A Defence of Hans Jonas' Critique of Modernity and Ethic of Responsibility

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Abstract

The present thesis is an original interpretation and qualified defence of Hans Jonas' philosophy. Jonas' thought constitutes a system, the purpose of which, I argue, is to rectify modernity's most critical ills: nihilism, the ecological crisis, and the threats to human dignity posed by certain biotechnologies. While these might at first appear disparate, Jonas shows that they are in fact interconnected: all originated in the anti-Aristotelian turn taken by Western thought in the sixteenth century – a theoretical event Jonas seeks to overcome by synthesising Heidegger's existentialism, Kant's ethics, and Aristotle's ontology. Previous commentators have tended to downplay Aristotle's influence on Jonas' system, and so I emphasise this aspect of his work.

I argue that Jonas' project is largely successful but fails in two key respects. Whilst he is able to develop a neo-Aristotelian ontology and a 'biogenic' axiology, his Kantian moral philosophy does not attain the sought-after objective status, while his political theory – as presented in *The Imperative of Responsibility* – is largely unpalatable. Jonas is, therefore, both unable to defeat nihilism and give his ethic a satisfactory political expression. As such, I uphold Jonas' theory of responsibility on relativistic virtue ethical grounds, and argue that its implications for bioethics and environmental ethics remain of great significance. Finally, I attempt to bolster Jonas' reputation as a political theorist by highlighting moments in his post-*Imperative* work which indicate that he was moving towards a republican conception of citizenship and the state, thus far overlooked by commentators.

With his system so corrected, Jonas stands out as one of the most profound philosophers of the post-War period, and a valuable guide for understanding and tackling the crises of the present century.

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Author's Declaration

Chapter One contains heavily revised material previously included in my dissertation 'Hans Jonas' Critique of Modern Technology: Power, Risk, and Responsibility', submitted in partial fulfilment of a Master of Research degree at the University of Exeter in 2014. This is in accordance with Point 2.1, Chapter 11, of the University of Exeter's Postgraduate Research Handbook.

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Introduction: Nihilism and Modernity

I. The Nature of Jonas' Philosophical Project

Hans Jonas (1903-1993) is little known in the English-speaking world, despite having had a significant influence on continental European environmentalism in the 1980s and 1990s.[1] His philosophy is here interpreted as a unified metaphysics, ethics, and politics, following in the German tradition of system-builders. The purpose of this philosophical project is practical, intended to confront the following ills of modernity: nihilism, the ecological crisis, and the biotechnological revolution. At first glance these might appear to be disparate issues. Jonas shows us, however, that they are in fact very much connected, following from the materialist, anti-Aristotelian turn taken by Western thought in the sixteenth century. Overcoming these crises – so I will argue – requires a retrieval, where possible, of the Aristotelian heritage. Although Jonas did not conceive of his work in this way, I believe it is this effort which fundamentally motivates it.[2] We shall see that for both its depth and foresight Jonas' thought is more relevant today than ever.

This thesis interprets, analyses, and ultimately offers a qualified defence of Jonas' project. My case rests not only on his individual arguments, but also on the power of his thought to synthesise the above concerns into a powerful, targeted critique of modernity. Since Jonas wrote relatively little the unity of his thought primarily emerges by taking together his classic texts, *The Phenomenon of Life* and *The Imperative of Responsibility*. The latter, in particular, bears favourable comparison to the great texts produced by Jonas' peers: Arendt, Gadamer, and Marcuse. However, I also make extensive use of Jonas' *Philosophical Essays*, *Mortality and Morality*, and the recently published *Organism and Freedom*, as well as a range of other articles and lectures, some of which are yet to be translated into English.[3] In so doing we can address what

[1] For accounts of this influence, both philosophical and political, see Schmidt (2013) and Schütze (1995).
[2] Jonas claims that "Aristotle didn't play much of a role" in his thinking, and appears bemused that so many people should feel that he did: "there was little I could do to keep myself from being classified as a neo-Aristotelian. I wouldn't have classified myself that way, but it's hard to defend yourself against others' views. At any rate, I wasn't in bad company" (*M*: 204).
[3] *Organism and Freedom* (*OF*) is not to be confused with *Organismus und Freiheit* (*OFA*), the 1973 German-language translation of *The Phenomenon of Life* (*PL*).

would otherwise be gaps in Jonas' thought, as well as providing crucial detail to his claims.

Before turning to our first topic – Jonas' analysis of modern nihilism – I will say a little about the character of his thought and where it fits in the history of twentieth-century German philosophy. As stated, his philosophy is a partial critique of modernity. The significance of that epochal transformation, beginning in sixteenth-century Europe, is its emphasis on empirical investigation and inductive reasoning over tradition and theoretical enquiry. The benefits accrued by modernity are readily apparent, above all the advances in healthcare, material security, and freedom from servitude secured for most of us in the West. This Jonas does not doubt: his critique of modernity is not social or cultural, although he does at times mourn the loss of custom in public life (*TME*: 57-59). His objections are to the consequences of modernity's materialist tendency: a worldview which brings ever-greater swathes of existence into its purview for technological manipulation, and – precisely *because* it does this – undermines any foundation for normative instruction as to whether it *ought* to. In Jonas' words:

> The crisis of modern man – at least one aspect of it – can be put in these terms. Reason triumphant through science has destroyed the faith in revelation, without, however, replacing revelation in the office of guiding our ultimate choices. Reason disqualified *itself* from that office, in which once it vied with religion, precisely when it installed itself, in the form of science, as sole authority in matters of truth. […] This situation is reflected in the failure of contemporary philosophy to offer an ethical theory, i.e., to validate ethical norms as part of our universe of knowledge. (*PE*: 170)

The challenge, according to Jonas, is to develop such an ethical theory, one grounded in a non-reductive ontology and which – when transposed to the political domain – could act as a bulwark against the relentless assault of instrumental rationality.

With this aim, and its implicit defense of reason proper, there is some commonality with the Frankfurt School's first generation, in particular Horkheimer, Adorno, and Marcuse. Of course, the project of these figures was

to defend the dialectical and emancipatory rationality of Hegel and Marx. Jonas certainly had socialist sympathies, and later in life was even loosely associated with the German Social Democrats, but he was no philosophical Marxist (*IR*: 175; *IHJ*: 363).[4] Jonas' philosophy emerges from a different tradition: that of *phenomenology*, the method devised by Husserl and taken up most notably by Scheler and Heidegger. Jonas studied at Freiburg and Marburg under both Husserl and Heidegger, but his thought owes considerably more to the latter.[5] Heidegger's fusion of phenomenology, existentialism, and hermeneutics, his critical reflections on modernity, and his radical interpretation of Western metaphysics, all exerted a profound and lasting influence on Jonas, as we shall see.

However, Heidegger's political alignment with the Nazis in 1933 came as an immense blow to Jonas, both philosophical and personal.[6] He came to believe that Heidegger's predisposition to Nazism could be attributed to a combination of philosophical nihilism and a personal affinity for blood and soil nationalism (*HRR*).[7] Put simply, while Heidegger's thought was unparalleled in its depth and profundity, it had at its heart an ethical void. It is for this reason that Jonas uses his tutelage in Heideggerian existentialism *against* Heidegger's own thought. For Heidegger had himself opened up the Western tradition to radical reinterpretation, and so Jonas reaches back to Kant and Aristotle for additional inspiration, retrieving key aspects of their thinking rather than – as Heidegger had – idiosyncratically distorting them. As a result Jonas' moral philosophy, much of which is captured in a new categorical imperative, is tied to

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[4] Jonas' overriding political adherence – as distinct from his political philosophy – was to Zionism. He even fought in the 1948 Arab-Israeli War, although later in life admitted to having regrets about the way in which Israel was established to the detriment of the Palestinians (*M*: 36-37).

[5] To my knowledge Jonas attended the following courses of Heidegger's: the 'proseminar' on Aristotle's *De Anima* in Freiburg, Summer 1921, which according to Kisiel (1993: 230-232) actually focused on Book 7 of Aristotle's *Metaphysics*; the Marburg Summer 1924 course published as *Basic Concepts of Aristotelian Philosophy* (2009); the Winter 1924-5 course published as *Plato's Sophist* (1997); the Summer 1925 course published as *History of the Concept of Time: Prologomena* (1985); and the Winter 1925-6 course published as *Logic: The Question of Truth* (2010c).

[6] Just as Jonas never renounced his intellectual debt to Heidegger, it seems that even after breaking off contact he had conflicting personal feelings toward Heidegger. The 1982 interview with Ingo Hermann for *Zeugen des Jahrhunderts* on ZDF television shows that Jonas kept a sketch of Heidegger above his desk. He also contributed an essay to a *Festschrift* for Heidegger's 80th birthday after his public denunciation of Heidegger (Klostermann, 1970).

[7] One of the strongest expressions of the latter tendency in Heidegger's writings is his almost self-parodic 1934 article 'Why Do I Stay in the Provinces?' (1981: 27-29).

an ontology which gives full recognition to life and corporeality: notions which were largely absent from Heidegger's thought.

One might reasonably ask whether we would be better off spurning Heidegger altogether, particularly now that his anti-Semitism has been incontrovertibly proven with the publication of the *Schwarze Hefte*. Unfortunately a remark made by Leo Strauss six decades ago still holds true today: "[o]nly a great thinker could help us in our intellectual plight. But here is the great trouble, the only great thinker in our time is Heidegger" (1995: 305). For all his criticisms of Heidegger Jonas ultimately thought the same, hence why, as David Levy says, Jonas' system offers an "answer" to Heidegger's thought, which is "at once more rational and more humanly inclusive" (2002: 79).

As indicated, Jonas' accompanying appeal to Kant and Aristotle is of paramount importance for his philosophical project. Whereas Heidegger's criticisms of the modern epoch extended to not just instrumental rationality, but reason *as such* – another factor in his embrace of Nazism – Jonas retains faith in the power of *theoretical and practical* reason. It is this which leads Jonas to seek a new metaphysics and an objective ethics. He is aware, of course, that this philosophically goes against the grain of the times, metaphysics having been "so often declared dead" (*MM*: 101). But in "entering this now abandoned arena with a certain good cheer" (*ibid.*), Jonas takes a step beyond the strictly negative critique of modernity offered by Adorno and Horkheimer, as well as ensuring that his alternative does not collapse into a reactionary irrationalism like Heidegger's. So although Jonas suggests that we should not "be too modern" (*SE*: 20), this entails only a rejection of "certain developments which are ominous, which are dangerous, or which are undesirable", not that "modernity as such was somehow a mistake" (*OR*: 3). In short, the ills of modernity are to be rectified through an appeal to alternative aspects of the Western tradition, not an abandonment of that tradition entirely.[8]

[8] One might argue that in this respect Jonas stands to Heidegger as Jürgen Habermas stands to Adorno and Horkheimer. The difference is that Habermas seeks to save modernity from itself by appealing to its current of communicative rationality, whereas Jonas reaches further back, to Kant and Aristotle, for a corrective. Incidentally, Habermas allegedly overruled Jonas' nomination for the Theodor-W.-Adorno-Preis on the grounds that his "conservative spirit" sat at odds with that of the award (*M*: 204).

II. Ancient Gnosticism, Modern Nihilism

Our first topic is Jonas' treatment of modern nihilism. But what exactly is nihilism, and what is particular to its modern form? Nietzsche, its greatest diagnostician, claimed at the end of the nineteenth century that nihilism "stands at the door", asking "whence comes this most uncanny of all guests?" (2017: 11). Some decades later Jonas notes in response that "the guest has [since] entered and […], as far as philosophy is concerned, existentialism is trying to live with him" (*PL*: 213). Both agree that modernity is plagued by this phenomenon, but they differ on exactitudes.

Nietzsche defines nihilism as the widespread sense that "there is no goal" to existence, "no answer to the question: why?" (2017: 15). He claims this is the result of the slow unravelling of the West's transcendent grounds for value and meaning, a process which was inevitable *precisely because* those grounds were transcendent. The pillars of Western thought which have now been found untenable were Platonic metaphysics, according to which the physical world is a mere copy of the real, and the Judeo-Christian version of this notion, wherein the corporeal world is positively debased.[9] We can no longer sustain belief in either, a development famously encapsulated in Nietzsche's proclamation that "God is dead" (1974: 181). For this reason Nietzsche claims that we are no longer entitled to a Christian ethics of benevolence, mercy, and equality, even one which seeks to ground itself in reason, as in Kant's philosophy – an attempt which failed on its own terms by eventually appealing to God (2015:101).

The only honest solution, according to Nietzsche, is to "become gods" ourselves (1974: 181). This means giving full and open expression to the life-force which lies hidden at the bottom of all creative endeavours (even those, such as Judeo-Christian theology, apparently opposed to it): the will to power. Overcoming our moral inheritance and affirming a new set of values explicitly based on the will to power would be a godly achievement, heralding the arrival of the *Übermensch*. For Nietzsche, this task justifies all means, even – or rather, especially – those running counter to our most deeply held moral beliefs. The following sums this up most vividly: "[t]o attain that tremendously energetic quality possessed by great men, the quality most needed in moulding the men

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[9] See the 'History of an Error', Nietzsche's masterful two-page rendition of this genealogy (2003: 50-51).

of the future, requires not only the cultivation of these men but also the annihilation of millions of the ill-constituted" (2017: 540).

Jonas accepts only part of Nietzsche's account of the origin of nihilism, and in a way which allows him to eschew the latter's quasi-fascistic conclusion. His analysis emerges from a critical engagement with Heidegger's existentialism, which he reveals to be the philosophical peak of modern nihilism.[10] This discovery is the result of a curiously dialectical process. Jonas' early tutelage in Heideggerian existentialism, with its emphasis on alienation, angst, and our 'thrownness' into being, acted as the theoretical framework for his doctoral thesis on Gnosticism, a 2nd century Christian sect. Jonas argues that Gnosticism was the most "radical and uncompromising" expression of the zeitgeist of late antiquity (*GR*: 26), testifying to a "troubled existence" following the turmoil into which imperial Rome had then fallen (*WPE*: 31).[11] It is summarised as follows:

> The cardinal feature of gnostic thought is the radical dualism that governs the relation of God and world, and correspondingly that of man and world. The deity is absolutely transmundane, its nature alien to that of the universe, which it neither created nor governs and to which it is the complete antithesis: to the divine realm of light, self-contained and remote, the cosmos is opposed as the realm of darkness. (*GR*: 42)

Using Heidegger's existentialism as an interpretative framework, Jonas vividly reconstructs the Gnostic experience of being, wherein humanity's divine spirit is locked in the mind, which is in turn incarcerated in the body, and stranded on a hostile world created by the unholy demiurge (44). It is, as he says, the pinnacle of nihilism in late antiquity, and although "not *the* key to understanding the whole epoch" (26) – which is generally less apocalyptic – nevertheless illuminates the troubled spirit of its time.

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[10] Of course, Heidegger famously insisted he was not an existentialist (1977: 151) – a label that was attributed to him by Sartre (1948: 26), among others – and it is indeed true that the former's early work differs greatly from the latter's. But with this distinction in mind, and some leniency, we can grant Jonas the usage of the phrase 'Heidegger's existentialism', which he acknowledges was not Heidegger's own term (*MM*: 46) and only applies to Heidegger's early work (*PL*: 231).

[11] Jonas' thesis was later published in two German-language volumes, and in the single English-language volume *The Gnostic Religion* (*GR*), which eschews much of the Heideggerian terminology.

The question then is why Heideggerian existentialism is so appropriate a lens for understanding Gnosticism: quite a remarkable coincidence given the millennia which separates them. To this end Jonas switches focus, using Gnosticism as a way of interpreting existentialism. "In other words, the hermeneutic functions become reversed and reciprocal – lock turns into key, and key into lock: the 'existentialist' reading of Gnosticism […] invites as its natural complement the trial of a 'gnostic' reading of Existentialism" (*PL*: 213). The result of this effort is the discovery that their underlying commonality is *nihilism*. This they share because both late antiquity and late modernity – of which Gnosticism and existentialism are the quintessential representatives – are historical periods of profound spiritual disruption and transformation. The only difference is that existentialism *surpasses* Gnosticism in its commitment to nihilism, signifying the relative depths of crisis defining the two epochs.

According to the Gnostics, the darkness in which we are situated may be overcome in death provided one prepares in life by studying the religion's tenets, supposedly handed down by the "messenger from the world of light" (*GR*: 45). According to Heidegger, however, "authentic" existence is only reclaimed in moments of angst which reveal our individual being-toward-death (2010a: 328). The consequence is this: although in Gnosticism the physical world is characterised by entirely negative value, the inverse of which belongs only to the human spirit and alien God, its vision is still one of *objective* good and evil, thus preventing a slide into *absolute* nihilism. For the existentialist, however, there are no such values. The world is devoid of any given meaning and there is no redeeming afterlife or even fixed norms by which to orient behaviour. Rather – according to Heidegger – we are helplessly thrown into being, and liable to fall prey to the inauthentic existence of anonymous mass humanity: 'the They'. All one can do is face this fate with "resoluteness" (323) and so reclaim authenticity. This, as Jonas notes, constitutes "the true abyss. That only man cares, in his finitude facing nothing but death, […] is a truly unprecedented situation" (*PL*: 233).

What, then, allowed for this absolute nihilism marking out existentialism as more radical even than Gnosticism? Here it is useful to recall Nietzsche's analysis. Jonas agrees with Nietzsche that attempts to justify existence through a transcendent principle risk succumbing to nihilism by devaluing the physical

world. Likewise, he holds that devaluation of nature, the “gnostic principle”, is a recurring feature in Western history and so nihilism is in some form an ever-present threat (*GR*: xxxv).[12] But modern nihilism is unique in its depth because *modernity alone rejects natural teleology and purpose in its entirety*. This is the crucial blow struck against Nietzsche’s analysis: it is not the case, as Nietzsche claimed, that “the general character of existence does not admit of interpretation in terms of the notions ‘purpose’, ‘unity’ or ‘truth’”, and that it “achieves nothing” (2017: 19, emphasis removed). This is a thoroughly *modern* view, prematurely aiming at not only those religious and philosophical systems which seek justification for existence in transcendence, but also those which locate teleological principles in the natural world. But why should we reject the latter as well as the former, as Nietzsche would have us do? For it was precisely Aristotle’s achievement to demonstrate that purpose and unity *are* immanent principles of existence, inherent to the natural world and reflected in the social world of the *polis* where the good of each citizen informs the common good of the whole (*PL*: 222).

It is modernity’s undue rejection of *this* heritage, an error from which neither Nietzsche nor Heidegger were exempt, which paves the way to absolute nihilism. As Jonas puts it: “a change in the vision of nature, […] of the cosmic environment of man, is at the bottom of that metaphysical situation which has given rise to modern existentialism and to its nihilistic implications” (216).[13] Heidegger’s existentialism is, therefore, a description of contemporary Western humanity alone, and the nihilism it represents can be traced to the materialist anti-Aristotelian turn of the sixteenth century (213-214). The destruction of the *scala naturae* and the stripping of teleology from plant, animal, and eventually

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[12] On this basis Elad Lapidot (2017) argues that the purpose of Jonas’ philosophical project is to confront and overcome the Gnostic principle *per se*, but this reading is too broad. For Jonas, “[t]he disenchanted world is a purposeless world” (*PE*: 171), and Platonism, Christianity, and Gnosticism, for all their devaluation of the physical world, did not construe it as completely purposeless. His underlying aim is rather to confront the Gnostic principle in its modern manifestation.

[13] Jonas’ use of the word ‘nature’ (with or without the capitalised ‘n’) seems to be coextensive with his use of ‘biosphere’, ‘biosystem’, ‘the kingdom of life’, etc., rather than referring to non-living nature as well. Similarly, his references to ‘Being’ (with or without the capitalised ‘b’) occasionally seem coextensive with his references to ‘Life’, and ‘life as a whole’. As a result, in Jonas’ philosophy, life, Being, and nature often coincide – but whether this is philosophically coherent, or simply demonstrates a lack of clarity, is hard to say. It should also be noted that Jonas’ use of the word ‘Being’ is, in Heidegger’s sense, metaphysical since referring to the totality of beings (*Seiendes*), rather than drawing the ontological difference between being (*Sein*) and beings (*Seiendes*). For this reason I capitalise Jonas’ ‘Being’ except when he uses it in a sense closer to Heidegger’s ‘being’ (e.g. ‘organismic being’), which is always uncapitalised.

human life, emptied Being of purpose, dignity, and intrinsic value, rendering plausible the notion "[t]hat nature does not care, one way or the other" (233). While Gnosticism originally arose from the demise of the *res publica* which had reflected Aristotelian cosmology (222), the plausibility of existentialism rests on the lack of any metaphysics which does justice to the purposeful and value-rich living world.

As discussed, Gnosticism is nevertheless saved from absolute nihilism through its appeal to an objective good, identified with the world of light. But now, after the total victory of materialism and subsequent death of God, there is no such bulwark left: hence the all-encompassing nature of modern nihilism. To overcome it requires not a return to faith and revelation – which cannot hope to compete with secular developments – but rather a return to an Aristotelian, teleological philosophy of nature.

