

SUSTAINABLE DEVELOPMENT IS A DEAD-END: THE LOGIC OF MODERNITY
AND ECOLOGICAL CRISIS

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ABSTRACT

This paper examines the theory of sustainable development presented by Jeffrey Sachs in *The Age of Sustainable Development*. While Sustainable Development ostensibly seeks to harmonise the conflict between ecological sustainability and human development the paper argues this is impossible because of the conceptual frame it employs. Rather than allowing for a re-conceptualisation of the human-nature relation Sustainable Development is simply the latest and possibly last attempt to advance the core idea of western modernity — the notion of self-determination. Drawing upon Hegel's account of historical development it is argued that Sustainable Development and the notion of planetary boundaries cannot break out of a dualism of nature and self-determining agents.

KEYWORDS

Sustainable Development, Jeffrey Sachs, Planetary Boundaries, Hegel, Modernity, Self-determination

The notion of Sustainable Development (SD) had its first articulation in the 'World Conservation Strategy' from 1980, but it has its most well-known manifestation in what has come to be called the Brundtland Commission from 1983. The report produced by the commission, *Our Common Future*, endures as one of the most influential expressions of SD. The Brundtland commission set the agenda for much subsequent discussion in academia, civil society and politics. It remains an important policy document to this day. At that time there was an increasing recognition that the natural environment was being dramatically damaged

by economic development and that this development needed to be curtailed. The emerging western concern to protect the natural environment raised fears amongst poorer nations that environmental protection would limit their potential future economic development, precisely because of the limits environmental protection could place on access to resources. This report was commissioned by the UN General Assembly to develop an approach and policy that might resolve this conflict. The challenge for the commission was how to reconcile these ostensibly opposing aspirations: protection of the environment and economic development.

The remarkable conclusion of the commission was that these two aspirations were not incompatible. The vision of SD that is developed in this complex and detailed report charts the economic and policy framework by which this conflict could be resolved and thereby provide the basis for a new and ongoing form of economic development. The concept of SD described in this report is encapsulated in its most famous sentence:

SD is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Brundtland, 1987: 43)

The conception of SD presented in this report is far more complicated than this sentence encapsulates, nevertheless this basic idea continues in contemporary articulations of this project. The primary concern of this report is admirable: justice for those who are poor and disadvantaged in the present, while also recognising that past and present damage to the natural environment may preclude future generations realising their potential. SD is therefore extraordinarily ambitious, since it has to provide the conditions under which *all* human beings can pursue economic development in perpetuity.

My analysis of the notion of SD will focus on the way it is described by the renowned economist Jeffrey Sachs, in his recent extended treatment of the topic, *The Age of Sustainable Development* (2015). Sachs is a leading figure in this field, a professor of SD and health policy at Columbia and has been a senior advisor to both Kofi Annan and Ban Ki-Moon. (The latter wrote the foreword to the book.) In line with the original proponents of SD in the Brundtland commission report, Sachs' recent articulations take up SD's explicit goal of protecting the physical basis for the survival of humanity. This aspiration has a number of key platforms, usefully summarised by Sachs (2015: 3-4), that provide the normative framework for evaluating and developing a good society:

1. Widespread economic prosperity.
2. Social inclusion and cohesion.

3. Good governance in the state, civil society and corporations (without which both points 1 and 2 are illusory).
4. Environmental sustainability: ‘The environment is protected from human induced degradation’.

My focus will be on the fourth claim. Ostensibly this last claim provides the basis for preserving existing ecosystems and habitats and even rehabilitating damaged ones. With regard to the protection of the natural environment in Sachs’ theory of SD, the motivation for protecting the natural environment from human degradation is *only* considered insofar as it is a condition for securing a natural world that can sustain human beings.

The holy grail of SD is providing the conditions for humanity’s ongoing survival while still allowing economic growth. This is where the notion of ‘planetary boundaries’ becomes critical. It plays a central role in Sachs’ work. The term is most associated with Johan Rockström, who has led research on this topic at the University of Sweden, and with whom Sachs has co-authored a number of papers. To re-deploy an image of Hans Jonas’s—if the natural environment is the tree branch upon which human beings are sitting that supports human life, then planetary boundaries is concerned to examine two interrelated systems: on the one hand, just how heavy the beast sitting on the branch can be before the branch breaks; and on the other hand, how we might understand the branch that supports the human beast so that we can make it strong enough to support us (Jonas, 1984: 7). The idea of planetary boundaries is an explicit attempt to determine the point at which damage to the natural environment will prevent human life from being able to sustain its ongoing economic development.

Besides its model of economic development, SD aspires to reconnect humans to the ‘biosphere’, but it provides no theoretical basis for doing this. My claim is that rather than allowing for a re-conceptualisation of the human-nature relation it is simply the latest, and possibly the last attempt, to advance the core idea of European modernity—the notion of self-determination. SD assumes that what it is to be human is to express freedom in a certain form, through economic development, SD is concerned to maintain this freedom by controlling the one thing that restricts it: the newly found vulnerability of the natural world. Rather than attempting to show the way in which humans are an integral part of nature, it maintains the dualism of self-determining and free individuals who are separate from nature. Drawing on the resources of Hegel’s account of historical development I argue that this approach

represents a dead end, because it seeks to advance a notion of self-determination that has run its course, precisely because it is set against the natural world.

