especially within the brief time-frame mandated by climate science.

The biggest barrier is the up-front cost of building an entirely new energy infrastructure geared to renewables rather than relying on the existing fossil-fuel infrastructure. Construction of a new energy infrastructure requires vast amounts of energy consumption, and would lead—if current consumption and economic growth were not to be reduced—to further demands on existing fossil-fuel resources.

Foster draws here on the ideas of ecological economists who refer to an emerging ‘energy trap,’ whereby the transition to a new energy system – and particularly renewable technologies – requires such a huge upfront investment in energy (today in the form of fossil fuels), that it risks increasing the cost of energy beyond what the wider economy can tolerate, potentially resulting in economic downturn (King, 2016, Floyd, 2015). This leads Foster to conclude (2013) that the transition can only be achieved ‘via a tectonic shift in the direction of energy conservation and energy efficiency,’ which ultimately requires transition to a steady-state economy. This in turn requires:

there are few studies that have looked at this question in detail. A recent attempt by Ted Trainer estimates that for Australia a future 100% renewable energy system might yield an EROI of between 7:1 to 5:1. Certainly this is quite low compared to the EROI enjoyed in the fossil fuel epoch, but even so it suggests, contrary to Sarkar, that a modern renewable energy system is *viable* in the energetic sense.

not just a new, more sustainable technology, greater efficiency, and the opening of channels for green investment and green jobs; it requires an ecological revolution that will alter our entire system of production and consumption, and create new systems geared to substantive equality, and ecological sustainability.

Both Foster and Sarkar, therefore, agree that the transition to 100% renewables will be increasingly challenging, requiring nothing less than the revolutionary transformation of society. They both criticize those (dominant) sections of the climate movement that frame the challenge as a simple struggle against fossil fuel companies, with the implicit assumption that a renewable energy system can sustainably power consumer-capitalism. But they nevertheless articulate very different views about the potential of renewable energy. For Sarkar, these technologies have essentially no useful role in the transition to frugal eco-socialist sustainable civilization. Foster, on the other hand – like most in the environment movement – sees the rapid uptake of renewable energy technologies as pivotal albeit in the context of a wider revolutionary struggle for a new eco-socialist civilization.

9. THE REVOLUTIONARY SUBJECT

The final area of divergence between these two eco-socialists relates to the ‘revolutionary subject’ – that is *who* will be the agents of social transformation. Foster is putting his hope in the emergence of “environmental working class” forged out of the converging economic and ecological crisis of capitalism. As he puts it:

How will the necessary revolutionary transition come about? I am convinced that objective forces today are progressively erasing previous distinctions between workplace exploitation and environmental degradation—as capitalism universally undermines all real-material conditions of production. This dramatic change is occurring more rapidly in the global South than the global North. As a result, we are seeing in places as diverse as China, India, Egypt, Turkey, South Africa, Brazil, Bolivia, Ecuador, and even parts of North America (for example in the larger movement growing up around Canada’s indigenous-led Idle No More) the emergence of what could be called an “environmental working class” arising out of wider alliances of oppressed groups around degraded material conditions.

It must be said, however, considering the recent election of Donald Trump, as well as the strong electoral results of various neo-nationalist parties across Europe, it is not at all obvious that the working class will respond to economic/ecological crisis in the way Foster hopes. These electoral results, widely interpreted as a rebellion against the neo-liberal establishment with key support among the old industrial working class (i.e. Fotopoulos, 2016) are motivated by *no* discernable environmental concern – indeed often active hostility – but rather a desire to restore economic and cultural privileges, now perceived to be eroding by rising inequality and declining rates of economic growth.

Sakar by contrast sees no *special* role for the working class. After all, a process of economic contraction is not in the *material* interests of any class grouping within society, not least the working class (1999, 227). Thus, unlike Marxists of all kinds, he sees no class as having a critical role to play – except perhaps among the leadership ranks, which throughout history have usually been disproportionately drawn from

the educated upper and middle classes. Otherwise, for Sarkar, the revolution will be made up of ‘anyone who cares about the state of the world’ (1999, 230) which can be found among:

All classes or strata of society – except perhaps among entrepreneurs, who must demand economic growth, without which they are in danger of going bankrupt. Eco-socialists would be the most active among those who care.

Nevertheless, in practice if not theory on this subject the views of both theorists are not irreconcilable. After all, Foster does not think the “ecological working class” can achieve its goals without forming coalitions with other groups, including environmentalists. Perhaps Foster could then agree with Sarkar that the ecological revolution will be forged from the ranks of “anyone who cares”! In any case, it seems to me their more fundamental differences lie in the nature and goals of the revolution, rather than who will be its agents.

10. CONCLUSION

This critical review has made clear areas of major theoretical divergence on a range of critical issues, between two leading eco-socialist theorists: Saral Sarkar and John Bellamy Foster. As has probably become clear throughout the report, my views – and, I would suspect, advocates of simplicity more generally – are closer to Sarkar’s than Foster’s, but I have offered critical reflections on the ideas of both where appropriate. Hopefully it has been made clear that eco-socialism is not a ridged inflexible doctrine, but an important and diverse body of thought that, although often marginalized in environmental circles, deserves to be considered and debated within our movements, as we struggle for a way out of the ecological crisis, and towards a better future.

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