III. The Technological Threats

This account of modern nihilism might only be of spiritual or cultural interest were it not for other, more immediate threats: the ecological crisis and the biotechnological revolution. As we shall see in the next chapter, these follow from the very same modern materialism to which we owe our nihilistic predicament. But firstly a little more needs to be said about these developments.

The industrialisation of the West, and later the wider world, has brought about climate change, mass species extinction, the desertification of landscapes, pollution, overpopulation, and finally genetic engineering, which promises to intervene in nature in quite another way. Both the ecological crisis and biotechnological revolution represent the dramatic increase in power – temporal and spatial – which humanity has acquired through modern science and technology, and for which, as discussed, we now lack credible normative guidance. Worse, the nature of these threats is unique. Unlike the "insanity of a sudden, suicidal nuclear holocaust", which may be avoided with relative ease by "sane fear", these existential threats are "slow, long-term, [and] cumulative", therefore easily overlooked (*IR*: ix). This is all the more so since both arise from the higher standards of living to which modern humanity actively strives.

Although a variety of ecological problems had become apparent by the time Jonas was writing his key works in the 1960s and 1970s, climate change was still then only a hypothesis. One of his essays concludes with the following conjecture:

> [S]uppose that a proposed rate of industrial growth, perfectly feasible and desirable in itself, involves a rate of fuel-burning that brings into play the so-called greenhouse effect – i.e., the trapping of thermal radiation under a carbon dioxide layer that forms in the upper atmosphere. Suppose that calculations show that this in time will raise terrestrial temperatures to a point where the polar ice caps begin to melt; and that once started, this is an irreversible and self-accelerating process with the end-result (ignoring all other consequences of the climatic change) of raising the ocean level enough to submerge vast continental areas on this globe, thus leading to incalculable catastrophe [...]. Surely then, with such a prospect demonstrated as certain or highly probable, the simple imperative that no economic policy is right whose eventual outcome defeats the prime purpose of all economy will bid the economist to place a normative interdiction on the policy in question[,] whatever its immediate benefits may be. (*PE*: 99-100)

Needless to say, the abovementioned consequences of anthropogenic climate change are now crossing over from a possibility to an actuality. In terms of global consequences, the latest report from the Intergovernmental Panel on Climate Change (IPCC) found that:

> Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased. (2013: 4)

Of all the ecological disruption wrought by modern humanity, climate change best exemplifies the global nature of the threat; indeed, to such an extent that a new geological epoch has been suggested as having begun around 1950: the Anthropocene.

Regarding the second dimension of our technological powers – our temporal reach into the distant future – the IPCC claim that “[a] large fraction of anthropogenic climate change resulting from CO_2 emissions is irreversible on a multi-century to millennial time scale” (28). Even if carbon dioxide emissions were immediately and dramatically reduced, thus limiting the global mean temperature increase to 2°C above preindustrial levels, “[m]ost aspects of climate change will persist for many centuries” (27) accompanied by “considerable” risks (IPCC, 2014: 14). If our present rate of emissions continue unabated, however, leading to a global mean temperature increase of 4°C or more above preindustrial levels, the likely effects include “severe and widespread impacts on unique and threatened systems, substantial species extinction, [and] large risks to global and regional food security” (*ibid.*). Taking these two dimensions together, Stephen Gardiner (2011) has argued that climate change presents us with the ‘perfect moral storm’, since we lack a pre-existing global and intergenerational ethic and the theoretical political tools through which to effectively act upon it. In later chapters we shall see that Jonas, too, diagnosed this problem, and moreover attempts to devise the objective ethic and political structures which could rise to the challenge.

The other manifestation of our new powers which concerns Jonas is the biotechnological manipulation of living things: above all, ourselves. From the first cloning of non-human life in the 1950s, followed by genetic engineering in the 1970s, through to the synthetic biology and prospect of ‘designer babies’ today, the genome has become the direct object of our control. The precision with which genes can now be targeted, particularly since the development of the CRISPR/Cas9 editing tool, dwarfs that of traditional methods such as cross-pollination and animal husbandry (although this does not, to be clear, mean that traditional methods are always commendable and newer methods necessarily unethical). At first glance this seems to be only a temporal power over the development of individual organisms, but modifications passed on through offspring can in principle be disseminated throughout a species and have a global impact. Indeed, in some cases of genetic engineering this is precisely the intention, such as ‘gene drive’ technology which promotes the spread of genetic alterations through populations (Akbari, et al., 2015).

Beyond the dangers which arise on a case-by-case basis lies an overarching problem: that the nihilism characterising contemporary civilisation undercuts any recourse to moral boundaries on biotechnological intervention, particularly where the distant future of humanity is at stake. As Jonas puts it: "the ruling pragmatism of our time […] will let no ancient fear and trembling interfere with the relentless expanding of the realm of sheer thinghood and unrestricted utility. The 'splendor and misery' of our age dwells in that irresistible tide" (*PE*: 142). The latest developments are genetic modification of unviable human embryos by researchers in China (Liang, et al., 2015), followed a year later by regulatory approval for a similar experiment on healthy embryos in the UK (Callaway, 2016). In Europe it remains illegal to carry a genetically-modified embryo to term, but there is no reason to suppose that the international consensus against eugenics – which arose specifically in response to Nazi atrocities – will withstand the apparently benevolent promise of human enhancement. Should we pursue this path? If not, why not? Jonas' seminal essays on bioethics, which we shall look at in detail in the final chapter, are in part an attempt to answer these questions and establish new moral limitations on the possible application of such technologies.

IV. Against the Stream: Jonas' Philosophical System

Such, in brief, are the three crises which Jonas' philosophical project addresses. It now falls to describe the structure of his system, which has only been gestured at so far. We said above that the root of modern nihilism is the undue expulsion of teleology and the *scala naturae* from explanation of the natural world in the scientific revolution. We also saw that the root of nihilism more broadly – the 'Gnostic principle' – was the denial of positive value and purpose in the physical world. Jonas' solution is to develop a non-reductive metaphysics allowing for an ethics and politics that together account for our responsibilities for the future in the face of ecological and biotechnological threats. As stated, this does not amount to a theological solution. In *The Imperative of Responsibility*, which not by coincidence concludes with a reference to Aristotle, Jonas claims that "[a]bandoned to 'sovereign becoming' […] after abrogating transcendent being, we must seek the essential in transience itself" (*IR*: 125).

Chapter One will reconstruct Jonas' critique of modern technology and the scientific revolution, which in one stroke paved the way for modern nihilism and the two technological crises discussed. Jonas' analysis begins by showing that the nature of modern technology is of a qualitatively different sort than the pre-modern. Originating in a mathematically calculable vision of nature, modern technology has intertwined with our socio-economic activity and become a force in its own right: both exercising and feeding from an ideological power in the form of progress. I argue that his sociological account of how this occurs is insufficient, but once corrected informs a compelling philosophy of technology which avoids both the dystopianism of Heidegger's and the utopianism of 'posthumanist' approaches. For Jonas, the practical problem is as follows: having become an end in itself, technological progress has broadened the scope of collective action – both temporally and spatially – to an extent which lies beyond the domain governed by traditional norms. This diagnosis is ultimately motivated by the Aristotelian concern that the distinction between the domain of means, to which *technē* properly belongs, and that of ends, which was previously determined by the virtues of *sophia* and *phronēsis* has been corrupted. What is required, then, is a new ethic which can resolve this issue and address the three crises discussed.

Jonas begins this attempt with an appeal to a reformulated Aristotelian philosophy of nature, recounted in Chapter Two, as only this can allow us to counter the Gnosticism of modernity which denies value and purpose in the physical world. The principal means by which Jonas proceeds is modifying Heidegger's existential phenomenology. Although the nihilistic component of Heidegger's existentialism was historically contingent, the broader analytic of our existence as 'care' was a timeless insight. However, whereas Heidegger had taken humans to be alone caring for their being in a purposeless universe, Jonas argues, on the basis of a monistic metaphysics, that *all* life demonstrates concern for its existence. From the lowliest unicellular organism, through plant and animal life to human beings, Jonas shows that teleological capacities and self-organisation are inherent to each. Seeking continued existence through the satisfaction of metabolic needs is the *organismic condition*, marking out life from mere matter. Moreover, since qualitatively different teleological capacities emerge in evolution we may speak meaningfully of a *scala naturae* in terms of

the freedom of 'world-openness' attained. Plants have only a rudimentary world compared to animals, which in turn possess a more restricted world than human beings, with our apparently unique openness to metaphysical and moral. The ethical import of this philosophical anthropology will only become fully apparent in Chapter Four and Six. Finally, Jonas argues that *since* life arose from matter and on to ever-greater degrees of complexity – which serves no mechanistic evolutionary purpose – we may suppose that this development is a "*potentiality*, hidden in matter's womb", manifesting itself given time enough and favourable circumstances (*MM*: 51). This notion I call the *nisus* of Being, which Jonas uses to argue, against the nihilists, that nature *is* purposeful and *does* care. When reconstructing this ontology we shall see that certain revisions are required to make Jonas' philosophical biology and anthropology tenable, but that this can be done consistently with his wider theory.

In Chapter Three we move from ontology to axiology: the question of what kinds of value exist. The conception of life and Being as immanently teleological allows Jonas to argue that value is necessarily imbued in both, as achievement of a goal – even a non-conscious one – is better for its possessor than the opposite. This amounts to a subjective value-preference, a good-for-something. Given their possession of such subjective goods, Jonas is then able to argue that each organism, and even Being as such, are of intrinsic and not merely instrumental value: a major advance in the confrontation with modern nihilism. However, nihilism remains undefeated as long as nothing is shown to matter *objectively*, and the extension of intrinsic value to even Being itself does not count as such. Hence Jonas claims that the mere capacity for valuing is itself objectively valuable, and infinitely superior to a universe that lacked it. This particular argumentative move is the weakest point of Jonas' philosophical system, and one of two major reasons why his project is open to criticism. I argue that there is no binding way to defend Jonas here and concede that his challenge to nihilism is unsuccessful at the last. However, I suggest an alternative to Jonas' attempt in the form of Alasdair MacIntyre's neo-Aristotelianism. MacIntyre argues that the fundamental error of modern philosophy is the attempt to rationally demonstrate the existence of an objective good. He argues that we should instead recognise that the good is relative to forms of life, which goes some way to dissolving the problem. It also means that

the greatest flaw in Jonas' philosophical system is precisely where he does *not* appeal to Aristotle.

Chapter Four introduces the core of Jonas' moral philosophy: his theory of responsibility, perhaps the area of his system which stands up best to scrutiny. Jonas argues that responsibility for others has historically been marginal in ethical thought. The reason why is that we are responsible only for a vulnerable good which is within our power to protect, and the reach of our power has previously been limited. The factor which changes this state of affairs is modern technology, as described above. Jonas' ethic of responsibility is intended to provide the normative boundary by which to guide our technological and socio-economic activity. Taking the Kantian form of a new categorical imperative, Jonas' theory of responsibility has for its ultimate object the 'idea of Man': humanity's continued existence as a moral being, recalling his philosophical anthropology. As such, his ethics accounts for our duties to future generations and non-human life, providing us with something like a task of guardianship for Being.

Since our new responsibilities follow from the power afforded by modern technology when integrated into our collective socio-economic life, Jonas moves from moral to political concerns. The question guiding Jonas' investigation, here treated in Chapter Five, is which political institutions are best able to act upon the imperative of responsibility for future generations and non-human life. His theoretical efforts in that domain have been subjected to considerable, and largely justified, criticism, as Jonas' argument unfortunately collapses into one for ecological authoritarianism. However, in reconstructing his argument I show that this conclusion does not, in truth, follow from his ethic of responsibility, and the parts of genuine value in his political philosophy – the 'heuristic of fear' and precautionary principle – are separable from his troubling vision of the state. Moreover, I argue that Jonas actually began to move away from his earlier acquiescence to authoritarianism with the essay 'Auf der Schwelle der Zukunft' (*TME*: 53-75). In this and other publications following *The Imperative of Responsibility*, Jonas draws on civic republican themes – once more demonstrating his debt to antiquity – albeit in a fragmentary and provisional way. Nevertheless, when these remarks are synthesised we are

able to point toward superior conceptions of citizenship and the state in his body of work, and redeem him as a political theorist.

The final component of Jonas' philosophical system is his bioethics, recounted in Chapter Six. Since his moral philosophy makes the case for the continued existence and essence of humanity – the idea of Man – Jonas took an interest in the development of medical science and biotechnology due to its potential to change the human condition. Although Jonas' instincts place him at odds with the utilitarianism of mainstream Anglo-Saxon bioethics, it is perhaps in this domain that he exercised most influence in the United States, as a founding fellow of the Hastings Center and twice giving evidence to the US Senate (*TH*; *THSR*). His contributions to bioethics are more relevant today than ever, as Jonas was an early critic of what is today known as transhumanism. Objecting to both its ends and its methods, Jonas raised compelling objections to genetic engineering (since rebranded 'genome editing') for its potential to undermine our freedom and, in some circumstances, violate human dignity. As to the final goal of enhancement, Jonas asks in what sort of image humanity is supposed to be remade. The answer usually given is one which transcends the limitations, vulnerabilities, and dependencies characteristic of organic being. Transhumanism is, therefore, only *the most recent manifestation of the Gnostic principle*, denying the value of our corporeal existence. Against this troubling vision, Jonas persuasively argues that the human condition – that we are born rather than made, that we must die, and that we must live in the knowledge of these facts – is worth preserving.

I conclude by considering some overarching criticisms of Jonas' system, above all his appeal to an objective ethics as a remedy for the ills of modernity. It is true that the 'untimely' nature of Jonas' thought means it is not beyond reproach, and that a post-metaphysical philosophical system of the sort advocated by Habermas might have exposed him to fewer foundational problems. But the attempt to develop a theory of Being shorn of the reductionism of modern materialism, and an objective ethic of responsibility which seeks its ground in that ontology, is a noble one nonetheless. The effort even speaks to something inseparable from the human condition, as alone among living beings we must question our own existence. In recognising this Heidegger was correct. But the question also demands a proper *response*,

including ethical and metaphysical claims which are, as Jonas notes, “never-completed attempts to confront this question […] and to find an answer to it” (*MM*: 84). In rising to this challenge, as well as confronting the defining crises of modernity, Jonas’ philosophy remains essential.

Chapter One: The Technological Age

I. Heidegger's Spectre

The purpose of this chapter is two-fold. Firstly I shall reconstruct Jonas' critique of modern technology, in part by showing where his theory is influenced by, and departs from, that of Heidegger. Secondly, I will attempt to defend Jonas against the charges most commonly levelled at him: indulgence in "cynicism" (Crocker, 2012: 34) and "dismal depictions of modern technology" (Sharon, 2014: 36), which amount to "technological dystopianism" (Ihde, 1999: 28). While there is no denying that Jonas adopted what Ihde calls a "rhetoric of alarm" (29) around modern technology, I will show that the substance of Jonas' thought on the matter is more nuanced than his critics take it to be. Ihde, for example, attributes to Jonas the opinion that technology "intrudes between humanity and its essence and as something like a Frankenstein […] outruns and threatens its creator" (1979: 132). On a superficial reading Jonas' philosophy of technology may appear to fit this description, but the charge is in fact wide of the mark.

As stated, I will partly proceed by showing how Jonas' work on technology is a response to that of Heidegger. Heidegger's philosophy of technology was indeed dystopian. Famously, he claimed in his obfuscatory interview with *Der Spiegel* that "philosophy will not be able to bring about a direct change of the present state of the world. This is true not only of philosophy but of all merely human meditations and endeavors. Only a god can still save us" (1990: 56-7). The present state of the world Heidegger lamented was what Günther Anders once called "[t]he 'technification' of our being" (Anders & Eatherly, 1989: 1). That is: the increasing dominance of technology and instrumental rationality over ourselves, our world, and the Earth. Heidegger's canonical reflections on technology constitute one aspect of his huge influence on Jonas, who shared these concerns and himself became a prominent figure in the philosophy of technology. However, Jonas' humanism ultimately sets him apart from Heidegger, in this area as in so many others. To take as an example what can only be a rebuke of Heidegger, Jonas tells us: "the human mind alone, the great creator of the danger, can be the potential rescuer from it. No rescuer god will relieve it of this duty" (*MM*: 54).

Curiously, however, Jonas' engagement with Heidegger's philosophy of

technology remains almost entirely implicit. As Richard Bernstein notes:

> Although Jonas discusses many thinkers in the *Imperative of Responsibility*, there is one exclusion that is notable by his absence. Heidegger is barely mentioned; his name doesn't even appear in the index. Yet there is a sense in which Heidegger's presence is manifest on almost every page of the book. (1995: 16-17)

To my knowledge, Jonas' only explicit comment on his teacher's philosophy of technology appears in his *Memoirs*, where he states: "[w]e need a new ethics for the age of technology, one that confronts the challenges of our era. Heidegger, for one, recognised this need, and attempted to take it on, though what he has to say on the subject […] seems to miss the point completely" (*M*: 203). In addition to the question of ethics there are other key dividing lines between their analyses which make Jonas' superior. Our starting point, however, is examining the place technology occupies in his philosophical anthropology.

II. From *Homo Sapiens* to *Homo Faber*

Of the two charges levelled at Jonas which supposedly comprise his dystopianism – that technology endangers the essence of humanity, and that it necessarily does so – the first is the easiest to address.

Far from conceiving of technology as external to human nature and antithetical to it, his philosophical anthropology – which we shall encounter in greater detail in the following chapter – actually accords technology a central place. Indeed, Jonas straightforwardly claims that technology is "integral to the human condition" (*IR*: 203), since the creation of certain artefacts – tools, images and graves – "reveal various decisive human qualities" (*MM*: 78). It is this move which undercuts Ihde's first criticism. Jonas holds that tool-making indicates a basic capacity for abstraction, allowing for image-making which brings with it a primordial experience of truth as correspondence (81). Furthermore, the creation of the grave – accommodating both of the above techniques – reveals a being which is aware of its own mortality, and "raises his thinking to the realm of the invisible" (85). For this reason Jonas says that "metaphysics arises from graves" (84). By this last point Jonas does not mean that all grave-making beings have a systematic metaphysics. What he means is

that the one is presaged by the other: the grave-making being has an existence which broaches metaphysical notions – in particular, comprehension of our finitude – and a metaphysics proper becomes a *possibility*. As we shall see in the next chapter, humans are set apart from all other lifeforms by having arrived at the latter point.

What relevance has this to Jonas' philosophy of technology? The key point is that a grave-making being – which must first of all be a tool-making being – has the capacity for metaphysics, and Jonas claims that "[w]hen man first began to interpret the nature of things […] he began to be man" (*PL*: 7). It follows that for Jonas *Homo faber* necessarily plays a part in the constitution of *Homo sapiens*, the being whose world transcends its immediate environment (*MM*: 79). On this basis we can conclude that Ihde was wrong to interpret Jonas as thinking that technology intrudes between humanity and its essence.[14]

What concerns Jonas, and explains what Ihde called his rhetoric of alarm, is "the triumph of *homo faber* […] in the internal constitution of *homo sapiens*, of whom he used to be a subsidiary part" (*TPT*: 38). Although not explicitly set out as such, Jonas' worry can be understood in Aristotelian terms. In the *Nichomachean Ethics* Aristotle distinguishes between five different intellectual virtues: *technē* (craftsmanship), *epistēmē* (knowledge), *phronēsis* (practical judgement), *sophia* (wisdom), and *nous* (intellect) (1984d: 1140a-1144a). Of these he regards *technē* as the 'lowest' since it is principally concerned with means to ends, rather than the ends themselves, and it is only by reflecting on the relative importance of ends than we can flourish.[15] In other words, *technē* is no end in itself – an insight which could not be further from the spirit of modernity, which has elevated technological development "to the position of [its] dominant and interminable goal" (Jonas, *TPT*: 38). How has this radical inversion occurred – whereby what is really a means has become for us an end in itself? Jonas' answer is that the difference lies *in modern technology itself*, which has, as a result of its all-encompassing successes, come to occupy a pre-eminent role in our collective life. The question now is whether Jonas is

[14] At times it seems that Jonas regards technology and tools as different things – for instance when he claims that technology was "foreshadowed in the tool" (*MM*: 86). The majority of his writings on the topic do not make that distinction, however. The decisive break for him, as I say, is between pre-modern and modern technology.

[15] Certainly, *technē* cannot be understood as identical to the contemporary idea of technology, since *technē* also encompassed what we would today call the fine arts, which we rightly regard as valuable beyond any instrumentality. But this point is peripheral to the issue at hand.

right to say that modern technology is, in this respect, qualitatively different from 'traditional' (i.e., pre-modern and non-Western) technology. To answer this we must turn, once again, to the scientific revolution.