PLANETARY BOUNDARIES

The Holocene (the geological period humans have been living in for the last 11,700 years or so) figures large in much of the discussion of the Anthropocene, planetary boundaries and SD. The Holocene is described by Rockström as providing a

reliable source of goods and services delivered from a stable equilibrium of forests, savannahs, coral reefs, grasslands, fish, mammals, bacteria, air quality, ice cover, temperatures, freshwater availability, and productive soils. ... The point of this story is as simple as it is dramatic: we still depend on the Holocene for our prosperity and wellbeing. It is the garden of Eden for our civilizations. (Rockström, 2015: 32-3)

The Pleistocene period that preceded it, according to Rockström, had significant climatic variability and was in general significantly colder, with vastly more of the earth periodically covered in ice sheets; at its coldest approximately 30% of the earth was covered in ice during this period. There was extraordinary variability in freshwater availability because it was stored in these ice sheets. By contrast the Holocene is characterized by a warmer and very stable climate. This, so the story goes, provided the condition by which humans could move from being hunter-gatherers to developing agriculture in largely sedentary communities, which in turn provided the basis for the development of the modern societies.

There is a parallel between this account of the emergence of the Holocene and Rousseau's, on the surface, implausible genealogy of human development in his famous account of the emergence of human beings out of the state of nature into civilised society in the 'Discourse on the Origin and Foundation of Inequality Among Men' (1997). The striking difference between the two narratives is that whereas Rousseau thinks the arrival of the conditions for civilisation is the beginning of humanity's fall, because the dependency upon one another that is cultivated by this communal living makes us weak and sick, Rockström by contrast thinks 'Eden' is created by these conditions. These stable Holocene conditions are Rockström claims the *only* conditions that can support the earth's population, since these are

the conditions that have allowed there to be 7-8 billion of us. Rockström claims that DNA analysis reveals, by some accounts, that during a particularly cold and dry period in the Pleistocene period there were as few as 15, 000 adult humans huddled together in what is today northern Ethiopia before a few of them crossed the red sea and dispersed across the planet (Rockström, 2015: 31).

If this Holocene stability is threatened, which is what is at stake in the Anthropocene, then human life in its current form is at risk. Human development, pollution and the exploitation of the natural environment have placed an extraordinary pressure on the resilience of the stable Holocene biosphere.¹

The complexity of natural systems makes it very difficult to determine how their key elements interact. Carbon emissions, ocean acidification, freshwater use, land degradation, biodiversity loss and so on are all capable of interacting in ways that so degrade the earth's resilience that it might trigger critical thresholds that permanently destroy the stability of the Holocene. Because of the complex nature of the interactions between climate, biodiversity, freshwater, the oceans and ecosystems, climate scientists can only make an educated guess as to which human action has the most risk of causing catastrophic change in the earth's biophysical systems.² The study of planetary boundaries is aimed at understanding, as best as possible, what human intervention in the natural world is likely to trigger these changes and the damaging positive feedback processes that would result from them. There are many activities that the human being sitting on this tree branch is undertaking that damage the branch, but which precise ones or the interaction between which exact ones might cause the branch to break or become precariously unstable, is a very difficult business to determine. The interrogation of planetary boundaries is particularly concerned that changes to climate, ozone and ocean acidification could lead to the melting of polar ice sheets, events that would change the 'Holocene equilibrium' in such a way that no human intervention could correct it.

SD theorists like Sachs and Rockström are concerned with the loss of biodiversity, but the focus is not the loss of species as such, but that the loss of an individual species or the introduction of invasive species that could 'undermine the ability of ecosystems to keep functioning', which might cause the permanent degradation of coral reefs or the destruction of rainforests and savannahs (Rockström, 2015: 75). The concern is not with these complex biophysical systems in themselves but only insofar as they sustain human life. Sachs' book is plastered with endorsements from prominent figures, from Jared Diamond to Sir Nicholas Stern. His 500+ page book on SD has 14 chapters; *only one* is concerned directly with

ecology and biodiversity. That is, the primary consideration of this immense study of SD is not for the viability or the value of those ecosystems but primarily only insofar as those ecosystems provide the essential stability, the ‘ecosystem services’, that is their capacity to provide as the long passage above remark ‘reliable source of goods and services’ that allows human flourishing (Rockström, 2015: 32).

In this context the broad concern is to establish just how much of the freshwater, biodiversity, carbon sinks need to be preserved, and how much of the earth’s ice-free land can be developed and cultivated, so that we do not cross the dangerous thresholds that would threaten what remains of the Holocene stability in the Anthropocene. Ascertaining and then respecting these parameters or planetary boundaries can provide thereby:

a safe operating space for humanity, marking the planetary playing field within which humanity can innovate, pursue social and economic aspirations, experiment with different technologies, and apply different governance and political systems. It leaves plenty of room for a myriad of options as long as we live on a planet in good shape. (Rockström, 2015: 67, my emphasis)

A recurring theme in the SD literature is that politicians are afraid of sustainability goals because they can’t think of economic growth other than in terms of exploiting a planet they consider to be a ‘magic pudding’: abundant, inexhaustible, and governed by such powerful processes that the impact of collective human agency was insignificant. SD does not of course share this delusion; it is acutely aware that collective human agency could (if it has not done so already) cause broad-scale ecological collapse.