III. The Scientific Revolution

(α) The Origin of Modern Technology

For Jonas the origins of today's technological crises lie in the epochal transformation which Europe underwent firstly in the Renaissance, and then, more explicitly, in the Enlightenment. He first argued this in the 1959 essay 'The Practical Uses of Theory' (*PL*: 190), but his thoughts on the matter are developed in greater detail in 'The Seventeenth Century and After: The Meaning of the Scientific and Technological Revolutions'.

Jonas opens the latter essay by stating, in characteristically dramatic fashion, that "[w]e live in a revolution – we of the West – and have been living in one for several centuries" (*PE*: 46). This revolution is no short-term political event, like the French or Russian revolutions, but rather a "revolution of thought" (48) which has unfolded over the last five centuries up to the present day. We may, however, point to a single year as illustrative of this "change in theory, in world-view, in metaphysical outlook" (*ibid.*). 1543 saw the publication of Vesalius' *On the Fabric of the Human Body* and Copernicus' *On the Revolutions of the Celestial Orbs*. Jonas contends that together they represent a novel reconfiguration of nature as uniform matter: the former at the "microcosmic" level of the human being, and the latter at the "macrocosmic" level of the solar system (52). The materialist interpretation of the human body would eventually result in the loss of a normative conception of human nature, with immense consequences, as we shall see when turning to medicine and biotechnology in Chapter Six. But as will be fully discussed in the next chapter, it was not until the Darwinian revolution of the 19th century that the *scala naturae* was fully toppled, resulting in the loss of humanity's belief in its own uniqueness and privileged position in the universe. *This* was only made possible by the Copernican mathematical proof of heliocentrism, and so the latter is the decisive event.

The reason Jonas takes Copernicus' proof to be pivotal is that it allowed for a plausible materialist understanding of nature to take hold. Of course, the

concept of matter had been around since antiquity in various guises, and as 'substance' was at the core of Aristotle's understanding of Being. The difference is that prior to the scientific revolution matter was also taken to be teleologically ordered in a way that attributed to beings varying degrees of significance: this was the *scala naturae*, or 'great chain of Being', as Arthur O. Lovejoy (1936) had it. But with the discovery that the Sun did not orbit the Earth, toppling the old geocentric perspective, the notion of a hierarchical structure to the cosmos took a first, crippling blow. This issue is not that the Sun became the centre of the universe instead. It is rather, as Collingwood notes, that there is no longer *any* centre to Being, just a grid populated by bodies at various points (1945: 97). Thus began the gradual development of a new understanding of nature as "homogenous" by virtue of the fact that "the earth had become a 'star' itself [...] and by the same token the planets had become 'earths'" (*PE*: 53). Needless to say, this is not literally true: every schoolchild learns the differences between types of celestial body. Jonas' point is that the customary notion of cosmic order was scientifically disproven. This was no mere cosmological fact, but one which entailed the loss of the Earth's exceptional status in the universe, where what was of greatest significance was also perceived to be at its physical centre.

Jonas argues that hidden behind the cosmological implications of the new Copernican worldview is a yet more subtle development. He claims that "the technological turn later given to the speculative revolution was somehow in the cards from the beginning" (48). At first glance this appears to be either an error, since the industrial revolution only followed the scientific after some two hundred years of relative technological stability, or crudely fatalistic, since random and unforeseen events might have changed the course of historical development. Underpinning such skepticism is the widely-held belief that, as Ullrich Melle states, "[m]odern science in its beginnings is the self-conscious renewal of the purely theoretical intention [...] of the ancient Greek will" (1998: 332). In other words, the scientific enquiry emerging from the Renaissance is – at least to begin with – the same as its Greek forebear in generating *theoria*: disinterested knowledge of the world. But Jonas argues that in fact *praxis* lay at the heart of the new conception of nature initiated by Copernicus. I will attempt to make sense of this claim.

From Aristotle to Aquinas the speculative or theoretical sciences were

distinguished from the practical. The former treated "things unchangeable and eternal [...] which, being unchangeable, *can* be contemplated only" – biology, for example – whereas the latter dealt with "the planned changing of the changeable" (*PL*: 189), such as agriculture. This distinction corresponds to two of the intellectual virtues mentioned above: *epistēmē* (knowledge) and *technē* (craft). Whilst there was of course interaction between the two – biology informing how to best manage livestock, for example – theoretical enquiry remained logically separate from practical affairs.

The decisive change occurred with the conceptualisation of nature as matter, explicable according to purely efficient causation. This vision contained "manipulability at its theoretical core and, in the form of experiment, involved actual manipulation in the investigative process" (*PE*: 48). Although Galileo famously claimed that nature was an "all-encompassing book […] written in a mathematical language" (2008: 183), this claim in isolation would have also been familiar to the Greeks, since mathematics characterised Pythagorean and Platonic ontology. The key difference, according to Jonas, is that modern science relies on *algebraic* version of a mathematised nature which is crucially different to the *geometric* model of antiquity (*PL*: 67). The difference between the two is that the latter was best equipped to map passive bodies in space, the movement of which remains explicable according to a final cause: teleology. But the former could also account for movement, and thus reduced it to efficient causation. Once movement was adequately calculable it allowed for the measurable *manipulation* of those same objects, in turn allowing experimentation – for which the Greeks had little regard – to take its preeminent place in modern science. With this last development, technology increasingly became the means by which scientific advances were made, from telescope, to microscope, to Large Hadron Collider. It is for this reason that Jonas boldly claims that from its inception modern "'science' is technological by nature" (198).

This distinction may well be too fine to bear the weight Jonas would like it to. Nevertheless, his account is strengthened by a degree of historical verifiability. Taking Copernicus as the rough starting point for his enquiry is an uncontroversial move (e.g. McGrew et al., 2009: 95), as is pointing to an emphasis on algebraic calculation and experimentation as the defining features

of the scientific revolution. Jonas goes further, however, in claiming that these developments made possible the technological revolution of two centuries hence. According to Albert Musson and Eric Robinson, the notion that the scientific revolution might have *directly* led to the industrial was “generally regarded as tenuous” (1969: 11) up until the inter-war period. Since then, however, it has gradually become more widely accepted by scholars. What makes Jonas’ account notable is that it carries this observation over to the plane of metaphysics. This means, of course, that the significance he attributes to the changing philosophical conception of nature cannot be categorically proven in and of itself, but that it is informed by a now widely-accepted historical thesis lends credence, I would argue, to his claim that the Renaissance was the pivotal moment in the development of modern technology.

(β) Heidegger’s Seinsgeschichte

So far, my account of Jonas’ philosophy of technology can be summarised as follows: in the Renaissance, a new worldview was made possible when rational investigation switched emphasis from theoretical contemplation to experimentation underpinned by algebraic mathematical calculation. It is at this point that the first connection with Heidegger’s philosophy of technology should be made. For Heidegger, too, the particular character of mathematics is key to understanding modern technology. He held, however, that manipulation is not just particular to the role mathematics plays in modern science, but is its essence *as such*. For Heidegger, mathematics consists only of “a kind of grasping and appropriating” of beings (1977: 251), which allows for the “metaphysical projection of the thingness of the things” in physical science (249). This “new experience” of nature (272) has its purest expression in “the realm of [...] uniform space-time” envisioned by physics (268). Having diagnosed the essence of mathematics as grasping, and science as its reflection, it is but a short step for Heidegger to show how mathematics as such allows for the technological “enframing” as a resource in modernity (301). Heidegger, therefore, goes much further than Jonas in terms of the radicalism of his critique. To be clear, he does not *reject* technology, science, or mathematics; on the contrary, he holds that they are all ways of engaging with the world. The problem, according to Heidegger – paralleling Jonas’ concerns about the predominance of *Homo faber* – is the *ubiquity* of this mode of

engagement with the world in modernity.

In emphasising the connection between mathematics, science, and technology there is clearly a commonality between Jonas and Heidegger's philosophies. However, because Jonas distinguished between *sorts* of mathematics, and Heidegger did not, their theories differ regarding the pivotal historical moment in the genesis of modern technology. As we have seen, for Jonas this moment is the scientific revolution of the Renaissance. For Heidegger, however, the emergence of modern technology is in fact the *culmination of the trajectory of Western metaphysics from its inception in ancient Greece*. This striking claim was at the core of Heidegger's *Seinsgeschichte*: that technology is, put bluntly, "the destiny of [b]eing" in the West (2001b: 183). The reason is that Western tradition has, since its inception, construed being as some*thing* which is produced according to fundamental principles, whether this be the God of Abrahamic religion, the Forms of Plato, or even the elements of the pre-Socratics. Regardless of specificities, all conform to a producer-product explanation of being, one which continues today in the scientific search for fundamental physical principles. For Heidegger, this 'productionist' orientation, running like a thread through Western thinking, meant that Western thought was pre-disposed to interpret being as something graspable, as in Pythagoras and Plato's mathematical ontologies, and eventually the natural sciences. According to this account, modern technology is, therefore, the ultimate expression of a productionist understanding of being inherent to Western thought.

It is – to say the least – an audacious argument. And unfortunately for Heidegger, his *Seinsgeschichte* does not entirely stand up to scrutiny, above all regarding his somewhat creative interpretation of the pre-Socratics.[16] Even Hans-Georg Gadamer, Heidegger's most devoted disciple, had to admit that "the beginnings of Greek thought are shrouded in darkness, and what Heidegger recognized in Anaximander, Heraclitus and Parmenides was certainly himself" (1994: 143). Whether it is truly possible to trace the origin of contemporary technology beyond modernity, all the way back to the birth of the Western mind, is highly debatable. It may simply be, as Gadamer suggests, that Heidegger read this history *into* his sources, posing a problem for his analysis of

[16] See, for instance, Dahlstrom (2011: 148) and Rosen (2005: 186).

technology.

Jonas, for his part, scorns what he calls Heidegger's "fate-laden" philosophy of history (*PL*: 242). Beyond its unverifiability – which Heidegger actually seemed to regard as an advantage (2002a: 243) – Jonas identifies a profound danger in Heidegger's neglect of ethics. There is clearly an *implicit* value-judgment present in Heidegger's depiction of modernity, insofar as he takes 'mass Man' to be increasingly under the sway of technological enframing. But Jonas rightly holds that Heidegger's philosophy, since "devoid of objective norms" (*PL*: 248), cannot offer an adequate guide for acting in this context. For those seeking practical wisdom nothing can be gleaned from the "terrible anonymity" (258) of Heidegger's thought beyond two inadequate solutions. The early, existentialist Heidegger had advocated acting authentically and resolutely in response to a "call of conscience" (2010a: 262), but, as stated, without any normative guidance by which to *judge* these calls. Heidegger heard such a call around 1933, coming to think of himself as a sort of prophet heralding the salvation of the West – at one point even wildly claiming to channel "the voice of the beginning" (1992: 167). Evidently he saw it as falling to himself to alert humanity to the spiritual void defining modernity which had forgotten the question of being. And yet, having nothing but a purely formal decisionism with which to respond, Heidegger notoriously endorsed Nazism as the vehicle of our salvation, identifying an "inner truth and greatness" in its "encounter between global technology and modern humanity" (2000: 213). In stark contrast, Jonas experienced the Second World War as a *moral* call of conscience to take up arms against the Nazi regime, enlisting in the Jewish Brigade of the British Army and fighting on the frontline of the Italian Campaign. Jonas then publicly entreated his fellow Jews to heed the call of their unique responsibility for defeating Nazism (*OFL*; *OPW*).

After his monumental error – never truly acknowledged – the later Heidegger withdrew into political quietism, exemplified by his belief that 'only a god can save us now'. He came to think that "technological advance will move faster and faster and cannot be stopped", as "[t]hese forces […] have moved long since beyond [man's] will and have outgrown his capacity for decision" (1966: 51). To a large extent this was driven by Nazism's failure to politically manage technology, as Heidegger thought it could under his guidance – but the

very attempt, he subsequently decided, only amounted to another kind of enframing. The alternative he came to endorse was seeking "releasement" from enframing through thinking and poetry (2010b: 79). Then one must simply await the arrival – or fully-understood absence – of the gods. Once again, however, Heidegger's 'solution' to the problems of modernity lacks any ethical dimension. For Jonas this normative deficit was crystallised in the later Heidegger's proclamation that "Man is the shepherd of Being" (1977: 210). He retorts: "Man: the shepherd of being – not, mind you, of beings! […] [I]t is hard to hear man hailed as the shepherd of being when he has just so dismally failed to be his brother's keeper" (*PL*: 258). For Jonas, then, Heidegger's failures were one; indeed, the personal, political, and philosophical lesson to be drawn from Heidegger could not be clearer: only a reasoned moral response can truly rise to the challenge of contemporary technology.

IV. The Forward March of Technology

Ihde accused Jonas, we recall, of belonging to a strand of technological fatalists including Heidegger and Jacques Ellul.[17] Interpreting Jonas in this way is, I believe, an error, albeit a forgivable one given that in his best-known essay on the topic he states: "[i]f Napoleon once said, 'Politics is destiny', we may as well say today, 'Technology is destiny'" (*TPT*: 35). As will become clear, Jonas did not mean this literally, a point he made explicit by correcting himself in a later essay. Referring back to the earlier claim he says he was "speaking figuratively and exaggerating somewhat" (*EBA*: 491).

The purpose of Jonas' rhetoric is to highlight the "intoxication" (*IR*: 203) of humanity by the siren voices of technological progress and utopianism. He argues that our often uncritical pursuit of technological development has blinded us to the precarious situation over which we preside. So although Jonas thinks we are unthinkingly heading into a technologically-delivered dystopia – and given our ecological predicament this is not, I would suggest, a mistaken claim – he does not think we must *necessarily* do so. The subtle but crucial difference is between Heidegger's technological *fatalism* and Jonas' theory of technological *autonomy*. I will explain what I mean by this and why it is so

[17] Ellul tells us: "[e]nclosed within his artificial creation, man finds that there is 'no exit'; that he cannot pierce the shell of technology" (1964: 428). Crucially, '[i]t is vanity to pretend it can be checked or guided' (*ibid.*).

important to both his ethics and an adequate philosophy of technology.

(α) Technological Autonomy

As discussed above, Jonas was deeply critical of Heidegger's fatalistic philosophy according to which the trajectory of history is determined by the unfolding of being, and from which no ethical guidance can be obtained. Jonas, by contrast, holds that "moral reason" is "our only hope", though he admits that this is "a very weak and frail hope" (*IHJ*: 368). Nevertheless, he says, "I forbid myself to give in to despair and say 'Nothing can stop the hold of this rush of things toward the abyss'" (*ibid.*). Moral reason has to overcome the "inherent dynamism" (*TSE*: 892) of technological development, which advances seemingly independently of any human deliberation. Jonas at various points refers to the "quasi-compulsive element" (897, emphasis removed), the "headlong rush" (*IR*: 203), even "the virtual infinitude of advance" (*TPT*: 37) characteristic of modern technology. However, his analysis of this tendency seeks to remain at the level of rational analysis: both Heidegger's fateful history of Western metaphysics and Oswald Spengler's notion of the Northern European 'Faustian soul' "strike a resonance in us" (36), but are incapable of concretely addressing the problem and adequately responding to it.[18]

Rather, there are two sorts of stimuli at the root of technological development. On the one hand lie motivations external to technology, but which nevertheless spur on its development, and on the other hand is the peculiar nature of modern technology itself, the origin of which lies in the aforementioned technological dimension of the scientific revolution. As stated, the modern sciences conceive of nature mathematically and quantifiably, thereby putting manipulability at the centre of their understanding of nature. The distinction between theory and practice is then partially dissolved in experimentation by actively doing things to nature in the pursuit of empirical knowledge, and this practical bent allows actual instruments to take centre stage. With this fusion of theory and practice Jonas claims a merging takes place in the means-end relationship between them. Rather than scientific theory merely acting as the bedrock upon which technological innovation occurs, as we commonly think, technological innovation is also at the heart of scientific discovery. Thus a

[18] For Spengler's account of "Faustian Man", dismissed by Jonas, see *Man and Technics* (2015: 77).

circularity emerges: new scientific discoveries allow for technological advances, which in turn propel scientific research, which in turn generates novel technologies, and so on, *ad infinitum*. Jonas calls this forward thrust the "formal automatics" of modern technology, resulting from its merging with modern science (*ibid.*).

External influences on technology then accelerate this process. Above all, capitalism plays a key role in technological development, and is therefore "in part the great danger that confronts us" (*CR*: 217). The industrial revolution of the eighteenth and nineteenth centuries saw scientific-technology put to the use of capitalism on a grand scale. The fusion of research, innovation, and market-economic activity further dissolved the distinction between technological means and social ends, and served to rapidly hasten development. Competition was driven by the profit-motive, embodied in the desire for greater efficiency from the new capital-intensive means of mass production. Finally, militaristic and political struggles between nations spurred on development. Initially this involved the market economies of Western Europe and North America, and later Japan, before the Cold War set these against the planned economies of the East. Market economies ultimately proved more efficient (in a narrow sense) than their adversaries, and following the collapse of the Soviet Union the capitalist mode of production spread worldwide. Although it has adapted to particular national traditions and circumstances, most countries – even those such as China, Cuba, and Vietnam, which remain nominally Communist – collectively form a global scientific-technological-capitalist civilisation.

In market economies the dynamic of supply and demand informs both the sort of technology developed and its necessity. Partly this is a matter of advertising: "industry does not so much strive to *fulfill* human needs as to *generate* human needs", as illustrated by the fact that "nobody ever dreamed of most of the things that progress keeps offering for our consumption" (216, emphasis added). But the pull of development is also down to the fact that technologies themselves "suggest, create, even impose new ends [...] simply by offering their feasibility" (*TPT*: 36). In other words, we are encouraged to consume novel technology because prior technology makes it desirable, on both an individual and societal level. Jonas continues:

> Technology thus adds to the very objectives of human desires, including objectives *for technology itself*. The last point indicates the dialectics or circularity of the case: once incorporated into the socioeconomic demand diet, ends first [...] generated by technological invention become necessities of life and set technology the task of further perfecting the means of realising them. (*Ibid*., emphasis added)

Take the automobile as an example. Cars and trucks were not isolated technological inventions, but brought about tarmacked roads, motorways, petrol stations, speed cameras, traffic lights, new laws, taxes, and insurance, the driving instruction and mechanic professions, new opportunities for trade, and so on. All become desirable when accommodating the new technology into our socio-economic life, and any of *these* technologies or practices may serve to facilitate others. This dialectic lies at the heart of Jonas' theory of the autonomy of technology: that the positive feedback loop of technological innovation and industrial capitalism strengthens in line with our reliance upon ever more technology.[19] As such, what was once merely a means has become for us an end.

(β) Hegemony and Agency

Since Jonas' account of technological development operates at the level of socio-economics, he rejects the almost demonic aspect that Heidegger had attributed to it. One could argue, however, that Jonas' theory of autonomous development is still essentially deterministic. Whilst he resists Heideggerian fatalism, Jonas may rather advance what Albert Borgmann calls a 'substantive' philosophy of technology:

> In the substantive view technology appears as a force in its own right, one that shapes today's societies and values from the ground up and has no serious rivals. […] It seeks to give a comprehensive elucidation of our world by reducing its perplexing features and changes to one force or principle. That principle, technology, serves to explain everything. (1984:

[19] Langdon Winner, whose theory of technological autonomy is comparable to Jonas', has called this "necessity through aimless drift" (1977: 89). We come to realise that there is no single power directing technological development: it is rather a *mélange* of scientific technology on the one hand and industrial capitalism on the other, each containing 'a variety of currents of innovation,' as Winner says, 'moving in a number of directions toward highly uncertain destinations' (88).

9)

Borgmann goes on to apply this label to Jonas' account of modern science as the root of technological advance (29-30), and criticises it as too strong. However, one might note in response that Borgmann's definition of technological substantivism is itself exaggerated. There is no doubt that Jonas is a technological substantivist, provided that we define this as the idea that technology is not just an instrument – a simple means to an end – but rather shapes our behaviour and so informs the ends to which it is put. But Borgmann's definition stresses a deterministic angle which Jonas evades by explaining the force of technology as a result of its being embedded in our scientific and socio-economic activity. Unfortunately Jonas' analysis of how technological imperatives concretely translate into human behaviour is not sketched out, and requires sociological support in order to be adequate to the task of informing his philosophy of technology. To build on Jonas' above arguments I will thereby introduce Gramsci's notion of cultural hegemony and Anthony Giddens' theory of structuration – and later, Ulrich Beck's 'risk society' – which can, I believe, reinforce Jonas' account of the autonomy of technology.

Extending Marx and Engels' notion that "[t]he ideas of the ruling class are in every epoch the ruling ideas" (1970: 64), Gramsci argued that ideology exercises power semi-independently of economics. According to orthodox Marxism, economics is the driving force of history and ideology serves merely as a gloss in expressing the interests of the ruling class, capital. Gramsci rejected this determinism, offering an alternative critique wherein ideology has a power of its own over production in advanced capitalist societies such as our own. He argued instead that capital exercises power via institutional reproduction and entrenchment of ideas, a process he called "cultural hegemony" (1992: 179). For example, the media, education, and art all serve to reproduce ideas beneficial to capitalism. These structures, today widely available to all classes, shape common sense – "the most widespread conception of life and morals" – and so "modify the average opinion of a particular society" (173). Gramsci's notion of cultural hegemony is able to show us how the ideology of technological progress, has, despite its fundamental unsustainability, become the dominant ideology of our time. Because of its comprehensiveness this conforms to what Karl Mannheim, Jonas' postdoctoral

supervisor, called the “total conception of ideology […] the ideology of an age” (1991: 49).[20]

It should be noted, however, that cultural hegemony is not deterministic since the structures which entrench ideology as common sense can only do so *via* individual agency. Anthony Giddens explained how this process, which he called ‘structuration’, operates through agents: those who are able to “exercise some sort of power” (1984: 14). While Gramsci explained how ideology becomes common sense on an abstract level, Giddens showed that concrete social structures are reinforced and ideologically justified through individual agency. According to Giddens, social actors, though possessing little agency *individually*, are yet *collectively* responsible for the structural reproduction of ideology. He noted that structural conditions are dialectically “both constituted by human agency, and yet at the same time are the very *medium* of this constitution” (1993: 129). In other words, agents, who are to a great degree conditioned by social structures, nevertheless possess the capacity to inform those structures in their reproduction of them. This is how seemingly monolithic structures are changed or even toppled – if enough individuals redirect their agency against a particular structure, shifting collective opinion, both that structure and its apparently common sense ideological justification can be overturned.

How, then, can Gramsci and Giddens’ theories support Jonas’ critique of the autonomy of modern technology? Hegemony explains why in contemporary society we consider the desirability of limitless economic growth and technological development to be common sense. We rationalise this acquiescence with the drive of technological civilisation as a desire for progress. Technological progress is, Jonas claims – with the exception of medicine (*IR*: 4) – not a normative advance, but merely *progress according to technology’s own criterion of efficiency* (*TPT*: 35). Jonas argues that the ideology of progress is neither a “gloss” nor “a mere option” of technological development, but rather its “*modus operandi* as it interacts with society” (*ibid.*). This claim is compatible

[20] Although Jonas studied under Mannheim as a postdoctoral student and wrote one of his earliest articles on Mannheim’s work (*KM*), the latter’s influence on Jonas is minimal, and certainly not comparable to that of Heidegger or Aristotle. Nevertheless, this connection is worth mentioning and – with the exception of Wennemann (2013: 114-122) – it has largely escaped the notice of commentators. It must be noted that whilst Mannheim’s conception of ideology is useful in elaborating upon Jonas’ social and political thought, their theories of utopianism are very much opposed.

with Gramsci's theory of hegemony outlined above: the desire for technological development is not simply a reflection of the interests of the ruling class – as orthodox Marxists would have it – but is in fact a 'common-sense' hegemonic entrenchment of ideology. Furthermore, Jonas claims that this happens through a "complex, multifarious determinism" since we act as "the vehicle of those [technological] dynamics" in part through "our daily consumer existence" (42). Giddens, in turn, concretely explains how we exercise our agency so as to practically reinforce ideology through our engagement in structural practices such as consumption.

According to Jonas, whilst the subjective side of this pressure "can be resisted of course; there's no compulsion" (*CR*: 216), the objective socio-economic aspect is more pervasive. The problem, in short, is that "a style of life has been established which one somehow has to join […] or else one simply cannot exist in the society as it has come to be" (*ibid.*). As a banal example, consider the following: I wake up in the morning to the alarm on my mobile phone, a device made in China with materials including tantalum extracted in Africa. It is still dark so I turn on the light, running on electricity generated by nuclear power and burning coal, put on my dressing gown (made in Bangladesh), and go to the kitchen to make a coffee. The coffee beans were grown in Colombia and transported across the Atlantic before being packaged in an unrecyclable plastic wrapper somewhere in Europe. I turn on the stove, using gas extracted from the North Sea, to heat the Italian espresso pot, before fetching some milk from the fridge which has been running all night.[21] And so on. On an individual level my actions are innocuous, but they are of course only possible as part of a destructive socio-economic whole. Each act presupposes a chain of events which, on a large enough scale and over a long enough time, entail serious ecological harms. Of course, each of us has the ability as individual consumers to opt out of some ecologically harmful practices, but changes to individual lifestyle only go so far, and here lies the crux of the matter: we have to live somewhere, work, travel, eat, drink, wash, clothe ourselves, and so on, and we can only do so in the society we inhabit.

How, then, do we reform technology? Jonas notes that *as individuals* we might refuse to embrace the "inherent drive" of progress, "[w]e may resent the

[21] The milk, at least, came from an organic farm in England.

fact and despise its fruits[,] and yet [we] must go along with it" (*TPT*: 35). This is because, as we learned from Giddens, the individual *qua* individual is virtually powerless to bring about structural change. For Jonas, our best hope of resisting the onward march of technological civilisation is at the level of governance, and judging by the insights gleaned from Gramsci and Giddens this can be achieved by a shifting of public opinion in favour of prudence and restraint. Although Jonas is not particularly confident that this will happen, as I will discuss in Chapter Five, Charles Taylor rightly notes that "it is still the case that there are many points of resistance, and that these are constantly being generated" (1991: 99). He continues:

> We need only think of the whole movement since the Romantic era […] and of the offshoot of that movement today, which is challenging our ecological mismanagement. That this movement has made some headway, has made some dent, however incipient and inadequate, in our practices stands as a partial refutation of any iron law of technological society. (*Ibid.*)

Taylor is surely correct, giving us some reason to be optimistic about the potential for transformation made room for in Jonas' analysis. Here is our final distinction to be drawn between Jonas and Heidegger. In light of Jonas' critique, supplemented by Gramsci and Giddens, it is fair to say that Heidegger's fatalistic *Seinsgeschichte* does not grasp the dynamic of technological advance in its concreteness. Jonas, however, tacks closer to social and historical analysis and is able to make conceptual room for the shaping, and perhaps even control, of the development of technology.

V. The Risk of Utopianism

As discussed at the end of the previous section, Jonas identifies the ideology of technological civilisation as one of progress. However, I have also referred throughout to 'techno-utopianism'. It is this radical extension of the ideology of technological progress which Jonas identifies as the most cogent expression of modern humanity's intoxication with technology. So far I have left techno-utopianism undefined, but Jonas' critique of technology is incomplete without a full account of this phenomenon, from its origins in the Enlightenment to its contemporary manifestations. I will then sketch out Jonas' alternative diagnosis

by way of an encounter with Ulrich Beck's analysis of 'risk society'. But I will begin with Jonas' *bête noire*: Francis Bacon.

(α) The Baconian Ideal

As Mannheim notes, Bacon saw himself as a destroyer of the 'idols' of tradition and an advocate of objective, rational knowledge of the world (1992: 55). In his zeal, however, Bacon essentially replaced the ideology of old with one of the new. The Baconian roots of techno-utopianism were identified by Jonas in his first essay on technology, 'The Practical Uses of Theory' (*PL*: 192-194). As explained above, Jonas holds that modern science had from its inception a technological bent by virtue of its emphasis on the quantification and manipulation of nature. Furthermore, he claims that this character of modern science dissolves, or fuses, the ancient distinction between theory and practice, such that practice is presupposed in theory, and *vice versa*.

Nowhere is this more self-consciously so than in Bacon's philosophical works.[22] Bacon begins the *Novum Organum* with the declaration that science must strike out in this new direction "so that the mind may exercise its right over nature" (2000: 6). The imperative of progress via the domination of nature is perhaps most famously formulated in the following: "[i]t is not merely success in speculation which is in question, but the human situation, human fortune and the whole potential of works. [...] Therefore those two goals of man, *knowledge* and *power*, a pair of twins, are really come to the same thing" (24). This declaration neatly encapsulates the project of the *Novum Organum*, the title of which suggests that this new scientific method must replace the reason which Aristotle regarded as the *organ* of rational enquiry. On this basis – with its explicitly practical agenda – Bacon elaborates on the notion that nature is to be technologically bent to humanity's will and remade for our purposes. Bacon says: "in artificial things nature accepts the yoke from the empire of man [...]. A completely new face is given to bodies by human effort and agency" (224). If humanity is able to control nature through practical knowledge – so the argument goes – nature might be used against itself in order to alleviate scarcity, illness, exposure and other problems pertaining to humanity's

[22] In terms of comparable influence, the other major advocate of the new science as a guiding principle of knowledge was Descartes. In the *Discourse on Method* he claimed that "instead of the speculative philosophy taught in the Schools" (principally that of Aristotle and Aquinas), "a practical philosophy can be found" which would make us "masters and possessors of nature" (1968: 78). We shall confront Descartes' legacy in the next chapter.

biological constitution.

The agenda becomes explicit in *Valerius Terminus* wherein Bacon states that the “true ends of knowledge” are the “command” of all creatures and the “restitution and reinvesting (in great part) of man to the sovereignty and power [...] which he had in his first state of creation” (1984: 42). In other words, a return to earthly paradise via scientific and technological progress awaits us. Elaborating on this theme, Bacon’s techno-utopianism stretches the imagination. In his unfinished novel *The New Atlantis* Bacon describes how the island people of Bensalem are able to use technology to meet their every need. In their applied-science research institute Salomon’s House, the “Interpreters of Nature” (1906: 297) modify and even create new organisms:

> By art [...] we make them greater or taller than their kind is, and contrariwise dwarf them and stay their growth; we make them more fruitful and bearing than their kind is, and contrariwise barren and not generative. […] We make a number of kinds, of serpents, worms, flies, fishes, of putrefaction, whereof some are advanced (in effect) to be perfect creatures, like beasts or birds, and have sexes, and do propagate. Neither do we do this by chance, but we know beforehand of what matter and commixture, what kind of those creatures will arise. (291)

He even envisions turning our power over nature into power over human nature also, since the proper application of modern science ranges from “the meanest mechanical practice” to “immortality (if it were possible)” (1984: 42). Jonas refers to this as the “Baconian ideal” (*IR*: 140) – the dream of not merely technological progress, but rather wholesale power over nature, to use and redesign it according to our desires.

To present-day readers Bacon’s vision cannot but appear prescient: we are now able to make creatures ‘other than their kind is’ through genetic engineering, generate new lifeforms from ‘putrefaction’ in synthetic biology, and are pursuing immortality as part of the human enhancement agenda. On each of these points Bacon seems to have longed for the very technologies which have either emerged in recent decades, or at least now appear possible. Needless to say, he did not foresee the practical and ethical dilemmas which would arise in the realisation of his vision. In part this is because he believed

that mastery of creation was sanctioned by Christian scripture. Not only is his techno-utopia perceived as a restoration of paradise which preceded the Fall, but equally, the inhabitants of Bensalem are portrayed as devout Christians, and he even says in *Valerius Terminus* that “all knowledge is to be limited by religion” (1984: 34, emphasis removed). Of course, as we saw in the introduction, modern science has in fact demolished the power of religion. However, the main reason Bacon failed to envisage the problematic consequences of his ideal is *precisely because utopianism precludes such considerations*. By its very nature, techno-utopianism excludes the acknowledgment of fundamental flaws in its agenda, whilst smaller problematic side-effects are simply deemed rectifiable by better (i.e., more efficient) technology. As such, Baconian techno-utopianism is the strongest ideology of technological civilisation – the form of life which it helps entrench.

Although Jonas does not make the connection explicitly, there is a profound link to be drawn between the ideologies of progress and techno-utopianism which characterise the contemporary West, and its deeper Gnostic tendency. This observation was made by Eric Voegelin, an associate of Jonas’ and who drew on the latter’s work to develop his critique of modernity as fundamentally Gnostic (1952: 124). In the ancient world, as we have seen, Gnostics held the divine to be fundamentally separate from the material world, the two realms being connected only by the messenger from the world of light who bade those who listened to prepare for salvation. Voegelin argues that the modern West is characterised by an “immanentization of the eschaton” (163). That is to say: it construes worldly history as teleological – a purpose discernable only to the select few – and oriented toward a “state of perfection” (120). The most conspicuous example is Marxist-Leninism, with its dream of world communism led by an elite vanguard, but Voegelin also points to the “progressivism, positivism, and scientism” of Comte as another key manifestation (164). The connection with Bacon’s thought should here be clear. Firstly he construed the world as explicable according to the principles of experimentation and inductive reasoning, which are available only to men of reason, rather than those beholden to the idols of the tribe. Secondly, and decisively, he quite literally held the historical *telos* of the scientific method to be a return to Earthly paradise, insofar as we would have power and sovereignty over Creation once more.

(β) The Reality of Baconianism

Jonas called the fundamental instability of technological civilisation and the ecological and biological catastrophes that await us the "ominous side of the Baconian ideal" (*IR*: 140). He warns us of an "apocalyptic perspective calculably built into the structure of the present course of humanity" (141): however, rather like his all-too-brief account of ideology, Jonas did not discuss this precarity concretely, seemingly taking for granted that we share his diagnosis of the situation. In this instance it is tempting to give him the benefit of the doubt, since the audience for which he was writing lived under the perpetual threat of nuclear war. This was not Jonas' chief concern, however, as he presciently identified the very crises we face today – climate change, pollution, overpopulation, and other such "slow, long-term, cumulative" problems (ix) – as greater threats. He observed, rightly, that the temporal and spatial distance of such issues places them at a remove from everyday concerns and political expediency, and so the movement toward them is considerably harder to avert in advance than nuclear war, "which sane fear can avoid with relative ease" (*ibid.*). A description of the inherent but subtle insecurity of technological civilisation which has caused these crises is necessary, therefore, to illuminate the reality of Baconian techno-utopia. In order to flesh out this idea I will briefly turn to Ulrich Beck's famous analysis of risk society. This move is justified, I would argue, by Jonas and Beck's debate about the ecological crisis in which the latter stated: "I have described the new epoch, which Hans Jonas […] has identified, with the notion of 'risk society'" (*FWT*: 70).

Beck diagnoses technological civilisation as fundamentally reliant on high-stakes risks which simultaneously imperil it. In line with Bacon's vision, he notes that "the modernization process takes place with the claim of opening the gates to hidden sources of social wealth with the keys of techno-scientific development" (1992: 20). However, this process necessitates "*a systematic way of dealing with hazards and insecurities induced and introduced by modernization itself*" (21). At face value risk society embodies the ideals of progress and techno-utopia, but it in fact rests on the "volcano" (76) of accepted and managed risks. Perhaps the best example of Beck's diagnosis is nuclear power – presciently, the original German edition of *Risikogesellschaft* (1986) was published shortly before the Chernobyl disaster. Measures are of course

taken to minimise the risk of a nuclear incident: in the United States, for example, radioactive waste is disposed of "about 300m underground in a dry, geologically stable medium" (Penner et.al., 2008: 277). Here it is isolated from the biosphere for some 10,000 years to allow radiation to fall to what is deemed to be the minimally-safe level. Moreover, the power plants themselves are typically situated at a geographical remove from conurbations so as to minimise the risk to those segments of society most dependent on their fruits.

Unfortunately the risk management process can and does occasionally fail. The Chernobyl disaster of 1986 was the result of lax procedures: engineers shut down multiple safety mechanisms as part of a live experiment with the reactors which caused the fatal power surge (Ramana, 2006: 1743). In 2011, the Fukushima disaster resulted from a combination of natural catastrophe – an earthquake followed by a tsunami which hit the plant – and insufficient preparation for such an eventuality (Pritchard, 2012: 220). To be clear, it is not that technologies such as nuclear power are any more *likely* to go wrong than simpler technologies – they may even be less likely – but that if they do the *scale* of harm is altogether greater (a distinction sometimes referred to as one of 'risk' and 'hazard'). The collapse of a windmill might be likelier than that of a nuclear power station, but leads to negligible harm. A household fire can spread to catastrophic effect, to be sure, as the 1666 Great Fire of London proves, but its harmful effects nevertheless remain temporally bound to the present. In this respect neither are comparable to the nuclear power plant, where the major costs attached will affect future generations as well as our own.

But above all, in risk society the danger is *a byproduct of normal functioning*. In addition to Fukushima-style catastrophes, Beck and Jonas' concern is that the possibility of harm innocuously accumulates in the form of radioactive waste – as Jonas notes, while it continues to work perfectly "the peaceful reactor undramatically goes on depositing his poison for millennia to come" (*TSE*: 896). Analagously, booming population numbers, fossil fuel emissions, and depletion of biodiversity are inherent to our present model of development, which makes some concessions to the necessity of tackling these problems. In risk society the greatest threats are not always accidental but rather cumulative and otherwise-managed side-effects, which, as Beck says, is precisely why it is so troubling (1992: 29-30). Where Beck's analysis helpfully

informs Jonas', therefore, is firstly fleshing out the notion of risk intrinsic technological civilisation, and secondly in supplementing it with the notion of rational management. In Jonas' critique deliberation only features insofar as he hopes it might rein in the technological drive (*IR*: 142). However, Beck shows us that rational planning in the form of bureaucratic governance is an integral part of risk society: part of technological civilisation's autonomous thrust is that it involves governmental management of risks as a justification for perpetuating the whole.

VI. Posthumanist Philosophies of Technology

In reconstructing Jonas' philosophy of technology I have attempted to show that the reasons most often given for disregarding it are unfounded, and that it offers an astute analysis of contemporary technological civilisation if bolstered with sociological analysis. However, the sense that his work is somewhat *passé* is tied to the changing trends in the philosophy of technology since Jonas' intellectual peak in the 1970s. In particular, the 'posthumanist' turn taken in the 1980s shifted the framework of technological analysis away from its traditional themes and figures. As Don Ihde notes, of the early philosophers of technology only Heidegger remains very much in vogue (2010: 1), although interpreted in a way that I suspect Heidegger himself would not recognise. Charting this movement to posthumanism, which remains the dominant paradigm, can help us better understand the reasons for Jonas' current unpopularity and evaluate its strengths and weaknesses against the contemporary alternative. Tamar Sharon has divided the history of the philosophy of technology into four broad categories, which provides a useful entry point (although I shall refine them): they are the *utopian*, the *dystopian*, *radical* posthumanist, and the *methodological* posthumanist (2014: 5). We shall take them in turn.

Courtesy of Jonas' critique of it we are familiar already with techno-utopianism, contemporary advocates of which include transhumanists such as Nick Bostrom, Max More, and Ray Kurzweil. Its defining features are that technology is an instrument put to use by humans who are in essence autonomous, productive beings: *Homo faber*. Technology is here conceived of as a neutral means to meet the end of material security against nature (including our own biological constitution), culminating in our meeting all conceivable needs and desires. I have argued that techno-utopianism is a

radical extension of the notion of technological progress, the everyday belief that technology continually improves and more or less delivers greater convenience and security. However, Sharon does not differentiate between the two.

The same oversight also applies to her sweeping discussion of those she terms the 'dystopian' philosophers of technology. Broadly speaking, these thinkers sought to counter the naïveté of the above views by stressing what has been, or could be, lost in technological development. Amongst them we can name Lewis Mumford, Oswald Spengler, Heidegger, Arnold Gehlen, Horkheimer and Adorno, Günther Anders, Jacques Ellul, Hannah Arendt, and Herbert Marcuse.[23] Jonas, of course, is also a key figure in this lineage which is united by the belief that technology – or at least its modern manifestation – is no mere instrument, and that *Homo sapiens*' existence and/or essence may be imperilled by the success of *Homo faber*. As argued above, these insights are ultimately more profound than the caricature sometimes offered. Some, such as Heidegger, Ellul, and Spengler, arguably deserve the label 'dystopian' given the fatalistic dimension of their thinking, but the others, who do not subscribe to that notion, perhaps ought to be considered 'critics' instead. Unfortunately, once more Sharon overlooks this distinction: even those such as Horkheimer, Marcuse, and Jonas, all of whom offer reasoned and powerful critiques of modern technology, are grouped with fatalists such as Ellul and Heidegger, obscuring at least one fundamental point of difference (2014: 81).

The third group Sharon identifies is radical posthumanism. This school has its roots in French post-structuralism, in particular the work of Michel Foucault, and finds contemporary advocates in Donna Haraway and Rosi Braidotti. The aim is to account for the way in which emerging technologies contribute to the deconstruction of dualisms foundational to Western thinking: self and world, mind and body, culture and nature, and so on. As such, it is fundamentally descriptive although its advocates often imbue their analysis with normative significance. This tendency is likewise a result of its Foucauldian inspiration, wherein "ethics involves the ability to reflect on the processes by which we are endlessly constituted as subjects and requires that we develop an

[23] Incidentally, Jonas studied alongside Marcuse under Heidegger, with Horkheimer under Husserl, and with Arendt and Anders under both.

active relationship to the mediations that help shape the self" (Sharon, 2014: 11). As such, the deconstruction of dualisms is deemed ethical in that it represents a challenge to power – but how we can distinguish good from bad according to only the descriptive category of power is unclear.