SD argues that by understanding planetary boundaries continued economic growth is entirely possible. SD within planetary boundaries provides a new technologically sophisticated domain in which it is possible to develop an entirely new type of economic innovation that is governed primarily by the ‘safe operating space of science-based goals’.

Sustainability, after all, isn’t limiting. In fact, it encourages innovation in the same way that the lines in a soccer field make Lionel Messi’s brilliance possible. If you know where the boundaries are, you can be a virtuoso of economic growth as creative as Zlatan Ibrahimovic is with the soccer ball. By defining *a safe operating space*, we can both preserve the natural world and pursue our own prosperity at the same time. (Rockström, 2015: 194, my emphasis)

The more we are able to operate within this ‘safe operating space’ the more we allow the earth to develop its resilience, which provides a further sphere in which to absorb human action, which in turn would provide the basis for an era of ‘abundance within planetary boundaries’ (Rockström, 2015: 163). Understanding planetary boundaries allows us to keep the branch supporting human prosperity strong.

A stated goal of SD and of theorists of planetary boundaries is to reconnect humans with the biosphere. My concern is that this approach has little theoretical resources to draw on to achieve this and it has no theoretical concern or framework with which it can reconceive the human-natural relation. I have no doubt that climate scientists such as Rockström have a deep regard for the natural environment. However, because their concern with the environment is framed exclusively by the economic and technological vocabulary of SD, they can make no coherent or credible claim to any value of nature beyond its *service* for human existence. And they do not attempt to do so.

The model of SD described by Sachs and Rockström does not provide the basis for rethinking the relation of human beings to their environment. Rockström’s popular work on planetary boundaries is co-authored with a photographer, Mattias Klum. His striking photographs have an important role to play in this work: they depict either horrific images of ecological devastation, which *corresponds* to the argument of the book, but then there are also numerous depictions of the beauty of the natural world, to which there is *no* corresponding argument and there is no attempt to articulate what a new relationship between human and animal life and the rest of nature would be or what the value of that natural world is beyond the ‘ecosystem services’ it provides. The idea of planetary boundaries is not concerned with the area outside the football field in-itself, nor does it seek to interrogate the human conception of this domain and how that might be a potential source of the problem modern humanity has made for itself. Its overriding consideration is to make sure that the area outside the football field is resilient *only* so that Ibrahimovic and Messi can keep scoring goals for eternity. Rockström and Sachs do not make any overt argument for the non-instrumental value of nature—that work is done, in the case of Rockström’s book, purely by the photographs. My concern in the rest of this paper is not to establish a new model for how we might think of nature or to enter the fray on the value of the concept of nature itself. There are many attempts to think the value of nature across the range of philosophical perspectives: from idealism to utilitarianism, deep ecologists, Leopold’s land ethic and his contemporary followers, and the innumerable attempts to critique these ways of valuing nature that have

triggered important and ongoing debates in journals such as this. My approach here by contrast is to examine the discussion of SD from the perspective of world history, and especially the philosophical problem of modernity, and to show how it can be seen, from this perspective, as a desperate attempt to preserve the notion of self-determining freedom.

SUSTAINABLE DEVELOPMENT AND SELF-DETERMINATION

Sachs recognises that the animating tension of the modern world is the incompatibility of economic development with a self-sustaining natural environment. Economic development, if it continues on its current model, will ‘burst through’ the planetary boundaries causing ecological devastation. He sees this tension resolved only by the development of a model of economic development that respects the ecological realities of planetary boundaries. He appeals to the threat crossing them represents to reinforce the need for the global adoption of SD. There are lots of well-informed and well-intentioned suggestions — analyses of energy, population control, agriculture and so on — all of which are significant interventions into reconfiguring the framing concerns of public policy to demand that it be more mindful of the need to sustain nature’s resources for future generations.

For all the admirable aspirations of this approach, it does not challenge the fundamental assumption of western modernity—that there are no limits to self-determination, a concept that has a central role in causing the current global ecological crisis (Lumsden, 2018). The primary consideration for SD is to provide the conditions by which earth’s biosphere can be stable such that humans can continue the development paradigms that enable their economic prosperity. ‘We are therefore faced with the most important challenge of sustainable development: how to reconcile the continued growth of the world economy and the sustainability of the earth’s ecosystems and biodiversity’ (Sachs, 2015: 195). The methodology of the empirical sciences and economics are the sole tools by which we can ascertain how to undertake human development such that it does not impact significantly upon those conditions that ensure the stability of the earth’s biophysical processes.

One has to question how seriously the latter part of this challenge figures for SD theorists like Sachs, since the predominant weight of their concern is the ‘services’ the ecosystem provides humanity not the ecosystem in themselves. For the West, and increasingly the non-western world, self-determination is a form of self-realisation that is

expressed in resource intensive practices and patterns of high consumption. From the perspective of what might grandiosely be described as world history SD looks like a defiant attempt to preserve these material intensive freedoms without fundamentally challenging their animating idea. To understand why SD represents a dead end of historical development I want now to turn to key aspects of Hegel's thought on the philosophy of history.