In a different way the problem of normativity also affects the final group, methodological posthumanism, which is the more philosophically robust of the two posthumanist strands.[24] The advantage of the methodological posthumanist approach is the detail added to a general theory of technology courtesy of fine-grained examinations of *particular* technologies, which is why this shift has also been called the 'empirical' turn in the philosophy of technology (Achterhuis, 2001). Key figures in this generation include Ihde, Albert Borgmann, Langdon Winner, Carl Mitcham, and Andrew Feenberg. Linked to this group is the sociological subdiscipline of science and technology studies, the foremost figure of which is Bruno Latour. All sought what they regarded as a more balanced examination of technology than was provided by the utopian and dystopian schools.

Ihde and Borgmann are probably the most astute and insightful of this generation. Ihde provides phenomenological descriptions of the role played by technology in mediating between the self and the world, which he refers to as "the intentional arc [of] Human-instrument-World" (1979: 32). He claims that the medium of technology alters our experience of the world in two connected ways: through "embodiment relations", and "hermeneutic relations" (36). The former refers to the way in which technology can amplify or diminish our experience of aspects of the world: for instance, a magnifying glass intensifies our visual perception of whatever we put before it, while shoes diminish our tactile perception of the ground beneath us. With an increase in technological complexity, however, Ihde argues that this reduction-amplification scale tips over into a novel hermeneutic capacity, as technology becomes a means of experiencing that which is not otherwise apparent to perception. He says:

> [I]n contemporary technologically embodied science, it is precisely what is thought to be unperceivable that is made present. The successful

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[24] I will bypass Sharon's own contribution of 'mediated' posthumanism as it builds on aspects of both radical and methodological posthumanism, and suffers from the same limitations as those outlined.

> search for atomic sub-particles, for DNA structures, for the various varieties of the micro-structure of the world appear through the mediation of the sophisticated instrument. (38, emphasis removed)

As a consequence, Ihde claims, "[t]he 'world' for us is interpreted as one of a vast system of impersonal relations, often explicitly conceived of in terms of mechanical metaphors" (1983: 17). However, he holds that the intentional arc and this hermeneutic experience are also reflexive, changing our *self*-perception: "technology supplies the dominant basis for an understanding both of the world and ourselves" (10). This even exerts an influence the science itself, which frequently conceives of the body in mechanistic terms: the heart is a pump, DNA is code, and the brain a computer, the latter accompanied by metaphors of 'hardwiring', 'programming', and 'processing'.

So far Ihde's analysis is broadly in line with Heidegger's theory of enframing and largely compatible with Jonas' account of modern technology. Indeed, as with Ihde's last point Jonas claims:

> There is a strong and, it seems, almost irresistible tendency in the human mind to interpret human functions in terms of the artifacts that take their place, and artifacts in terms of the replaced human functions. […] The use of an intentionally ambiguous and metaphorical terminology facilitates this transfer back and forth between the artifact and its maker. (*PL*: 110)

The difference between Ihde and Jonas on this issue is that the latter regards it as a *misconception* and pursues a way out of modern mechanistic metaphysics, whereas the former does not. While Jonas attempts to tackle the reductive technological worldview on the plane of metaphysics, where it belongs, Ihde opts instead for "a 'loose' or maybe even 'Zen' relation to technology" (1983: 23), modelled on the later Heidegger's concept of releasement. The problem with Ihde's approach is twofold, then: firstly, it surrenders the search for metaphysical accounts of the world which would allow for a stronger engagement with technologically-influenced conceptualisations of it. Secondly, and relatedly, it lacks the normative grounds required to *judge* how technology changes our self-conception. It is for this reason that Jonas regards the

elaboration of an “idea of Man” (*IR*: 43) as of utmost significance, particularly, as we shall see in Chapter Six, for bioethics.

In this regard Borgmann’s thought represents an advance over Ihde, as his analysis of technology is explicitly anchored in a normative framework. Borgmann draws a distinction between two sorts of technological entities, the *device* and the *thing*. His account of a ‘thing’ follows that of Heidegger, as expounded in an essay of that name (2001b: 161-184). Borgmann explains it as follows:

> A thing, in the sense in which I want to use the word here, is inseparable from its context, namely, its world, and from our commerce with the thing and its world, namely, engagement. The experience of a thing is always and also a bodily and social engagement with the thing’s world. (1984: 41)

The crucial role played by a thing is as a *focus*, gathering both people and a world. Borgmann’s paradigmatic example of a focus is the household fireplace, or hearth, since it is, in fact, the etymological origin of the word. He notes that the hearth, as provider of warmth, physically and socially centred the household, provided its occupants with skilful tasks such as fire-lighting, and was intimately tied to the local source of timber. When describing the building and maintenance of a fire Borgmann arguably veers into Romanticism, but he does also recognise the degree of hardship such a way of life entailed (41-42). Indeed, for Borgmann it is precisely the promise of ease and affluence over toil and scarcity which explain the allure of technological development. This promise finds greatest expression in the device. A device “makes no demands on our skill, strength, or attention, and it is less demanding the less it makes its presence felt. In the progress of technology the machinery of a device has therefore a tendency to become concealed or to shrink” (42). A device equivalent of the hearth is a central heating system, which also provides warmth but with none of the focal aspects of the former. Its heat is dispersed throughout the house, it is less intimately connected to the environment powering it, and any more work involved in using it than clicking a button is considered laborious. Finally, its workings are largely hidden from the view of the user, again contributing to the device’s status as a background entity.

Borgmann provides other detailed examples of the distinction between things and devices, in particular cookery versus microwave dinners (51-52) and hiking in the wilderness versus camping with all the latest mod cons (191-194). Although it is clear that Borgmann prefers “focal things and practices” (196) to devices, he stresses that this does not constitute a rejection of technology, even in its modern form. He tells us that “we have always and already accepted technology, be it in the middle of the wilderness or on a homestead where we pretend to live a self-sufficient life. […] [T]his acceptance is required of us. It is the sign […] of a new maturity” (194). The challenge is to identify those things and practices which, though just as technological as devices, act as focal points. Why? Borgmann’s answer is that these contribute to the good life, to flourishing – a connection worth briefly elaborating on.

Borgmann argues that the consumption of devices principally offers convenience. As noted above, they encourage a less intimate relation to the world and other people, involve less skilful engagement, and so – despite their great utility – a life dominated by devices is in key respects a poorer one (124-143). Moreover, he argues that the nature of the device as a background object, fulfilling a single function, means that we easily get bored and dissatisfied with them, and search for newer ‘improved’ versions. Because the device has little to no value beyond utility – though it might also have aesthetic value, or come to have sentimental value – it encourages a consumerist attitude to the world.[25] For Borgmann, if we seek to live well in an age of mass consumption then it is vital that we engage in focal things and practices which offer the chance to develop oneself, to maintain genuine relations with our friends, family, and wider civil society, and – if possible – pursue a line of work which involves such focuses. Cooking and preparing food, eating around a table instead of in front of the television, socialising at the pub rather than via the internet, walking the dog, learning a new skill or craft: all, in one way or another, embody characteristics of the focus.[26] If we adopt technologies and practices both old

[25] One wonders here as to the exact nature of a device which acquires sentimental value. Take the broken watch I value solely because it belonged to my late grandfather, and which has no utility for me (although it presumably did for him). Is this broken watch then no longer a device, but now a thing?

[26] The pub (my example, rather than Borgmann’s) shows that not all focal aspects of the thing need to be in play at the same time. The beer is generally not brewed on site and the fireplace, if there is one, is usually not maintained by the patrons. But even in its most superficial

and new which work in this way, Borgmann argues that there is no reason why we cannot recover "the promise of technology" (246).

VII. From Technology to Ethics

Borgmann's philosophy of technology is undoubtedly one of the most insightful to emerge from the posthumanist turn, both for the richness of its analysis and its commitment to a normative dimension which broadly situates it within the framework of virtue ethics. In the latter it might work as a supplement to Jonas' philosophy, which, as Nikulin points out, rarely explicitly draws on virtue (2001: 101). Jonas' theory shows us how the integration of science, technology, capitalism, and bureaucratic government form a mutually propelling juggernaut which leaves a diminished space for agency to fundamentally challenge it. Jonas' solution, as we shall see in later chapters, is to utilise government and public policy against contemporary technological civilisation, as these can best respond to reason and thus enact the new responsibilities he identifies. But in doing so Jonas fails to flesh out the connection between technology and virtue, a possibility which Borgmann's work alerts us to.

Viewed from Jonas' perspective, however, Borgmann's philosophy of technology is not without its own limitations. Borgmann centres his analysis on the role technology might play in the good life, and asks that we engage with focal things and practices to that end, yet he overlooks the ambiguous role that technology plays in the *formation* of ends. Jonas noted, in a neo-Aristotelian vein, that part of modern technology's peculiarity was that it is no longer a means to an end. To reiterate: "in addition to spawning new ends (worthy or frivolous) from the mere invention of means, technology as a grand venture tends to establish *itself* as the transcendent end" (*TPT*: 38). Borgmann somewhat evades the issue by arguing that "at least in our reflective moments we hold to the traditional understanding of means and ends" (1984: 247). In our reflective moments perhaps we do – indeed, faith in our ongoing ability to draw this distinction is one of the few remaining grounds for hope – but to just assume it is to neglect the very real influence technology has over our day-to-day socio-economic activity, and which its accompanying ideology has over our

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manifestations the pub remains a social focus – the legacy of when it was quite literally a public house – gathering a community.

inner life. If Jonas is correct, then, Borgmann's analysis is undermined by the changing nature of human ends in the technological age.

A final problem is that despite his recognition that the reform of technology extends into politics and economics (226-246), Borgmann gives little sense of the urgency of the task. As Jonas, Anders, Beck and others in the 'critical' or 'dystopian' schools have shown, risk is central to an adequate account of technological civilisation. And, although it might be a statement of the obvious, the fact that the future existence of human and non-human life is in doubt calls for a more urgent and collectively demanding response than Borgmann offers. The root of this oversight is, I suspect, his desire to break with those he considered substantivist philosophers of technology, and in doing so did an injustice to their insights. So let us summarise what we have learned from Jonas' philosophy of technology, when reinforced with the necessary sociological theories: we have seen that technology, far from being a neutral instrument, is rooted in a particular approach to the world embedded in modern science. Its development acquired a momentum of its own when combined with industrial capitalism, which reinforces this automatic advance through the ideology of progress and its radical offspring, techno-utopianism. Both of these elevate technological advance to the status of an end-in-itself. This masks the great risks technological civilisation poses to life, and it is the latter development which makes unprecedented ethical demands of us. A new ethics will represent, then, the restitution of true ends and the relegation of technology to its proper place as a means. This ethics is our topic for the next three chapters, beginning with its ontological foundation.

Chapter Two: Philosophical Biology and Anthropology

I. Ontology as a Ground for Ethics

The previous chapter made the case that modern technology, developing autonomously, has its origin in the same scientific revolution from which modern nihilism arose. The root cause in both cases is a materialist interpretation of the natural world, interpreted mathematically and denied purpose, order, and value. It is this which Jonas' ontology seeks to overcome.

Jonas ambitiously argues that "*Being, in the testimony it gives of itself, informs us not only about what it is but also what we owe to it*" (*MM*: 101). Vittorio Hösle suggests that due to this unapologetic fusion of ontology and normativity "[i]t is no exaggeration to say that since Immanuel Kant, there has hardly been an ethicist in whose approach the metaphysics of ethics has played so decisive a role as in the case of Jonas" (2008: 22). While this may be an exaggeration – Hegel and Schopenhauer spring to mind – it is fair to say that in this respect Jonas' philosophy is unusual for its time. Indeed, we shall see in the next chapter that Jonas' attempt to bridge ethics and metaphysics leaves him open to criticism from those who uphold a post-metaphysical critical philosophy. Firstly, however, we must make sense of Jonas' claim that Being implies obligation, and to do this we must first examine what 'Being', for Jonas, actually is. For this reason I will focus here on his middle-period work which seeks to demonstrate that *life*, in its manifold forms, is the pivotal domain of ontological interrogation: one which escapes and refutes materialism.

There are two major works in Jonas' *œuvre* which present his philosophical biology and anthropology, both having their origins in the *Lehrbrief* written by Jonas to his wife Lore during the Second World War (*M*: 220-245). The first is the only-recently published monograph *Organism and Freedom*. Jonas intended it to be a systematic and integrated presentation of ideas developed in a series of essays written in the 1950s, but abandoned the project after struggling to find a publisher (197). He opted instead to publish the individual essays in a single volume as *The Phenomenon of Life*: the other crucial text.

In both Jonas offers an "'existential' interpretation of biological facts" (*PL*: xxiii).[27] Adopting Heidegger's existential-phenomenological method, he sets out to show that the materialism of modern science is incompatible with a first-person account of actually *being alive*. However, he also argues that Heidegger's early approach is itself fatally limited as "existentialism, obsessed with man alone, is in the habit of claiming as his unique privilege and predicament much of what is rooted in organic existence as such" (*ibid.*). Integrating phenomenology with biological findings and concepts from philosophical anthropology, Jonas attempts to show how various organic capacities, in evolving, brought about differing degrees of freedom at the ascending levels of plants, animals, and humans. The transcendent properties of the last – our capacity for abstract thought and morality – thus constitute Being's pinnacle. The end result is a partial rehabilitation of Aristotelian biology which, though plausible, is by no means uncontentious, as I will show by examining some broad criticisms Jonas' philosophy of life has received.

II. Dualism, Materialism, Integral Monism

Jonas firstly sets about showing that materialism, as it is understood today, in fact rests on the untenable assumptions of substance dualism. He uncontroversially takes the exemplar of dualistic metaphysics to be Cartesianism, as Descartes infamously divided the world into *res extensa* and *res cogitans* or "extended" and "intelligent" substances (1968: 57). The former, *res extensa*, was the world of matter as described by the new physical sciences. As discussed in the previous chapter, this perspective jettisoned teleology and instead took material, formal, and efficient causation as sufficient to interpret non-human nature, living and non-living. The latter substance, *res cogitans*, was the human subject which accordingly became the central object of philosophical enquiry as sole terrestrial possessor of purpose and intrinsic value. As is well known, Cartesian substance dualism led to a conundrum in that the mind's interaction with the material body could not be accounted for. To his credit, Descartes recognised that their relation was not simply like that of "a

[27] I am grateful to Francesca Michelini for alerting me to the fact that in *Organismus und Freiheit* the word 'existential' is in this line replaced by "ontologische", or 'ontological' (*OFA*: 3). However, I take *The Phenomenon of Life* to be the definitive edition, partly because it is the original, and partly because Jonas' use of 'existential' seems more appropriate given his criticism of 'contemporary existentialism' in the following line. This latter usage is preserved in the translation as "[d]er zeitgenössische Existentialismus" (*ibid.*).

pilot in his ship", but rather that the mind was "joined and united more closely with the body" (76). However, his notorious solution – indicated only in private correspondence (1998: 205) – that the point of connection was the pineal gland in the brain merely begged the question: how, then, was the mind joined to the pineal gland? No adequate answer conceived of on dualistic terms was forthcoming.

The resolution of this fundamental flaw entailed a move to monism. Two competing positions arose, each emphasising one half of the substance duality over the other: the idealist path accommodated the physical into the mental; the second option, materialism, reduced the mental to the physical. Idealism was not so much philosophically defeated as culturally discredited: the success of the modern sciences, in particular Darwin's theory of evolution by natural selection, proved decisive in resolving the stand-off in favour of materialism. Extending Darwin's insights it was possible to argue that humanity, and consequently its faculties – previously taken to be apart from mechanistic nature, thereby deriving their dignity – were also mere products "thrown up in the mechanics of organic mutation" (*PL*: 127), as Jonas puts it. This explanatory advantage allowed materialism to emerge as the dominant ontology of the modern era.

However, this still left the problem of accounting for the immediate evidence of the mind in a world purportedly composed of matter: how did the one belong to the other? Jonas critiques two philosophical attempts to account for this. The first, epiphenomenalism (which Jonas amalgamates with parallelism), had the virtue of taking materialism to its logical conclusion in that consciousness was conceived of as simply a shadow of neurological activity, with no power of its own. This was exemplified by B.F. Skinner's description of mind as a "metaphor", the efficacy of which is – he claimed – only plausible due to the "seeming relevance" of introspective observation (1974: 165). To this Jonas makes two objections. Firstly, he notes the "grandiose pointlessness" (*PL*: 129) of evolution giving rise, through natural selection, to a consciousness with no efficacy. However, this is not, in itself, a disproof. Secondly, therefore, he identifies a "logical absurdity" undercutting the epiphenomenalist claim "in that it denies itself the status of an argument", since strictly physical processes are themselves "entirely foreign to 'meaning' and 'truth'" (*ibid.*). For the

epiphenomenalist the mind has a reality, to be sure, but only as a correlation of neurological states. Creative, purposeful mental capacities such as meaning and judgement – conditions of possibility for even *making* the epiphenomenalist case – cannot be accounted for on such a model which permits only physical processes. Thus epiphenomenalism is, in essence, a performative contradiction: as a justification for materialism it circumvents the problem of mind-matter interaction "only at the price of destroying […] the very idea of mind", which it at the same time presupposes in making the argument (*IR*: 130).[28]

The second solution analysed is emergence theory. The attraction of this approach was that it held on to the immediate evidence of the mind's efficacy, but located its origin in particular configurations of matter, thereby retaining scientific compatibility. This position was advocated with force by Ernst Mayr, who held emergence theory to be "thoroughly materialistic" and "by definition, nonvitalist" (1982: 64).[29] But, as Jonas points out, emergence is a "valiant attempt" to have it both ways by holding on to pure matter *and* the power of consciousness, yet refusing to confront the contradiction that the latter cannot have emerged *ex nihilo*, as it were, from a world of purely material and efficient causation (*IR*: 67). On the contrary, something of the causal power of mind would have to already reside in matter in order for particular configurations of the latter to give rise to the former – but this is precisely what the materialism underpinning emergentism denies.

It is true that Jonas overlooks other philosophies of mind, the nuances of which might address certain problems with the above accounts. But the essential conundrum is that materialism can only make sense of mind by either defining it as an emergent property of a substance which precludes such qualities, or else reducing it to a mere phantom of the brain, in direct contradiction to the logical conditions of argumentation. Each is unappealing,

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[28] 'Impotence or Power of Subjectivity', the appendix to *The Imperative of Responsibility*, confronts the issue of epiphenomenalism in far greater detail. However, the essence of Jonas' criticisms are summarised here.

[29] According to Strachan Donnelley, Mayr described Jonas as "one of the few thinkers who took organic life and organisms seriously" (2008: 261). However, he also accused Jonas of "fighting Darwin and […] endorsing biologically unsound theories" (1982: 75). In Mayr's defence it has to be said that Jonas' interpretation of the organism and metabolism is hardly in line with orthodox scientific theories, but whether Jonas' arguments are valid is a matter of metaphysical, not scientific, debate.

but their respective failures point toward a way out. The absurdity of the epiphenomenalist account reveals the fundamental inadequacy of the original Cartesian division between mind and matter. Descartes had conceived of this distinction under the influence of modern science, but arbitrarily so. There is no good reason, after all, to assume that the physical sciences provide us with a comprehensive ontology, and a very good reason to think that they do not: namely, the immediate evidence of our own minds. Although emergentism had valiantly tried to square this circle, the theory only makes sense if we admit that mind must already exist in matter as such, even if only in adumbrated form.

With this latter observation we have essentially arrived at "integral" monism as the only plausible metaphysics of substance (*PL*: 19).[30] In other words: a theory of Being which reunites the erroneously separated domains of mind and matter, synthesising the "partial monisms" of idealism and materialism (16). How, then, is this ontology to be constructed? Jonas' answer is that we must take embodied consciousness as our methodological starting point. This derives its authority from being the most fundamental ground for enquiry available to us, since "*my* body […] is, in its immediacy of inwardness and outwardness in one, the *only* fully given concrete of experience in general" (24). If it is true, as we have argued, that "[r]eality, or nature, is one and testifies to itself in what it allows to come forth from it", then "we must let ourselves be instructed by what is highest and richest concerning everything beneath it" (*IR*: 69, emphasis removed). In this way Jonas proceeds to substantiate his ontology, which is consistent with, but transcends, the theory of evolution. In a dialectical twist he argues that the philosophical consequence of Darwinism is not, as is often claimed, the proof that humans belong to a mechanistic nature, but in fact the very opposite: "evolutionism undid Descartes' work more effectively than any metaphysical critique […]. If man was the relative of animals, then animals were the relative of man and in degrees bearers of that inwardness of which man, the most advanced of their kin, is conscious in

[30] What Jonas means by his call for an 'integral' monism can be clarified with reference to related ontologies. Despite referring to Spinoza as "the great rectifier" of Descartes, Jonas rejects Spinozistic "psycho physical parallelism" for veering "right to the other extreme" and locating psyche – and not just its latent possibility – in all living and non-living beings (*MM*: 185). He is similarly wary of "panpsychism" – perhaps to avoid the implication that mental activity, such as thoughts, occur even in lifeless beings – and uses the term only to refer to the theological metaphysics of Teilhard de Chardin (*PL*: 25). As such, Jonas' integral monism ought to be considered an idiosyncratic attempt to bridge substance dualism.

himself" (*PL*: 57). Thus life and mind, both eluding the materialist, are shown to be one and the same.

We shall briefly consider two possible criticisms of Jonas' historical account. Firstly, we might argue the following: if it is true that to challenge an idea by reference to its origin is to commit a genetic fallacy then Jonas gains little from his narrative. One might say that although materialism arose from a flawed dualistic ontology this is not proof that it is *itself* defective. Jan Trnka has sought to defend Jonas from this charge by claiming that the latter's history of modern metaphysics is a rhetorical move "to relativise the exclusive standing of materialistic ontology in modern science" (2008: 8). In other words, Jonas might be seen to be merely *raising the question* of materialism's legitimacy by showing that it arose as a solution to the contradictions of substance dualism. Although this is by no means a disproof, exposing materialism's historical genesis might then lay the ground for an alternative ontology by showing the other paths that might have been taken. But this is not, it seems to me, the entirety of Jonas' intention. Rather, he offers a 'deconstruction' of materialism *via* a historical account – namely, that the Cartesian separation of mind and matter excluded the former from progressively greater swathes of the latter, leading to a conclusion which is incompatible with the very act of self-reflection. This is not simply a relativisation strategy, but an argument which draws power from a historical perspective.

Secondly, there is the charge of vitalism, which is today regarded as an unscientific anachronism. Mayr, for instance, derided Jonas for invoking "nonmechanical forces that were not acceptable to most biologists" (2004: 25). Now, it is true that Jonas' ontology transcends the materialist basis of modern biology, and that he shares this ambition with vitalist thinkers such as Bergson (1922) and Ludwig Klages (2013). But whether Jonas' ontology is vitalist is really a matter of definition. If vitalism refers to a philosophy holding that living beings cannot be fully accounted for by the physical sciences, then the charge stands. However, this is not a troubling criticism since the materialist theories of the mind fail to satisfactorily account for it, as described above. On the other hand, we might think that vitalism entails, as Jonas himself claims, the view that "life involves *forces* other than those found in the interaction of inorganic bodies" (*IR*: 205, emphasis added). In that case, however, Jonas cannot be a vitalist

since his ontology is strictly monistic. To repeat, Jonas' contention is that modern ontology's march into the dead-end of materialism was not a necessary consequence of scientific discovery; on the contrary, science requires, as a condition of possibility, a philosophy that can account for the mind which practices it. To show how Jonas goes about developing this alternative we must first turn to phenomenology.

III. Heidegger's Existentialism

Jonas originally studied under Husserl, the founder of phenomenology, and praised him highly in an obituary. Philosophically speaking, however, Jonas regards Husserl's transcendental phenomenology as inferior to Heidegger's existential version of the method. Jonas' criticism of Husserl centres upon what he perceives as the Cartesian emphasis on cognitive consciousness: "Husserl invested all his efforts in attaining that realm of sources, the pure Ego, as a subject of philosophical reflection, and thereby to establish philosophy as the science of consciousness" (*EH*: 14-15). But philosophy "has to go beyond this, because what is given in consciousness, apart from itself, […] is the world, and Husserl did not offer, I would say, an approach to the world" (*IHJ*: 344). For Jonas, Husserl essentially overlooked "in what sense and to what extent we are enmeshed in the processes of nature" (345).

Now, this characterisation of Husserl's thought is somewhat unfair. In his later works Husserl both developed a concept of the lifeworld and emphasised the "completely unique ontic meaning of the body" for consciousness (1970: 106-107), drawing a crucial distinction between its possible appearances as the lived body (*Leib*), and the objective body of scientific investigation (*Körper*).[31] However, we should note that Jonas' discussions of Husserl's phenomenology usually contrast it with that of Heidegger, in reference to the moment in time – the early- to mid-1920s – when Jonas studied under both (*M*: 41-42). It is true to say that at that point Heidegger, rather than Husserl, offered the most comprehensive account of the world in his existential phenomenology.

As with Jonas' philosophy of technology, the spectre of Heidegger looms large in his ontology. Vittorio Hösle (2008: 29), Susanna Lindberg (2005: 176),

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[31] One might add that Merleau-Ponty developed this dimension of Husserl's thinking in his important phenomenological studies of the lived body (1962) and nature (2003).

and Lawrence Vogel have all argued that its core consists of Jonas “extending his teacher’s categories” to nature as a whole (Vogel, 1996: 170), an interpretation which is broadly correct. In so doing he did not embark on a radically new direction for phenomenology, but rather adapted and altered one Heidegger had gestured towards in his early studies of *Dasein* which culminated in *Being and Time*.

In Heidegger’s usage *Dasein* referred to those beings for whom their being is an issue, and it is clear that Heidegger had human beings in mind. A rock, a painting, and a memory are all beings, but they are not beings which are concerned with themselves. Only *Dasein* is characterised in this way, by *care* for its own being (2010a: 175). Care entails that something has an *existence* (11-12). Heidegger played on the Greek and Latin etymology of ‘existence’, drawing on its original meaning of ‘standing-out’ or ‘standing-forth’. *Dasein* thus exists as it never simply resides in its present situation. On the contrary, it is both one step ahead of itself in its preoccupation with things – including its finitude, represented by death – and one step behind, as it were, in being constituted by a history. These characteristics of *Dasein* are the existential categories Vogel referred to above – historicity, being-toward-death, being-with-others, and so on.[32] Thus the fundamental being of *Dasein* is not transcendent consciousness, as in Husserl’s phenomenology, but rather care following from its *being-in-the-world* (53). Heidegger’s existentialism seemed, therefore, to reunite subject and world and overcome the Cartesian division of *res cogitans* and *res extensa*.

The extent to which this is not the case, however, is clearest when we turn to Heidegger’s analyses of non-human life. From his 1921 lecture course *Phenomenological Interpretations of Aristotle* (2001a) through to the 1926 course *Basic Concepts of Ancient Philosophy* (2008), Heidegger flirted with the possibility of *Dasein*’s extension to non-human life. In large part this investigation was guided by the twin concepts of world (*Welt*), in which *Dasein* is inextricably engaged, and mere environment (*Umwelt*), as made famous by the biologist Jakob von Uexküll (2010). Heidegger initially equivocated over their relative significance for existential phenomenology and the question of

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[32] Of the existential categories Jonas does *not* reject as historically contingent to Western *Dasein*, historicity is overlooked. I attempt to account for this in Chapter Three.

whether either could be attributed to non-human life. At his most generous, in a 1925 essay, Heidegger states:

> Life is that kind of reality which is in a world and indeed in such a way that it has a world. Every living creature has its environing world not as something extant next to it but as something that is there for it as disclosed, uncovered. […] [W]e miss the essential thing here if we don't see that the animal has a world. (2002b: 163)

Here the two concepts seem to converge as a disclosing 'environing world', although this is apparently not available to plant life but only to animals. In any case, by the 1929-30 lecture course *The Fundamental Concepts of Metaphysics* Heidegger turned a corner and instead famously conceived of animals as "poor in world" (1995: 176). Heidegger there argued, in his most sustained and penetrating analysis of the issue, that animals are 'captivated' by entities in their *Umwelten*, rather than open to these entities *as* beings. Since ontological disclosure is denied to them we cannot, he says, attribute a world to animals. Finally, in 1935, with Heidegger's famous 'turn' (*die Kehre*) away from existential phenomenology, he concluded that the "animal has no world, nor any environment" (2000: 47).

Why could Heidegger not arrive at a satisfactory account of non-human life? Why did his early sympathies for animal existence collapse into a total dismissal of the idea? Jonas argues that it was because Heidegger had from the beginning overlooked the corporeality of *Dasein*, and could not, therefore, conceive of a common existential ground between living beings.[33] This was most obviously the case for *Being and Time*, wherein "the body had been omitted and nature shunted aside as something merely present" (*WPE*: 31). Nature did later feature in Heidegger's thought as 'earth' and *phusis*, but in neither case was this a *living* or corporeal nature. He only once, and belatedly, broached the phenomenon of the lived body (*Leib*), in the *Zollikon Seminars* of 1959-69. There he stated that *Dasein*'s being-in-the-world is "determined by the bodying forth [*Leiben*] of the body" (2001c: 91). This was indeed a radical rethinking of the existential phenomenology of decades before, but the

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[33] See Aho (2009) for an analysis of Heidegger and the body; for a sample of the extensive literature on Heidegger and animals, see Buchanan (2008), Calarco (2008), Elden (2006), Krell (1992), and McNeill (2006).

connection Heidegger there drew between existence and embodiment was only provisional and tentative. In particular, Heidegger still had little to say about how *Dasein* and the *Leib*, if interlinked, related to the *Körper*. Jonas asks: "[i]s 'care' ever traced back to […] concern for nourishment, for instance – indeed to *physical* needs at all?" (*MM*: 47). It must be admitted that at no point, including in the *Zollikon Seminars*, did Heidegger undertake a full investigation of the body's significance which could satisfy this demand. Hence the body remained for him "the most difficult problem" (Heidegger and Fink, 1993: 146).

Had Heidegger from the start connected *Dasein*'s existential categories to the demands of organic being, as Jonas suggests, he might then have been able to recognise the presence of those structures in non-human life. Probably the closest Heidegger came to doing so is in *The Fundamental Concepts of Metaphysics*, when he briefly addressed "the motile character of the living being as such", which "is intimately bound up with the question concerning the essence of life" (1995: 266). There Heidegger entertained the possibility that an animal's motile behaviour, such as flight from danger or shrinking in pain, means that death, as opposed to a mere "coming to an end", is in fact open to non-humans (267; emphasis removed). If so, animals would then have an existence of sorts in anticipation of their demise, their being-toward-death, which would have contradicted his well-known declaration in *Being and Time* that only *Dasein* can die whereas non-human life simply perishes (2010a: 237-8). But the attribution of this existential structure to animals was not, however, carried out, due to Heidegger's inadequate understanding of the body.

Partly because of this oversight, Heidegger increasingly regarded language – *logos*, as distinct from *phonē*, the voice – to be of paramount ontological importance. As early as 1926 he claimed that Aristotle's definition of the human being as ζῶον λόγον ἔχον was correct only insofar as it referred to our "being-as-speaking-with-one-another" (2009: 33, emphasis removed). This tendency intensified with the 'turn' of the 1930s, when language came to dominate Heidegger's thinking. He suggested in the 1947 'Letter on Humanism' that "language is not the utterance of an organism; nor is it the expression of a living thing" (1977: 206). Rather, "language is the house of [b]eing in which the human ek-sists by dwelling" (213). Since Heidegger by then took *Dasein*'s being to be overwhelmingly determined by access to language, he concluded that "the

essence of divinity is closer to us" than "our scarcely conceivable, abysmal bodily kinship with the beast" (206).

Throughout his thought, then, the body was fundamentally overlooked. This was the case in Heidegger's early existential phenomenology, but particularly from the 1930s as language increasingly held sway over his thought. Heidegger never, therefore, truly escaped Cartesian dualism: the division of *res cogitans* and *res extensa* ultimately reappeared under the guise of *Dasein* – whose embodied being was never adequately accounted for – and mere corporeal beings.

IV. The Philosophy of Life

Since this failure was peculiar to Heidegger rather than his method, Jonas sets about developing an alternative phenomenological ontology comprised of two key ideas. On the one hand is description of the "living, feeling, striving organism" (*PL*: 12), and on the other is an argument concerning the emergence of such beings within a universe apparently composed of inanimate matter. It is Jonas' contention that the phenomenon of life – comprising of both of these ideas – can only be accounted for by a philosophy which integrates the findings of biology with an existential phenomenological perspective. In other words, one "must deal with the organic facts of life", which pertain to the body as *Körper*, "and also with the self-interpretation of life in man", understood as the *Leib* (6). Taking the two together reveals that existential categories are intrinsically connected to corporeal being, and, consequently, that there is not *Dasein* on the one hand and worldless beings on the other. Instead we find that degrees of world-openness are manifest in Being. Jonas characterises this organismic world-openness as a gradual realisation of *freedom*, in perception, action, and eventually thought, running "like Ariadne's thread" through life (3).[34] On this basis his ontology takes us far from the dualism of animating soul and lifeless matter, and instead to a unified, but gradated, natural world.

In defence of existential phenomenology, Jonas notes that subjectivity is the most fundamental methodological starting point (to this extent, at least, Descartes was correct). More originally, however, he also claims that only on

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[34] Jonas' debt to *Romantische Naturphilosophie* – in particular the work of Schelling (2006) – is here unmistakable. Aside from Goethe, however, the Romantics barely feature in his work.

the basis of embodied consciousness can we account for our experience of other living beings *as living beings*. The natural sciences presuppose, as a condition of possibility, exactly "that almost organic faculty of recognizing life, understanding life, [and] anticipating the encounter of life" (*EDM*: 4). Only on the basis of experiencing ourselves and other living beings as *Leib* can we subsequently interpret them as *Körper* and obtain objective knowledge: this "is the advantage – perennially disowned or slandered in the history of epistemology – of our 'having', that is, being, bodies" (*PL*: 82). Materialists and behaviourists, in their eagerness to avoid any and all anthropomorphism, rely on this pre-theoretical ability only to uphold a metaphysics which *precludes* it. To illustrate this Jonas uses a thought-experiment, asking what James Jeans' God-as-Pure-Mathematician (a proxy for the physical sciences) would see when looking at an organism (75). The answer, Jonas claims, would be that which Newton discovered in the realm of physics: simply the movement of matter. But *we*, "happening to be living material things ourselves", possess "peepholes into the inwardness of substance" (91), and for this reason perceive "a striving […] for existence and fulfilment" in all living beings (61). In essence this means that existential phenomenology is the key which unlocks Being's door. To be sure, with this knowledge comes the danger of undue anthropomorphism, as in animist ontologies. But this, too, is only a possibility because we have the prior ability to recognise beings as alive.

Our fundamental perception of living beings as 'striving for existence and fulfilment' leads Jonas to describe the *Körper* teleologically. In doing so he clearly reaches back for inspiration from Aristotelian biology, despite his claim that a philosophy of life "need not mean a return to Aristotle" (2). Jonas' ambivalence is presumably due to the fact that natural teleology is widely regarded as a chief fatality of modern scientific progress. However, Jonas notes that the exclusion of teleology is only a *presupposition* of the natural sciences, which ought not to be confused with a *finding*. As discussed, precisely because our perception of life is as striving and purposeful, "'teleology' is not a metaphysical afterthought, […] but a descriptive, phenomenological concept […] indispensable in progressively organizing the [scientific] evidence" (*KG*: 163). Aristotle's conceptualisation of it thereby remains a legitimate philosophical resource. As indicated in Chapter One, modern science operates according to

three of Aristotle's four causes: the formal, material, and efficient. The final cause is the *telos*, or end, "for the sake of which a thing is done" (1984e: 194b). The *telos* of an artefact, for instance, is the purpose for which it is made. However, the *telos* of a living being does not transcendentally come from outside, as with the artefact, but rather from *itself*. According to Aristotle this pertains both to the "natural organized body" (1984a: 415b) and its being "moved by intellect, imagination, purpose, wish, and appetite" (1984c: 700b). Jonas takes up this notion of a two-fold "immanent teleology" (*OF* I: 36), like Aristotle locating it in the "structure and behaviour of the organism" (*PL*: 91). On this basis Jonas is able to give the rich account of life that Heidegger could not.

(α) Self-Organisation

As stated, the first type of immanent teleology is the organism's *self-organisation*. Jonas argues that in metabolism the organism achieves an "independence of form with respect to its own matter" (81), as the organism can absorb and excrete substance while maintaining a stable structure. This is what marks out the living being from a stone, river, or computer, which are at all times identical with their material composition, even when – as with the river – they are permanently in flux. Indeed, Jonas believes that we may go even further and say that material composition is in fact *secondary* to the organism, which principally exists in the continual metabolic activity of self-organisation:

> In the process of its being, the parts of which the organism consists at a given instant are only temporary, transient contents whose joint material identity does not coincide with the identity of the whole which they enter and leave and which sustains its own identity by the very act of passage of foreign matter through its spatial system, the organic form. This whole is never the same materially and yet it persists as its same self – *by* not remaining the same matter. (*OF* II: 15-16)

Jonas stresses the novelty of organic being in the universe by characterising the living thing's identity as a "performance", "act", and "process rather than structure" (48; 6, emphasis removed). Ontologically speaking the organism *is* what it *does*, which must not be confused with a being whose 'is' is distinct from the fact that it does things. The appearance of this mode of being allows us to speak of life as an "ontological revolution" (*PL*: 81).

As stated, self-organisation is systemic, which is to say that the identity of each part is derived from its place in the whole. This applies to individual cells – a neuron being very different from a spermatozoon – but most obviously to organs:

> [T]he parts in question cannot exist otherwise than *as* parts of their respective whole (a machine part can): […] there cannot be a heart, an eye, a nervous system, by itself. Outside the whole these structures lose not only the meaning of their function and the power to function, but the very possibility of existence. Furthermore, they have come into existence through acts of self-articulation of the whole and are thus creations of that which they subserve. […] [T]herefore, the whole is ontologically prior to this kind of part. (*OF* II: 39).

If Jonas' argument that 'there cannot be an eye by itself' strikes us as strange, this is likely because of a misunderstanding of the nature of organismic teleology. Clearly, an 'organ' is not, as its etymology implies, a tool or instrument: extraneous beings which can always be set down and picked up by their user. The organ is rather *part of* the organism, and if it ceases to be so (through an operation, for example) will wither and decay. Crucially, however, the organismic whole is not merely the sum total of its parts. A house, for example, is identical with the totality of bricks and mortar which constitute it, and which are teleologically arranged from without. By contrast, the organism, as a process or activity of self-organisation, is *more* than the sum of its parts.

Joseph Farrell has argued that on Jonas' account the organism's self-organisation should be explained with reference to the genome (2015: 191). For the most part Jonas pays little attention to genes, but at one point he does seem to invoke the genome as an explanation of the organism's self-organisation. He says that the organism grows "according to a predetermined 'plan'", any deviation from which "during development is a failure to achieve itself" (*OF* II: 40). The recognition of possible deviation means he does not endorse a naïve genetic *determinism*, but the invocation of a 'plan' still implies a 'preformationist' conception of the phenotype as essentially a product of the genotypic code. This is unfortunate, as such an understanding of organismic development has since been shown to be inaccurate:

> The empirical fruits of several decades of research in molecular, cell, and developmental biology have revealed that what distinguishes one biological form from another is seldom, if ever, the presence or absence of a certain genetic template but rather *when* and *where* genes are expressed, *how* they are modified, and into *what* structural and dynamic relationships their 'products' become embedded. (Moss, 2003: xvii)

The relation between a phenotype and genotype is therefore more complex than preformationism would suggest. For one thing, phenotypic development – including not only learned behaviour but even physiological functioning – can be informed by environmental factors (Barker, 2015: 53-62). This 'adaptive plasticity', as it is called, by itself indicates only a certain *re*activeness on the part of the organism, which changes in response to environmental conditions. It is crucial to note, therefore, that the organism can also make changes *to* its environment – known as 'niche construction' – which then feed back *into* the process of adaptive plasticity (62-66). The result is a picture of phenotypic development as more active and malleable than was available to Jonas at the time he was writing. However, this does not really pose a problem for Jonas, whose theory is perfectly compatible with it. With recent biological evidence on our side, we can uphold the radical core of his account of organic being as freedom, and note that this includes phenotypic freedom from genetic determinism and preformationism.

Organic being is, as Jonas suggests, fundamentally self-creation, or *autopoiesis*.[35] Here an important contrast must be drawn between Heidegger's existential analytic of *Dasein* and Jonas' existential analytic of the organism. In *Being and Time*, Heidegger had attributed to *Dasein* "a potentiality-of-being which belongs to itself, and yet has *not* given itself to itself", since "it exists as thrown, brought into its there *not* of its own accord" (2010a: 272). The 'not' emphasised by Heidegger does not denote a lack, as though a determinate essence is missing from *Dasein*. The very idea of a lack implies that something *should* be present, when, on the contrary, *Dasein*'s "character of being is

[35] Indeed, Jonas' philosophy has been highly influential on the concept of *autopoiesis*, arguably lending his thought greater contemporary relevance. For instance, Varela, Maturana, and Uribe similarly contend that "a physical unity […] remains as such only insofar as this organization is continuously realized under permanent turnover of matter" (1981: 7). For explicit references to Jonas in this context, see: Weber (2002), Weber and Varela (2002), di Paolo (2006), and Thomson (2004; 2007).

distinguished from any kind of objective presence" (*ibid.*). Jonas reveals this picture to be incomplete. It is true that *Dasein*'s mode of being is nowhere objectively present, but because Heidegger did not conceive of existence as essentially embodied he could not see that not only *Dasein*, but to an extent organic existence as such, is a potentiality-for-being. This is borne out by the analysis of metabolism – the defining characteristic of living beings – which reveals the organism to be at no point identical with its material composition, but rather a perpetual act of self-constitution extended through time. Crucially, this process cannot even be explained according to a preformed plan, present-at-hand in the genome. Rather, the organism's potentiality-for-being extends even into informing its own behavioural and corporeal development.