Spirit is the broad term that German idealists like Hegel, Fichte and Schelling employed to capture the human derived realm of values and norms, as well as the vast array of social and political institutions and other forms of collective human life. Spirit is both human thinking and the succession of collective acts by which we have made ourselves into the beings that we are. A central issue in the philosophical shift from the pre-modern to the modern concerns the nature of the authority of a culture's norms. The standard interpretation of this division in philosophy runs like this: in the non/pre-modern world norms get their force on the basis of an external authority; there is something (the divine, religion, a natural order or tradition) beyond human control to whose authority we must submit since these forces are immutable. In modernity this is replaced with the idea that norms are collective human achievements, acts of spirit's self-production. This is the fundamental idea of modernity; rather than there being some external force to which we must submit, something that holds us in line because it has absolute power or unquestioned authority, in modernity the norms are willed and imposed upon ourselves because we are rational. This is what gives modernity its defining attribute— that it is self-correcting. What that means is that modernity is the era in which there is a reflective understanding of itself as self-produced, that is, it knows itself to have made itself into what it currently is. Critically, this reflective aspect allows it to recognise its limits and contradictions and attempt to overcome them to produce new more rational norms and institutions. In modernity there is a self-consciousness of humanity's capacity to be self-transforming in a way that pre-modern societies, which relied on an authority external to them, rather than their putative rationality, could not.

Self-determining freedom is the core idea of western modernity.³ Charles Taylor nicely summarises this animating idea of western modernity: 'We are free when we can remake the conditions of our own existence, when we dominate the things that dominate us' (Taylor 1992, 101). In his subjective spirit Hegel describes the central idea of European spirit, self-determination, this way: as 'reason, which has the confidence in itself that for it nothing can be an insuperable barrier, and which therefore invades everything in order to become present to itself therein' (Hegel 2007a, §393). Practically, Hegel claims that this is manifested

in the domination of nature. Hegel's account of the idea and origin of European modernity is not a manifesto of what cultures *ought* to do, that is, he is not claiming the domination of nature as a necessary feature of freedom. His concern is rather to comprehend the concept that underpins modernity, from Bacon to Kant, which is that we are free when we can control that which had dominated us: the natural world and in particular our own animal natures. This view is most influentially articulated in Locke's thought, for whom the natural environment provided the resources for self-determination, and self-determination was marked by the transformation of and independence from nature.⁴

Modern self-determination is built on the idea that nature is a resource and that the control of nature allowed the freedoms of political society to be possible. Human history is the product of self-conscious agents; natural history is the product of causal forces. Kant, for example, in the 'Conjectures on the Beginning of Human History' describes human dominance of nature as a 'prerogative'; nature is 'means and instruments to be used at will for the attainment of whatever ends he pleased' (Kant, 1970: 225). The current ecological crisis that the Anthropocene announces has demonstrated that self-determination in this form is no longer possible, because the resources that enabled it are finite and without them there is no self-determination.

The challenge for SD is to establish a model of self-determination that allows humanity to pursue development in perpetuity by ensuring the planetary boundaries are secure. That is, just as with Kant, humanity's unique status as self-determining is achieved when we are '*release(d)* from the womb of nature' (Kant, 1970: 226). This modern narrative of freedom through liberation from the domination of nature is powerful. SD does not contest this idea; it takes it to its extreme. The Anthropocene has shown this subject-object split to be illusory—modern agency rather than being released from the womb of nature *has now come crashing back into nature* (Chakrabarty, 2009).

Theorists of SD like Sachs appreciate, in some sense, the rich complexity of human dependence on the natural environment, but the basic assumption is that we are set over and against it by virtue of the fact that we can impose laws and norms upon ourselves that we act in accordance with. We are free precisely *because we can determine* ourselves, whereas the rest of nature is determined either by us or by causal natural forces. Nature provides us with services that we must regulate and control to ensure the ongoing prosperity of humanity. If it can be accepted that self-determination underpins SD and planetary boundaries, there are two further implications that we can take from Hegel's thought to help us understand what is

problematic about how it is pursued by SD. While Hegel's philosophy of history might not at first sight seem the most likely intellectual resource for understanding SD, two essential features of Hegel's thought can help us explore its core limitation. The first is Hegel's conception of historical development, and the second is the logic of the understanding [*Verstand*].

A 'shape of life' or a 'shape of spirit' is the term Hegel uses to describe the practices, material life and ideas of a specific manifestation of spirit. What makes a specific culture not just a contingent assemblage of social practices is that the shape of life is governed by the 'Idea', which, broadly conceived, is that which makes the reasons and norms authoritative for a shape of life.⁵ World-historical cultures⁶ are those that have a self-consciousness that the norms that govern its practices, institutions and forms of social organisation, through which those norms are lived, are collective human achievements. There is a specific dialectical developmental path by which world-historical cultures develop. Venturing into the details of Hegel's dialectic would take us far beyond our immediate concerns, nevertheless we need to see something about the role of the negative, a key element of the dialect, in these transformations.⁷ In Hegel's logic the negative occurs when a thing ceases to be what it is, for example in Hegel's abstract formulation in his *Logic*, pure being pushed to its limit shows a necessary relation to nothing. In Hegel's objective spirit (his social, political and historical thought) the logical form of the negative — when a thing ceases to be what it is — is expressed as the way in which a concept or norm reaches their limits and lose their authority.⁸