This process of self-constitution also allows Jonas to account for one of Heidegger's key concepts: the temporality of *Dasein*'s existence. As the title *Being and Time* would suggest, temporality was paramount for Heidegger's existential analytic. For Heidegger, care fundamentally consisted of *Dasein*'s projections into the future, entailing that temporality was its ontological meaning (309). Thus for Heidegger one engages with beings insofar as they pertain to our projects, which are always ahead of us. Jonas agrees that temporality is essential to existence, but is able to argue that it follows from organismic being: "[i]nternally [the organism] is directed toward the next impending phase of its own being, i.e., the future as the continuation of the life-process to which it is committed; and this directedness constitutes biological *time*" (*OF* III: 2). In other words, the metabolic process, entailing that the organism is always in a state of becoming, is the corporeal foundation for that which we phenomenologically experience as the flow of time. We might say that there is a forward projection immanent in our very constitution. Heidegger would be correct to say that the experience of temporality comes first, of course, but he could not connect this to *Dasein*'s *Körper* or organismic being as such.

(β) Behaviour

Self-organisation coincides with the second form of immanent teleology exhibited by living beings: purposive behaviour. 'Behaviour' is here employed in a broad sense, to mean any purposive activity undertaken on the part of the organism in relation to its world. Obvious examples are the acquisition of food,

sexual reproduction, and the avoidance of predators. But Jonas also has in mind the basic capacity of an organism to move and orient itself in its world: the organism is engaged with beings as something-for nutrition, something-for traversing, something-for shelter, and so on. In each case this 'something-for', this openness to other beings, represents a purposive activity or behaviour which Jonas quite brilliantly ties to Heidegger's notion of care. We recall that for Heidegger "[t]he being of *Dasein* is care" (2010a: 272), but he could neither show how this related to our corporeal existence nor characterise non-human life in the same way. For Jonas, by contrast, the organism *as such* is a being "whose being is *committed to their own care*" (*OF* II: 31, emphasis added). We shall see how he elaborates on this claim.

Jonas argues that "having a 'sake', and awareness, i.e., being internally affected by the environment, emerge only and entirely *with* that organization which we call organic" (33). Why? Because in its self-constitution the organism wrests itself from the remainder of Being: with this process of individuation comes a boundary, and therefore an 'inside' and a corresponding 'outside' world. To quote Jonas: "to the living entity all the rest of reality is the 'other', the external: crowding in upon it from out of the environment and receding into its distance" (*OF* II: 46). This is the corporeal ground of the organism's being-in-the-world. And as with *Dasein*'s being-in-the-world, the organism's existence is characterised by care, i.e., engagement with other beings. This follows from the demands of metabolic freedom of form: as the organism is not self-contained, but rather reliant on other beings for its continued existence, it relates to those beings accordingly:

> In the single encounters this otherness has the quality of foreign body or influence which is either *useful* or *harmful*; in its entirety and as an enveloping horizon it has the character of 'the external world' confronting the organism's overwhelming concern in its own life-process which has to assert itself within it and, so committed, is of constitutive egoism. (46-47, emphasis added)

The reference here to harms illuminates another essential aspect of organismic being, namely, mortality. Although the organism has a freedom of form from matter, its dependence on other beings for continued existence means that it is

a "*needful freedom*" (*PL*: 80). Thus care is tied to the precarity of organismic being: it is an existence which is always oriented toward staving-off inexistence. This is the organismic ground of being-toward-death.

In this way Jonas is able to explain how the basic structures of existence are not only connected to the lived body (*Leib*), but also the *Körper*, to which metabolism belongs. As we saw above, this is precisely what Heidegger failed to articulate courtesy of his neglect of the body. Jonas suggests that:

> The great contradictions which man discovers in himself – freedom and necessity, autonomy and dependence, self and world, relation and isolation, creativity and mortality – have their rudimentary traces in even the most primitive forms of life, each precariously balanced between being and not-being, and each already endowed with an internal horizon of 'transcendence'. (xxiii)

Of course, Jonas does not conceive of these structures as equally realised across the organismic realm in terms of *intensity*. To give an obvious example, he does not suppose that organismic care and being-toward-death are always conscious (let alone self-conscious). Rather, the internal horizon of worldhood opened up in the organism's interaction with its environment constitutes "the fundamental condition from which ultimately all 'later' characteristics of life derive", including sentience (*OF* II: 47). This is the connecting thread between the meagre world of the amoeba and *Dasein*'s immensely richer existence.

Lastly, Jonas connects care to spatiality, which, in addition to temporality, is one of the two dimensions of the horizon mentioned above "into which life continually transcends itself" (*OF* III: 2). Heidegger had defined spatiality not as an objective point present-at-hand, but rather a as structure of *Dasein*'s being-in-the-world such that care is always an act of "de-distancing" (2010a: 102). What he meant by this was that spatiality is first of all a dimension of our engagement with beings. A being is always somewhere in relation to *Dasein* before it is somewhere in mathematically-calculated space: the car keys are *here* (or over *there*) before they occupy a point in the spatial grid, the latter always being an abstraction from phenomenological reality. Jonas likewise claims that spatiality is a necessary dimension of care, but, true to his broader argument, that it belongs to the organism as such. In reaching outside of itself

to satisfy its metabolic requirements, the organism is "directed towards the co-present *not-itself*, i.e., the 'environment' – that total 'other' […] which holds the stuff relevant to its own continuation; and this directedness constitutes biological *space*" (*OF* III: 2). For Jonas, then, the 'here' or 'there' that something has in an organism's relation to it is first of all a relation of the lived body – of something being 'out of reach' or 'within my grasp' – and this on the basis of need (again, pertaining to the *Körper*). To take an animalistic example: for the fox in pursuit of the hare the latter is just *there* ahead, but this directed, phenomenological relation has its corporeal counterpart in the fox's organismic constitution.

(γ) The Nisus *of Being*

On the basis of this description of the organism Jonas engages in a metaphysical speculation as to the emergence of life from Being as such. This idea first makes an appearance on the opening page of *The Phenomenon of Life*, where Jonas argues that "since matter gave such account of itself, namely, did in fact organize itself in this manner and with these results, it ought to be given its due" (*PL*: 1). His position can be clarified by comparison to two others which it might be mistaken for, which we shall take in turn.

Firstly, and crucially, this is not a claim for a transcendent teleology determining the direction of evolution. On Jonas' schema, the notion of transcendent natural teleology misapplies the logical relation of a designer to their product, where the former is the origin of the latter's *telos*. On the contrary, Jonas holds that the emergence of life and its development into ever-more complex forms remains "entirely within the immanent" (*MM*: 173), without recourse to transcendent agency. He has in mind a weaker notion of a "potency" residing "in the very concept of physical 'substance'" (*PL*: 2). Jonas is here careful to distinguish the two sorts of teleology: "although there should be no plan in [evolution] – this we have already rejected with good reason – we might ascribe to it a tendency, something like a yearning" (*MM*: 173). Michael Hauskeller has characterised this as a "*nisus*: an effort that is being made by nature […] to move in a certain direction" (2015: 45). Even if this is not a proper teleological claim, then, one might yet ask why the speculation is necessary. Jonas' answer is that *mechanistic evolution alone cannot explain the emergence of life*: "the survival standard itself is inadequate for the evolution of

life. If mere assurance of permanence were the point that mattered, life should not have started out in the first place" (*PL*: 106). The fact that it did suggests that something else is also at play: an *urge* to develop. One might note that this also appears to be true of the evolution of animal life, which similarly defies the principles of natural selection: it is a far more precarious form of being than plant life, dramatically exposed to species-extinction in a way unknown to the latter – and yet life arose to these new heights nonetheless. This *nisus* of Being, as I will call it to distinguish it from Jonas' teleological account of the organism, is therefore best understood as a tendency.[36]

Secondly, the *nisus* of Being ought to be differentiated from Alfred North Whitehead's panpsychist ontology. Whitehead's 'philosophy of organism' was undoubtedly a significant influence on Jonas in the post-War period (*M*: 195); indeed, he credits Whitehead with an "intellectual force and philosophical importance […] unequalled in our time" (*PL*: 96). Nevertheless, Jonas rejected Whitehead's ascription of inwardness to every entity: this, he claims, is "an overreaching of speculation […] uncalled for by the record of reality" (*IHJ*: 357).[37] The more parsimonious claim would be that sentience exists only as a *potential* in non-living Being. Jonas articulates this notion by suggesting that "right from the beginning matter is subjectivity in its latent form, even if aeons, plus exceptional luck are required for the actualizing of this potential" (*MM*: 173). Incorporated into the notion of *nisus*, then, the argument is that in order for Being to have given rise to life and mind, the possibility – and at root nothing more than a possibility is identifiable – must have resided therein and expressed itself when chance delivered the necessary favourable conditions. Although this has a certain plausibility (much more so, one might note, than pure materialism) for some it will no doubt prove a speculation too far. If so, this arguably poses a problem for Jonas who requires the *nisus* of Being to make a key axiological claim, as we shall see in subsequent chapters.

[36] Jonas does use "*nisus*" at one point, but rather inconveniently does so to refer to what I call the immanent teleology of the organism, rather than the tendency of Being (*IHJ*: 354).
[37] In his *Memoirs* Jonas refers to Whitehead as "a mighty figure" and concedes his debt to the latter (*M*: 195). We might note, for example, their similar conceptions of God as immanent in the world, or the parallel between Jonas' rejection of modern ontologies and Whitehead's critique of the Cartesian "bifurcation of nature" (1920: 32). However, Jonas takes issue with the fact that the "overbold" (*MM*: 211) attribution of sentience to all entities means that there is "no real place for death in [Whitehead's] account of life", nor for the "deep anxiety of biological existence" (*PL*: 95-96). In this we have evidence that it was Heidegger's *Being and Time*, not Whitehead's *Process and Reality* (1978), that ultimately motivated Jonas' philosophy of life.

V. The *Scala Naturae*: Plants and Animals

Clearly, briefly reconstructing Jonas' existential account of organic being leaves much unsaid. For now his position can be summarised in the following maxims: "there is no organism without teleology; there is no teleology without inwardness; and […] life can only be known by life" (*PL*: 91). The issue to which we now turn is the various forms to which the *nisus* of Being gives rise. To this end Jonas once again reaches back to Aristotle, this time rehabilitating the notion of a *scala naturae*:

> [T]he manifold of existing life presents itself as an ascending scale […]. Aristotle read this hierarchy in the given record of the organic realm with no resort to evolution, and his *De anima* is the first treatise in philosophical biology. The terms on which his august example may be resumed in our time will be different from his, but the idea of stratification, of the progressive superposition of levels, with the dependence of each higher on the lower, the retention of all the lower in the higher, will still be found indispensable. (2)

Evidently the reason for Jonas' qualified appropriation of the *scala naturae* is that Aristotle seemed to envisage the natural world as static and comprising of unchanging species. For instance, in the *Generation of Animals* Aristotle says that "it is impossible for [a living being] to be eternal as an individual – for the substance of the things that are is in the particular; and if it were such it would be eternal – but it is possible for it as a species" (1984b: 731b). However, after Darwin and the expansion of the fossil record we know that no such fixity exists: rather, the history of life on Earth is one of perpetual, if gradual, change and the "frustration and extinction" (*IR*: 81) of numerous evolutionary avenues.

However, Jonas argues that the discrediting of one version of the *scala naturae* does not mean that the notion is nonsensical *per se*. On the contrary, he claims that Aristotle's division, outlined in *De Anima*, of the soul into four accumulative types – "the nutritive, the appetitive, the sensory, the locomotive" (1984a: 414a) – glimpsed something fundamental. As indicated earlier, Jonas believes that this can be characterised as an ascending realisation of freedom in "world perception", empirically identifiable by "greater sophistications of form, the lure of sense and the spur of desire, the command of limb and powers to

act, [and] the reflection of consciousness and the reach for truth” (*PL*: 2). On this scale we may identify ‘higher’ and ‘lower’ life-forms broadly corresponding to a hierarchy of plants, animals, and humans as evolutionary levels.[38] If such clean-cut divisions seem at odds with Jonas’ avowed gradualism, it ought to be noted, firstly, that these are broad classes which themselves allow for huge variation – as indicated by distance between, say, bivalves and the great apes – and secondly, that what Jonas attempts to identify are the *key* manifestations of existential advance which do indeed roughly coincide with the demarcations of plant, animal, and human life.

(α) Plant Life

Jonas writes that plant life possesses a rudimentary subjectivity as the “germ of sensing unfolds to [a] distinct world-relationship, just as the cells grow into the differentiated, composite organism” (99). As an organism the plant is of course a metabolising being – in this case a photosynthesising one – and thereby self-constitutes through material exchange. Moreover, the plant exhibits care in the acquisition of water and sunlight, for which it only has to take root in any suitable location fortune happens to deliver to it. Jonas notes that this is the “most efficient means of exploiting the inherent advantages” of photosynthesis: through roots “we have immediacy guaranteed by constant contiguity between the organs of intake and the external supply” (103). However, this fixity of position and easy satisfaction of needs means that the plant’s relation to its environment “cannot take on the keen edge of want” (*ibid.*), which would constitute a *sentient* world-relation.

(β) Animal Life

Jonas suggests that with the evolutionary arrival of animals a huge existential gain was made. The defining characteristics of animal life are the “three modes” of “perception, emotion, and movement”, which “express the mediacy of animal being, or the split between self and world – a qualitative widening of the split which metabolism opened first” (*PE*: 206). Although part of the gradual advance of organic freedom, Jonas holds that these features

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[38] Jonas does not discuss archaea, bacteria, fungi, and algae, presumably because he saw them as existentially identical to plant life. For this reason, we might consider sub-section *(α) Plant Life* – and all references to plants – to refer instead to vegetative life.

nevertheless signify the realisation of a “real world-relation” (*OF* III: 1). He states:

> The differentiation of sentience […] furnishes the beginnings of a true world of objects; […] the exercise of motility (in turn implying centralization, viz., of control) subjects it to the self-assertion of freedom, which thus answers on a higher plane to the basic necessity of the organism. (*PL*: 100)

Animals are distinguished by these co-arising modes, since their metabolic requirements – whether carnivorous or herbivorous – are such that movement is integral to their fulfilment. Unlike a plant’s virtually immediate attainment of sunlight, minerals, and water the object of an animal’s satisfaction lies at a spatial and temporal distance: in short, a meal must be sought out. The ‘internal’ counterparts of this motility are sentience and emotion. As survival here “becomes a matter of conduct in single actions, instead of being assured by well-adapted organic functioning itself”, the animal’s “precarious and exposed mode of living commits to wakefulness and effort […] but it also knows the pang of hunger, the agony of fear, the anguished strain of flight” (105). As such, Jonas identifies in an animal’s sentient, emotional, and motile mode of existence the first conscious manifestation of care (although not, he believes, *self*-consciousness).

While Jonas’ description of vegetative life closely tracks his account of organic being as such, the sceptic might ask whether his identification of sentience and emotion in animals amounts to mere anthropomorphism. However, Jonas pre-empts this criticism by offering a phenomenological account of intersubjectivity which deals with what has been called “the problem of animal minds” (James, 2009: 45). Jonas makes the argument that we understand the minds of others “*not* by analogical inference” with reference to our own, but rather because “[k]nowledge of inwardness as such, whether one’s own or that of others, is based on communication with a whole human environment which *determines* […] what will be found in eventual introspection” (*PE*: 246, emphasis added). This understanding between humans, Jonas goes on to claim, is in fact derivative of our pre-theoretical understanding of living beings as purposeful. Regardless of species, in the interaction of humans and

animals “something passes between us without which there could be no higher understanding, however far it surpasses this elemental substratum” (248). This understanding is indicative of our shared being:

> [Understanding] is part of the intuitive beholding of life by life and thus begins with the accomplishments of animal perception, which is attuned to the accomplishments of animal expression. […] *Animal life is expressive*, even eager for expression. It displays itself; it has its sign codes, its language; it communicates itself. Whole rituals of posture and gesture and expressive movement serve the role of signals. (*Ibid.*).

The phenomenological perspective thereby refutes the absurd behaviourist interpretation of animal emotion and sentient behaviour as mechanistic, which in fact *presupposes* the recognition of emotion and sentience before attempting to explain them away. For the same reason the charge of undue anthropocentrism is here erroneous: it is an abstraction reliant upon the very human-animal intersubjectivity which it denies.

In touching on the intersubjectivity fundamental to animal being we arrive at life’s inherent *sociality*, a topic which features strangely infrequently in Jonas’ published works.[39] Some light can be shed on this oversight by looking to Leon Kass’ article ‘Appreciating *The Phenomenon of Life*’. Kass recounts a question put to him by a student, which he in turn addressed to Jonas: why, in the ascending scale of capacities constituting organic freedom described by Jonas, does sexual reproduction not feature? According to Kass, Jonas fell silent, then “commented that this was the most serious and powerful objection anyone had yet raised against his account” (1995: 11). Jonas’ justification for the omission was, firstly, that “reproduction and sociality are not indispensable functions of life for an individual animal *qua* living thing”, and secondly, that at the time Jonas “was still too much in the grip of the teachings of Heidegger and his view of life as (mainly) a lonely project over-against-death” (*ibid.*). The first defence is partly justified: an organism, though the product of reproduction, need not itself

[39] At only one point in his published writing does Jonas point toward it (*PE*: 249-254), describing animals “who are able to play, namely animals with brood rearing, especially mammals with their sheltered childhood, who are still free from the grim pressure of animal needs but enjoy already the powers of movement” (249). In an unpublished manuscript Jonas mentions that this thought came to him whilst watching dolphins play from the deck of the ship on which he emigrated to America (*FOS*: 2-3). In it is a partial recognition of the social aspect of organic existence, yet the conceptual possibility is not there fully pursued.

engage in it. Clearly, however, this fails to account for the importance of reproduction and sociality for most animal life. Jonas' second claim, that he was here under the undue influence of Heidegger, also fails to stand up to scrutiny, since Heidegger's account of *Dasein* did in fact accommodate a social existence, via the category of being-with-others: "the world is always already the one that I share with others. The world of *Dasein* is a *with-world*" (2010a: 115-6).

Jonas' neglect of life's sociality would appear to uniquely hamper his project in a significant way – except that he *did* broach the issue in the unpublished *Organism and Freedom*. Jonas there acknowledges, if only fairly briefly and late in the book, that "the organic fact we have so far left unconsidered [is] sex" (*OF* IV: 67). Its recognition duly transforms his account of animal life:

> [W]ith the emergence of more direct co-operation in the sexual act, and again, much later, with the extension of the female role to tending either eggs or offspring, life within the species assumes entirely new features, *profoundly affecting the very nature of animal existence*. Whatever there is of non-self-seeking traits in the emotional economy of the animal kingdom has its root in this basis of sex and procreation. (67-68, emphasis added)

As Jonas says, the world of animals is therefore not simply one oriented toward self-preservation and "acquisition", but also one which finds fulfilment in "expenditure" with "no reference to the metabolic demands of the organism" (68). This recognition may have been influenced by one of Jonas' correspondents, the biologist and philosophical anthropologist Adolf Portmann.[40] In *Animals as Social Beings*, Portmann emphasised that a social existence is present from insects through to mammals on the basis of reproduction: "[t]he attraction of individuals to each other is the basic phenomenon of social life; and even in dragonflies, as we have seen, *this social factor is primary for life itself*" (1961: 55; emphasis added). Jonas even speculates that in the biological fact of reproduction we have the seed of "the whole scale of emotions which we comprise under the name of 'love' and which

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[40] See Portmann's letter to Jonas (1956).

eventually reaches far beyond the physical realm", including even *amor Dei* (*OF* IV: 68-69). In other words, sociality allows for one key form of transcendence to emerge, making love one of the highest forms of freedom.[41]

Then there is the maternal (and occasionally paternal) animal practice of rearing young, which "suppl[ies] the foundation of all sociability" (*OF* IV: 69). Here 'sociability' does not mean a social existence *per se*, which is already necessitated by reproduction, but rather a 'social life' in the sense of living alongside others. This becomes clear when he states that "[w]ith the development of rearing habits intraspecies relations pass from the fleeting nature of the sexual encounter to more durable, either individual or collective, forms of association" (*ibid.*). Rearing allows not only for the animal's parent-child relation to blossom – contrast, for example, the life of a reared penguin with that of a turtle who hatches unaccompanied – but also for the social life of an entire brood, mentioned above, which establishes kinship amongst contemporaries. From broods the circle of sociability can obviously be expanded to packs, troops, and so on, each with complex structures and norms, and these eventually bearing comparison to human society. Therefore Jonas is, after all, able to accommodate Heidegger's being-with-others in non-human life with reference to our corporeal natality.