It is a complex story but essentially the way history develops for Hegel is that a culture's core concepts develop as the norms, practices and material life of the culture. As Hegel describes this process in his philosophy of history those norms eventually become inflexible customs, that is, customs and practices that just perpetuate themselves (Hegel's term for this is second nature) without a living connection to the purpose that motivated them and this is the point at which a culture begins to atrophy (Hegel, 2011: 158; See Lumsden, 2016 for a detailed discussion of this process). The negative is central to the dialectical movement by which the normative transformation takes place. A dissonance emerges between, on the one hand, norms that have become inflexible habits or customs, which repeat themselves because they are second nature, and on the other hand, the demands of a new era. This is the point at which the negative shows those norms to be untenable. A favoured example of Hegel's is the ancient Athenian conception of freedom, which pertained only to *particular* classes of male Athenians. There comes a point when the authority of this central

concept of Athenian life reaches its limits. The core social and political idea of Christianity is that *all* are free. While this might come to be recognised in some incipient sense at the end of the Roman era, nevertheless institutions and forms of life persist long after that perpetuate this much more limited conception freedom. These practices are sedimented in the material culture, beyond the point at which the reason that lay behind them (that freedom is the privilege of the few) can be considered an intelligible reason to legitimate those practices and institutions. In Hegel's technical language, which will be elaborated further below, this holding onto and adhering to a norm or practice in an entirely one-sided manner is characteristic of the understanding [*Verstand*]. The experience of this dissonance is the marker that a shape of life is becoming untenable. In the Anthropocene we can see this in the material heavy practices, norms and habits of modernity and the *comprehension* that these are out of alignment with a flourishing and self-sustaining ecology.

From the insufficiency of a shape of life, where norms have begun to show that they are no longer authoritative, nevertheless new concepts and their material objective structures emerge to meet new challenges, and thereby form a new shape of life adequate to the needs of the present. In the dialectic this is where reason kicks in: 'If true and universal interests are to arise then a people must aspire to something new. ... But from where is this to come if the principle is already produced? The new can only entail a surpassing of that people's principle' (Hegel, 2011: 160-1). Reason, as we will see in a bit more detail shortly, has the speculative role of being able to recognise the contradiction between the out-dated norm and the existing state of affairs and propose a new concept that can resolve this situation. One might argue that SD is an attempt to do just that—it develops a new concept with which modern culture can correct the obvious insufficiency of its current shape of life by allowing it to respond to ecological crisis. Such an interpretation would be a mistake. SD does not resolve the problems of modernity, it simply tries to pursue the core notion of modernity, self-determination, while recognising that the poor management of the environment is a constraint on self-determination.

SD represents not a correction to the fundamental problem but is an intractable attempt to force the animating concept of a shape of life that has grown old to be adequate to the challenges of the present. Its path is one sided and in some sense tragic, as it cannot see that the norm that it is seeking to continue into the present is no longer fit for the age; it pursues its concept without confronting the core conflict and contradiction.⁹ SD is entirely circumscribed by the logic of modernity. It does not challenge its basic assumption that

human beings can determine themselves largely independent of nature. For SD we require nature to sustain humanity, but we determine it, it does not determine us. SD remains an exemplification of the confidence in a self-correcting modernity that can respond to all vulnerabilities. It perpetuates the idea that the natural world is something controllable, a limit that can be incorporated back into self-producing spirit (Tubbs, 2018, offer an interesting Hegel inspired challenge to this division). SD in a sense claims that self-determination can finally be *realistically* achieved, as we now have a better insight into self-determination because we have the right techno-scientific know-how to manage the environment, and so we can empirically ascertain the vulnerabilities that make our ongoing self-development potentially thwarted (Blühdorn, 2015).

SD is built on a fundamental paradox: on the one hand, it rightly asserts that the approach to the natural environment of modernity is based on the false assumption that biophysical systems are infinite and resilient in the face of human exploitation of them; on the other hand, it seeks to establish the conditions for ongoing human development by maintaining *human control of natural systems* so that future generations can continue to develop themselves.¹⁰ There is no change to the fundamental modernist assumption that human beings produces themselves, they make themselves into who they are and nature is outside that process of self-production. Nature provides the condition for this self-production, yet we are not part of it, beyond its requirement to provide us with ‘ecosystem services’.¹¹ All that has shifted in SD is the realisation that the condition for humanity’s self-production is not infinite.

Sachs argues that wealthy countries do not need to give up economic growth to free up surplus capacity to allow other countries to develop. By choosing ‘the right technologies we can achieve continued economic growth and also honor the planetary boundaries’ (Sachs, 2015: 215). The right mix of economics, technology and science can allow humanity to pursue economic growth sustainably. This will allow the ‘decoupling’ of growth and damage to ecosystems. Decoupling: ‘means that growth can continue while pressures on key resources (water, air, land, habitat of other species) and pollution are significantly reduced rather than increased’ (Sachs, 2015: 217). Again the appeal to planetary boundaries is instructive: SD aims to reduce pressure on the key resources otherwise the boundary is crossed and the ‘playing field’ for economic development might be irrecoverably degraded. Decoupling is a clear overstatement. Decoupling is designed to relieve ‘pressure’ on the planetary boundaries rather than being an explicit concern to allow biophysical systems to flourish with minimal

interruption from human culture. In this case SD seeks to make nature resilient only insofar as it keeps the branch supporting human development strong.

SD is not concerned to reposition human freedom in relation to the limit it has encountered with ecological crisis. That is, SD agrees with the basic assumption of modern self-determination with one modification: we can only sustain ourselves permanently as self-determining agents when the material basis of that self-determination is managed correctly. SD's primary assumption is that self-determining freedom has a limit *only* in so far as it undermines nature's resilience.¹² SD does not require us to think the limits of self-determination; its concern, as we have said, is simply to measure and predict the point at which the exploitation of nature is unsustainable for human economic development. Understanding this boundary allows humanity to perpetuate their current material realisation of freedom because it then has the required model of resource management to preserve that freedom. It has no intellectual resources for locating human beings as part of nature; the relationship to nature is entirely instrumental: it is the material condition for human self-realisation.

The enlightenment conception of the freedoms of modern life locate it primarily in rights and/or natural laws, and institutions that enforce and cultivate those rights. These are significant achievement of modern life, but what this rational view of the development of freedom does not consider is the materiality by which much of modern freedom is lived. The achievements of modern life have not simply established human beings as abstractly self-determining agents; those freedoms have a material form, and that material form persists through habits and customs that have considerable momentum. Capitalism and the market economy have ensured that the freedoms to which much of the world aspires are built around high levels of consumption, which increasingly underpins much of the world's social interaction. Modern self-realisation is tied to the consumer economy in a way that guarantees for the foreseeable future heavy resource dependence and models of development that will pollute and damage the natural environment. While SD is concerned to mitigate damage to the environment insofar as it interferes with our ongoing capacity for material self-realisation it does not and cannot confront the human-nature relation, it simply ignores it by arguing that we do not have to concern ourselves with it because technology and scientific measurement can preserve the current socio-economic order.

SD strives to keep the existing socio-economic model advancing into the future without confronting the basic values on which this system is built. As Blühdorn puts it: 'the

more this eco-politics ... acquired the hegemonic status it today maintains, the more did contemporary societies lose their ability, ... to even *think* what they might want in terms other than those of technological innovation, individualised consumer choices or emissions trading, all of which reinforce rather than challenge the logic of liberal consumer capitalism' (Blühdorn, 2016: 160). SD continues a view of freedom tied to the market driven materiality of self-realisation. Its only concern is to provide the conditions by which the self-production of autonomous agents and the participatory social structures that sustain this dominant form of material life can continue. The complex nature of our dependency on and relationship to the natural world does not figure in how that freedom is lived; we simply keep on doing what we have been doing before, *but better* because we now have 'a safe operating space for humanity, marking the planetary playing field within which humanity can innovate, pursue social and economic aspirations' (Rockström, 2015: 67). This continues the polarity between the inside, which contains humanity, and the outside of the natural world. Hegel's various lectures on the Philosophy of History and his *Phenomenology of Spirit* describe the way in which the norms that animate a shape of spirit are embodied in material pathways in the habits of agents, the customs, culture and institutions of a society. A culture starts to collapse when it experiences a lack of fit between its animating norms and the needs of the present. This forms the basis by which spirit transforms itself into a more rational shape that can reconcile the divisions that have started to cause the collapse of a shape of life. But the transformation into more adequate forms of life involves the concepts that animate a form of life developing to the point at which they collapse, which, as we have seen, is the point at which their explanatory potential is exhausted.

The understanding (*Verstand*) has a critical role in logical and historical transitions. There are two elements to the understanding: the first is its capacity to be static and isolating. It abstracts concepts and makes them rigid by isolating them from the dynamism of the whole. 'The activity of separating is the force and labor of the *understanding*, the most astonishing and the greatest of all the powers' (Hegel, 2018: §32). The isolating capacity of the understanding is powerful, and this leads to its second attribute, a negative power that is destructive.

To be sure, the understanding does give them through the form of abstract universality a *rigidity* of being, so to speak, ... but by thus simplifying them, the understanding at the same time *quicken*s them *with spirit*, and it so sharpens them that only at that point, only there, do they also obtain the capacity to dissolve themselves and to pass

over into their opposite. The ripest maturity, the highest stage, that anything can attain is the one at which its fall begins. (Hegel, 2010a: 539).

SD is illustrative of this isolating logic of the understanding: it pushes the notion of self-determination to the extreme. For all SD's awareness of the damage of collective human action on the natural world, it does not challenge the basic enlightenment division of human beings set over against nature. That is, while SD understands the paradox — that control of nature has landed us in this global ecological crisis, but human development requires further control of nature for human ends — it responds to that vulnerability by digging itself further into the modern model of material existence. What we see here is an attempt to keep hold of the same concepts that have animated modern life — self-determination, self-production, economic development — without confronting their adequacy. The question has to be asked if these concepts still fit the world we now inhabit.¹³ What needs correcting is the relationship to nature but instead what we get with SD is further consolidation of the border between humanity and nature. In that sense it has reached the limits of modern self-determination; it is as though the material form of this shape of life has exhausted itself. SD understands that the problem is the relationship to nature but the structure of intelligibility it employs to confront it just further reproduces one side of the relation (human self-determination) itself rather than recognising the limits of its own of intelligibility. Understanding the planetary boundaries is a further attempt to consolidate the conditions by which it can materially reproduce the idea of self-determination. It isolates in a way that pushes its concept to an extreme point that is incapable of thinking the relation to what is other to it.

In conjunction with reason, the negativity of the understanding is a process (the dialectic) by which spirit transforms itself, since reason is able to see what the understanding has excluded and the necessity of the relationship between the opposing elements.¹⁴ What rational thinking, as opposed to the understanding, can recognise is that such fixed thoughts need to become fluid and it is only when such fixity is overcome that a new shape of spirit can realise itself. That is, what reason essentially recognises is that the knowledge claims of the understanding are incomplete, that its claims to truth are one sided and partial claims. The understanding cannot see this partiality. The understanding cannot see the lack of fit between its own claim and the whole. But this is clearly important for the dialectical movement since it is the recognition of the limitation of this claim that pushes thought on to make a more adequate claim. The dialectic is distinguished by a fluidity of thinking; it can recognise the power that pertains to the understanding, that it is essential to spirit's self-transforming

process. What the understanding cannot do is move beyond itself; it can only fix and isolate. It stops at the opposition. Only reason is able to think the opposition and resolve itself into a totality that overcomes the opposing elements.

SD pursues the notion that self-determination can be detached from nature: *we* are in the human playing enclosure with Messi and Ibrahimovic developing the technology that will somehow allow 10 billion of us and subsequent generations to achieve a high level of economic development, while nature is outside neatly confined within its own operating parameters and separated from us by scientifically reinforced guardrails:

to avoid such disastrous outcomes for humanity we need to define planetary boundaries to act as guard rails to keep us from accidentally going over the edge. These boundaries won't hinder growth or development, just as guardrails along a meandering road don't slow down the progress of drivers. (Rockström, 2015: 59)

What SD lacks is the speculative or rational dimension. Its 'understanding' logic cannot recognise that human self-determination is *already* beyond itself. Ecological crisis has driven modern freedom to the point where it has to reconsider its relationship to the natural world, to that which it takes to be opposed to it. But rather than finding itself in otherness, or being at home in otherness, SD just positions ongoing human activity behind the guardrails.

The approach I have adopted to examine the problems of SD is to apply the concepts and method of Hegel's philosophy of history to it, in order to understand why SD stands as a defiant attempt to hold onto the notion of self-determination. For all its good intentions, it is built on a model of self-determination that assumes the mastery, entitlement and control of nature.¹⁵ Moreover, this model of self-determining freedom cannot separate itself from the damaging material forms of life of modernity. Hegel offers a different model of freedom and one that has the potential to allow a very different relationship to nature.

What distinguishes nature and spirit for Hegel is that only spirit can *take its own existence as an object*. This marks a radical distinction between human life and the natural world.¹⁶ Modern philosophy, for the most part, develops this division by positing the high point of this reflective capacity in the achievement of autonomy or self-determined freedom. And moreover, as we have seen, this freedom is lived and advanced, in modernity, through the domination of nature. Hegel acknowledges the importance of self-determined freedom, which he calls abstract freedom, but this is just *one* aspect of a much richer and complex form of freedom that Hegel calls concrete freedom (Hegel, 1991: §5-7). '*Concrete* freedom means

that in whatever determines, limits, or negates me, I nevertheless remain at home with myself [*nur bei mir selbst bin*]’ (2007b: 67). While Hegel respects the core idea of autonomy, that is, the capacity for reflective examination of one’s norms, concrete freedom problematizes the standard model of autonomy, which he argues assumes that reflective rationality stands outside and above any social or normative context. It is that asocial and ahistorical perspective that is central to the authority of autonomy. In Hegel’s case, all agents, rational or otherwise, are inextricably part of a shape of life or spirit (Bates, 2014, elaborates this idea). But more specifically, the idea of being at home in otherness (concrete freedom) entails, as the phrase suggests, seeing what is usually external to us as determinate aspects of ourselves, that is part of our essential self-relation (Pippin, 2008: 10).

Concrete freedom is most fully articulated in the *Philosophy of Right*. In that work we come to think of those we love, rights, institutions and norms as essential to both how we understand ourselves and our freedom. That is, the thinking relationship to oneself involves a self-consciousness of how my self-relation is mediated through elements ‘external’ to me. I don’t just think of myself as abstractly free, but free because of the norms, social relations and institutions, which provide the condition for that being possible in the first place and through which one can actually live that freedom. There is an analogous discussion, though this aspect of his thought is much less discussed, in Hegel’s subjective spirit (2007a; 2007b). There he argues that the natural aspects of ourselves, which despite being so familiar to us, usually go unnoticed. That is, our ‘internal nature’ (desires, drives, bodily capacities and skills) is not standardly seen in modern views of freedom as an integral part of how we see ourselves as free and by which we project ourselves onto the world. Usually the opposite is the case: for example in Kant, autonomy is explicitly tied to the capacity to liberate oneself from one’s natural inclinations. Hegel’s subjective spirit shows us to be embodied and he wants that embodiment to be central to our self-understanding; it aspires to a reconciliation of our reflective capacity with our internal nature (Levine, 2015: 650).

The challenge for a properly Hegelian environmental philosophy would be, however, to extend this model of concrete freedom to, for want of a better word, external nature. This would require us to think of the broader environment (biological life and the geo-physical environment) in the same way as internal nature is considered in the subjective spirit. This is not something that Hegel directly considered; it is possible to extend the notion of concrete freedom to this domain, though certainly beyond the scope of this much more limited project to do so here. Nevertheless concrete freedom could allow us to think of all life and

biophysical systems not as simply the condition for human freedom, that is, something that has to be preserved by the planetary boundaries. Being at home in otherness (concrete freedom) does not turn the other into the same, that is, something simply for human benefit, but rather the ‘otherness’ in concrete freedom opens the possibility of ensuring, as far as possible, those others develop into what they can be, but which also form a part of my own self-relation and hence my freedom.¹⁷

In conclusion, my concern here is not to attempt to resolve the dualism that SD leaves us with but to show that Hegel provides us with a position from which to understand why this approach is limited. SD continues unquestioningly the internal logic of modernity. Whatever the way forward is, at least for Hegel, it has to be reason and not the understanding because only reason can make intelligible the limitations of this approach and confront the contradiction from which a way forward is possible. This of course is what much important environmental thought is and has been doing, my concern here has been simply to shine a conceptual-historical light on SD to show why from the perspective of historical development SD has taken the idea of self-determination to a point beyond which it cannot progress and the realisation of this is important in showing the determinate inadequacy of this approach.

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¹ See the most recent report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019), describing the current extent of species extinction and its prediction for catastrophic escalation.

² An influential analysis of the extent of the human domination of earth is presented in Vitousak, et al (1997). See also Jamieson’s (2014: 178-193) nice summary of these issues and their ethical implications.

³ There are rival accounts of modernity that do not necessarily see it as a peculiarly western phenomenon. For divergent takes on this theme see Eisenstadt (2000) and Koselleck (2002: 192-204).

⁴ This idea of the domination of nature, which pervades conceptions of freedom from Bacon to Fichte, is not explicitly rejected by Hegel in the *Philosophy of Right*, though he does criticise the model of freedom that underpins it. The Logic, especially the way it describes the organism offers a potential alternative for thinking of all biological life other than domination. See the discussion in Alison Stone (2005: 139-145).

⁵ As with all things in Hegel this is complicated. We can't explore the nature of this normative authorisation here, and the contestation in Hegel scholarship about how this might be interpreted. For a clear and important account see Pippin (2008).

⁶ The way Hegel describes world-historical cultures is notoriously Eurocentric, but the significance of his account of historical development as well as the notion of world-history can be abstracted from these problematic aspects of it. For the details of this, see the various introductions to his philosophy of history, Hegel (2011), and for a detailed discussion of this see Pinkard (2017)

⁷ There is a detailed discussion of its logical form in the Introduction to the *Science of Logic*: 'It is in this dialectic as understood here, and hence in grasping of opposites in their unity, or the positive in the negative, that the speculative consists' Hegel (2010a: 35).

⁸ For an elaborate account of the way the negative functions in Hegel's social and political thought, see Pippin (2008). This theme is pursued throughout the work but chapter 2 has the most concentrated discussion of it.

⁹ All this is not to say that one could not reconceive self-determination as a form of autonomy that is not primarily framed on the model of self-sufficiency and individual self-legislation of norms. Figures in critical theory such as Adorno have been interpreted as doing just that, which is a challenge to the standard modern account of self-determined freedom. See the numerous papers on these themes in Biro ed. (2011).

¹⁰ This paradox is nicely described in Dresner (2002: 147-8).

¹¹ For an interesting discussion and critique of this idea that draws on MacIntyre to argue for a model of autonomy that does stress our dependence on ecology, see Hannis (2015).

¹² Resilience is one of those terms that is endemic in neo-liberal discourse.

¹³ Clive Hamilton's recent provocative work (2017) does not challenge the basic modernist assumption.

¹⁴ For a clear elaboration of the difference between Reason [*Vernunft*] and the Understanding [*Verstand*] in Hegel's logic see the addition to §32 in his *Encyclopedia Logic* (2010b). There he elaborates on the rigidity of the understanding and the way in which reason overcomes its one-sidedness and rigidity: 'Reason's battle

consists in overcoming what the understanding has rendered rigid [*fixiert*]¹⁵. For a detailed and clear discussion see Nuzzo (2010).

¹⁵ For an illuminating discussion of this issue and an attempt to steer philosophy to a different footing that embraces our vulnerability and frailty, see Tubbs (2018).

¹⁶ Which side of this division complex forms of non-human animal life sit is a matter for debate that I can't enter into here, though generally Hegel would put animal life more on the natural than the spiritual side, but he is ambiguous on this issue. For further discussion of this see Bates, (2014)

¹⁷ For preliminary and very interesting steps in this direction see Bates, (2003) and Deranty, (2021).

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