Jonas makes one last observation as to the significance of child-rearing, namely that it coincides with much of the technical skill evidenced in animal existence. Although there are exceptions to this – most obviously amongst primates – Jonas is right to note that rearing procedures account for much of the technical "measures which go from slight adaptations of existing features in the environment to elaborate artificial constructions" (70). Whether an excavated den or a constructed nest, the purpose is usually to account for vulnerability, either of the adult in hibernation or the child in infancy. This is evidenced by the fact that the majority of such habitations are constructed seasonally – exceptions including, as Jonas notes, the dam-building of beavers and the hives or nests of social insects such as bees and termites, all of which are remarkable in their complexity and social function. He concludes these critical supplementary reflections by noting that "we have in sexuality the root

[41] Stephan Kampowski has argued that in Jonas' philosophy love is *the* highest form of freedom (2013: 64), which I consider to be too strong a claim. It is one aspect of transcendence, to be sure, but not the whole.

for two extremely important classes of animal behaviour: social and technical" (71).

VI. The *Scala Naturae*: Humans

The final stage of Jonas' *scala naturae* – indeed, the final stage of our reconstruction of Jonas' philosophy of life – is the position of humanity in nature. In addressing this issue Jonas turns to philosophical anthropology. As with his debt to existentialism, the influence of philosophical anthropology on Jonas' thought is likely due to its prominence in the 1920s Germany of his student days, though direct references in his work to the key figures are scant.

The practitioners of that sadly out of favour sub-discipline pursued the question 'What is the human being's *differentia specifica*?' in a way which sought to be consistent with, but transcended, the natural sciences. The methodological influence on Jonas' approach here is obvious, and, like Jonas, some philosophical anthropologists broadly endorsed Aristotle's dictum that the human is the ζῶον λόγον ἔχον. Ernst Cassirer and Max Scheler followed Aristotle in identifying the human as having something in addition to animal life: for Cassirer it was our symbolic cultural life, hence our status as the "*animal symbolicum*" (1944: 26), while for Scheler it was our possession of a "spiritual being" in addition to animal instincts (1961: 37). Other philosophical anthropologists offered more ambiguous definitions. Arnold Gehlen, for instance, argued that our unique world-openness originated in a *deficiency* of instinct as an "undetermined animal" (1988: 25). Similarly, Helmuth Plessner attributed humanity's status as the "apostate of nature" (1975: 320) to the "eccentric" relation each human being has to their own body, in that we simultaneously have it and are it (1970: 36, emphasis removed). Of these definitions of human specificity Jonas approvingly cites Cassirer's, stating simply "*homo* = *animal symbolicum*" (*OF* V: 37).

The reason is as follows. Jonas holds that distinctively human freedom is epitomised by our transcendence, meaning an engagement with more than what is found in the physical world. Specifically, humans have a greatly increased freedom in the power of abstract thought. True to his integral monism, Jonas seeks to explain this achievement physiologically, initially via the human's perceptual emphasis on vision. In the ability to behold an object by

sight we have a mode of perception which is both more durable than sound, and, in contrast to touch, smell, and taste, allows the perceiver to be situated at a remove from the perceived.[42] Clearly this has an evolutionary benefit: a being which seeks sustenance, a mate, or to avoid predators has an advantage in surveying its field of vision and beholding at a distance an object therein. But, crucially, Jonas also argues that this freedom of perception leads to an increase in freedom of thought, as “[s]ight includes at any given instant an *infinite* manifold at once, and its own qualitative conditions open the way to what lies beyond” (*PL*: 151). What Jonas means is apparent in the study of a three-dimensional object: it can never be perceived from all sides at once, but only from a single point of view which contains within it endless alternate perceptual possibilities through space and time. It is more apparent still in surveying the horizon or the night sky, which recede to a point and indicate that there is yet more: a ‘going-beyond’ which is never as explicit in the modes of perception reliant on proximity. Additionally, in perceiving at a distance the object is left untouched, and so one can disinterestedly observe change over time. From this Jonas draws a striking conclusion: the freedom of sight lays the ground “for some basic concept of philosophy” by making explicit “the contrast between change and the unchanging, between time and eternity. […] Thus the mind has gone where vision pointed” (152).

One obvious criticism of Jonas’ thesis is that the explanatory gap between sight and a symbolic world is too great; our vision-centric perception is insufficient as the sole condition of possibility for the intellectual achievements which differentiate the human being. Gehlen noted that it is “impossible to declare any one distinguishing characteristic of man […] to be the ‘whole’. Such an approach never succeeds, for any one of these isolated characteristics can be found somewhere in the animal kingdom” (1988: 7-8). This, it seems to me, forcefully applies to Jonas’ claim that our symbolic being is grounded in vision: the latter is, after all, shared by many animals and truly excelled at by birds of prey. Additional and complementary physiological factors must have allowed humanity to rise to the level of freedom peculiar to it. Presumably this is why, in the much later essay ‘Tool, Image, and Grave’, Jonas supplemented his thesis by stressing a multitude of physiological characteristics: “the increase in man’s

[42] See the third chapter of *Organism and Freedom*, and pp.135-187 of *The Phenomenon of Life*, for extensive discussions of this issue.

brain size, his hand, [and] his erect posture reveal their significance in what they allow us to accomplish" (*MM*: 77). It is this line of thought which allows him to better bridge the gap between our bodily constitution and symbolic being, demonstrated concretely with reference to three human artefacts: the tool, image, and grave. Such artefacts, brought into being with the help of the dextrous opposable thumb, are not simply objects: they embody ideas and drastically change humanity's self-understanding.

Firstly is the tool. "A tool is an artificially devised, inert object interpolated as a means between the acting bodily organ (usually the hand) and the extracorporeal object of the action. It is given permanent form for recurring use and can be set aside in readiness for this" (*MM*: 78). One objection to his definition, reminiscent of Heidegger's discussion of the hammer in *Being and Time* (2010a: 69), might be that a tool need not be inert: think of an electric drill. However, Jonas means any object which is inert until it is picked up and put to use, in contrast to a machine which is left to work by itself, like a printing press. Jonas' definition is also intended to preclude any comparison with a creative organic function, such as a caterpillar's chrysalis or a spiderweb, as well as the utilisation of objects observable in mammal – and particularly primate – life. However, given the existence of the latter Jonas concedes that "here we can most readily speak of fluid boundaries between animal and human capabilities" (*MM*: 79).

The definitively symbolic human capacity is image-making, which, he claims, "from its very beginnings in its most primitive and awkward products, displays a total, rather than gradual, divergence from the animal's […] – fluid boundaries are not even conceivable here" (*ibid.*). He defines the image as "an intentionally produced likeness with the visual appearance of a thing […] in the static medium of the surface of another thing. It is not meant to repeat the original or pretend that it is the original, but to 're-present' it" (*ibid.*).[43] The image is thus a product of will which depicts an idea (*eidos*, the 'look' of a thing) through semblance: "[a] figure of *Pinus sylvestris* in a work on botany is a

[43] The distinction between 'art' and 'image' is worth noting here. As is well known, modern art gradually eschewed representation as a criterion, so that although paintings such as Mondrian's are works of *art*, they are not *images*, since the latter entails likeness. Similarly, paint daubed on a canvas by an elephant or chimpanzee is not an image – though whether it is art is another matter. For my part, I suspect this question is only soluble with reference to Arthur Danto's theory of the 'artworld' (1981), which would not at present answer affirmatively.

representation not of this or that individual fir tree but of any fir tree of that species. The antelope of the bushman drawing is every antelope remembered, anticipated, identifiable as *an* antelope" (*PL*: 165). Jonas argues that the capacity for image-making – though carried out with the hands – is primarily an achievement of vision, in that the *eidos* is abstracted therefrom (168). Through this connection Jonas again links vision back to philosophical notions – this time more plausibly – as an image "has to be more or less true to the object" (172). The fact that an image can succeed or fail in its aim of representation thus paves the way for rudimentary experiences of truth and falsehood as correspondence.[44]

However, it is the grave, Jonas' last object of study, which he fully invests with transcendent significance. Whereas humanity's earliest pictorial achievements – a cave painting of a bison, for example – represent the *eidos* or appearance of the bison, Jonas holds that the grave represents *abstract* ideas: those which cannot be observed and do not, therefore, permit of simple sensual representation.[45] The presence of the grave "tells us that a being, subject to mortality, reflects about life and death, defies appearances, and raises his thinking to the realm of the invisible, utilizing tool and image for this purpose" (*MM*: 85). Not only that – Jonas also argues that in reflecting upon death humanity thereby becomes a problem for itself. Apparently alone amongst living beings, we possess a self-conscious concern for our existence that in the grave "takes on concrete form: 'Where do I come from; where am I going?' and ultimately, 'What am I – beyond what I do and experience at a given time?' With these questions *reflection* emerges as a new mode of dealing with the world" (83-4). Thus the highest freedom is achieved by humanity who alone can reflect on life, death, and its own place in the world, all encapsulated in the invention of the grave.

Such is the basic outline of Jonas' philosophical anthropology, which we shall now refine through further comparisons with Heidegger's analytic of *Dasein*. Firstly, we can say a little more about how Jonas takes up the category of 'thrownness'. As indicated above, Jonas construes the organism as a

[44] Here Jonas diverges from Heidegger's conception of truth as unconcealment, as Lindberg notes (2005: 177)
[45] Cf. Hegel's discussion of 'symbolic' art and architecture in his masterful *Aesthetics: Lectures on Fine Art* (1975).

potentiality-for-being which has not given itself to itself, and he thereby adopts Heidegger's definition of the structure. But at the same time, Heidegger's account drew, at least implicitly, on the notion that *Dasein* was set apart from other beings in having care as its mode of being. This coloured his existential phenomenology with an almost Gnostic sense of isolation amidst mere life. Jonas, by contrast, shows us that *Dasein* is unremarkable in having care as its mode of being, and is instead remarkable in *how* care manifests itself therein: as a symbolic existence which is connected to our physical constitution. As such, although human world-openness has unique characteristics, it is also the product of a tendency in Being itself. Put another way, although we are thrown into being *the throwing itself is not blind*: as human beings we are part of a movement in Being. In this way Jonas is able to reconcile human existence with the character of the natural world, overcoming the Gnostic tendency which survived in Heidegger's work.

The final contrast to be drawn with Heidegger concerns historicity. We recall from the Introduction that Jonas co-opted certain existential categories from Heidegger's analytic of *Dasein*, while arguing that others – fallenness and authenticity – were in fact socially and historically contingent. Curiously, historicity itself is notable by its absence from either camp: it is neither rejected nor incorporated into Jonas' philosophy of life. The reason is presumably that human beings alone are historical. This is not to say that humanity always and everywhere has actual *knowledge* of history, let alone what Hans-Georg Gadamer called historically-effected consciousness – awareness of one's consciousness *as* historical (2004: 299-301). The point is rather that historicity is an essential component of human existence and one way in which we are distinguished from animals. But how is this possible given that, on Jonas' account, the existential categories are meant to be present *in nuce* from life's beginning? The answer is that historicity is, according to Heidegger, a possibility grounded in the temporality of *Dasein*: "[a]uthentic being-toward-death, that is, the finitude of temporality, is the concealed ground of the historicity of *Dasein*. *Dasein* does not first become historical in repetition, but rather because as temporal it is historical" (2010a: 367, emphasis removed). Of course, Jonas argues that temporality and being-toward-death are not only structures of human *Dasein*, but of organismic being as such. On his schema, then,

historicity is a property emerging only in humans but from the structure of temporality belonging to all life.

Since Jonas abandoned the notion of authenticity, however, historicity cannot for him be connected to an authentic reclaiming of our being-toward-death, as Heidegger supposed. Rather, Jonas more plausibly argues that historicity is the *symbolic* transformation of organismic temporality. Decisive in this regard is *language*: the most prominent manifestation of symbolic being and without treatment of which no philosophical anthropology would be complete.

As we have seen, images and language occupy a central place in human life and rise to ever-higher levels of abstraction, hence our status as the *animal symbolicum*. The existential consequence of our symbolic being, Jonas argues, is that the past becomes a vista of meaningful experience: a *history*. Take cave paintings and rock art. In these rudimentary symbolic works a world is eidetically preserved for posterior generations: even if we cannot grasp what the painting or sculpture means, *that* it had meaning for its creator is given in our basic encounter with it, imbuing the past with significance. But, as stated, it is above all else language which transforms the past into history. At the most basic level the human use of language can point beyond the immediate to things, people, and states that have been present but are no longer. The invocation of the (potentially distant) past occurs through meanings afforded by our world. Often the past invoked is not a factual one but mythological: a culture might have a creation myth, for instance, or even conceive of the past as eternally identical to the present. Regardless, the universal 'conceiving-of-the-past-as' indicates historicity as an existential consequence of symbolic being.

Language is also, according to Jonas, intimately connected to more tangible aspects of human life. We have already discussed the importance of social life and the symbolic products of tools, images, and graves for human beings. Jonas later stresses that these phenomena – which together form the beginnings of what we call culture – cannot really be separated from linguistic communication:

> Rearing of the young means for man essentially teaching them how to speak – by speaking to them. Kinship and authority relations are defined and transmitted through speech. Even our dreams are permeated with

> words. How much more do words dominate in the life areas indicated by the tool, the image, and the tomb – in planning, work, remembrance, and veneration. And how completely speech-dependent are the worlds of politics and law, and most of all, the relations with the invisible, which nowhere gains form but in words. Man, then, is first and foremost a creature of speech – productive of speech and the product of it. […] The philosophy of language must stand in the center of every philosophical anthropology. (265)

The general point is that language and image create a cultural world which to a great extent shapes the world of *Dasein*. This is not to deny the importance of our organismic constitution, which is, after all, the basis of our having any world at all. Moreover, Jonas' phenomenological approach entails that experience – both of ourselves and other entities – is not always linguistically mediated, but also pre-cultural and pre-linguistic. Nevertheless, what is peculiarly human is the prominence of this cultural world in our total existence.

VII. Criticisms of Jonas' Phenomenology

Having reconstructed Jonas' philosophy of life I would now like to consider two different objections levelled at it: Renaud Barbaras' phenomenological criticism of Jonas' understanding of life, and Andrew Johnson's illuminating Heideggerian critique of existential differences between humans, plants, and animals. Thus far I have generally interpreted Jonas' ideas exegetically, at most suggesting minor problems at specific points which can be fairly easily overcome. The following criticisms, however, constitute potentially major oversights in Jonas' metaphysical schema, and consequently require more substantial treatment.

(α) Renaud Barbaras on Movement

The first major objection to Jonas' philosophy of life comes from the French phenomenologist Renaud Barbaras. Barbaras argues that Jonas misrepresents life as metabolism and survival – the avoidance of death – and as such fails to grasp what it is to be alive as *Leib* rather than *Körper* (2008: 9-10). In particular he charges Jonas with falling into a circular argument:

> Life […] is defined as preservation of the living being, that is, as the renewal of life itself: living is staying alive, it is preserving life as living. But what is it to be living? The only possible answer will once again be: it is to preserve itself. In short, in an infinite kind of regress, […] life is what presupposes itself. (10)

Bararas instead argues that a true phenomenology of life would have to move beyond metabolism and the avoidance of death to identify what makes both possible. Harking back to Aristotle's *Physics*, he claims that "movement […] is the fundamental descriptive feature of the living being" (11). Without movement there is no metabolism, no satisfaction of desires, no freedom, or precarity. A being without movement would be entirely self-contained, like a mountain – in short, it would not be alive. On Barbaras' reading, therefore, the flaw that Heidegger recognised in his own work – that he had not engaged with the motile character of the living being as such – is equally true of Jonas. Barbaras concludes: "Jonas is a prisoner of presuppositions […] which lead him to miss life's vitality and thus life's essential mobility" (12).

Barbaras is partly correct: it is true that Jonas emphasises metabolism, and not movement *per se*. The following indicates its centrality in his philosophy of life: "metabolism can well serve as the defining property of life: all living things have it, no non-living thing has it" (*MM*: 88). While Barbaras is therefore correct to say that Jonas is preoccupied with the individual metabolising being as an observable indication of life itself, one might reply that this is necessary if we are to distinguish living beings from those moving but unalive. Glaciers, fire, and machines all move, but none are alive. Metabolism is essential in order to identify *immanently teleological movement*, which *is* unique to the living. In a way, Barbaras admits as much when he defines movement as "a process by which something […] is accomplished, as a movement that is not *displacement* but *realization*" (12; emphasis added). This presumes that we already know which movements constitute realisation and which constitute displacement, which cannot simply be taken as given. To animists, for example, a storm or an earthquake is immanently purposeful. We can only disprove this claim by distinguishing between displacement and realisation as forms of movement. Jonas' integration of scientific evidence (derived from the *Körper*) and phenomenological insight (of ourselves and other beings as *Leib*) allows us to

do so, revealing metabolism to be the first empirical instance of being alive which we know ourselves to be. So although Barbaras is right to note that Jonas emphasises metabolism in his account of life, it is to solve a problem which Barbaras' method cannot.

(β) Andrew T. Johnson on Existential Differences

The second key criticism I will consider comes from Andrew T. Johnson's insightful comparative account of Heidegger and Jonas. Johnson is chiefly concerned with their accounts of the manifestations of existence. He recognises the attraction of Jonas' notion of gradated existence over Heidegger's eventual division between human *Dasein* and non-human life, but rightly observes that Jonas' philosophy of life does not, in fact, always live up to its gradualist principles. When it comes to detailing the empirical indications of degrees of freedom, Jonas occasionally imbues the differences between life-forms with exaggerated significance, and in one instance denies plants an existential structure altogether.

The first questionable distinction Jonas draws is between humans and animals, and on the basis of image-making. In being able to perceive and create images representative of something, he argues that we hold the status of a "speaking, thinking, inventing, in short 'symbolical' being", which, he says, "is not a matter of degree" (*PL*: 158). Johnson rightly asks, however: "[o]n what grounds is this exemption justified?" (2014: 269). After all, an animal's ability to use tools is surely also evidence of an 'inventing' and so 'symbolical' being. For arcane Heideggerian reasons Johnson then argues that the denial of a symbolic existence to animals means that Jonas denies a proper self-world relation to non-human life: "he cannot avoid, in exactly the same manner as Heidegger, quietly divesting life of certain basic structures that he otherwise so insistently portrays as constitutive of its essence" (270). This charge is misplaced, however, since Jonas accounts for the self-world relation with reference to metabolism, as we have seen. Nevertheless, his refusal to accept that symbolical being could be a matter of degree does point to an exaggerated difference, confirming Johnson's suspicion that Jonas unjustly diminishes animal existence.

Johnson is again partially correct in his criticism of Jonas' analysis of plant life. Jonas suggests not only that plant and animal being differs greatly – which they evidently do – but also that "[w]ith its adjacent surroundings the plant forms one permanent context into which it is fully integrated, as the animal can never be in its environment" (*PL*: 104). As a result of this lack of motility the plant's horizon is merely a "dimension of dependence and necessity" rather than a "dimension of freedom" (*OF* III: 4). Johnson suggests that in this characterisation Jonas surreptitiously withholds temporality and spatiality as existential structures from plants (2014: 270). This is again wide of the mark, as these structures were also accounted for in the analysis of metabolism, but once again Jonas does create another exaggerated difference between life forms. Moreover, and crucially, he entirely fails to account for being-with-others as a structure of plant existence, which then appears *ex nihilo* in animal life. To a degree, then, Johnson is correct to say that Jonas' *scala naturae* is elaborated in a way which is at odds with his underlying gradualist thesis.

The inconsistencies in Jonas' philosophy of life somewhat undermine the promise of his ontology: that it should account for the evolution of life and existence without succumbing to reductionism or old dualisms. Johnson concludes that this is inevitable as Jonas "was too liberal in his desire to attribute full existence (formally – i.e., it is only the richness and intensity of the structures that vary in Jonas' account) to every manifestation of life" (274). In line with Heidegger, Johnson says this is because "it is impossible to overlook that 'abyss of essence' that separates the most sophisticated animal from the most primitive human being" (273). But this intuition remains untested. For it is not self-evident that Jonas' failure to consistently pursue his thesis means that it is impossible to do so. This would only be the case if it were demonstrated that the differences between plant, animal, and human life could not be accounted for without necessarily withdrawing certain existential structures. To abandon a Jonasian philosophy of life may therefore be somewhat premature, and I will now show that the problems raised by Johnson can indeed be overcome.

(γ) Revising the Scala Naturae

The most promising way to improve Jonas' *scala naturae* is to point toward phenomena – some of the evidence for which has emerged in recent

decades – indicating that his exaggerated divisions between plants, animals, and humans do not stand up to scrutiny. Firstly, we recall that Jonas attempts to justify a stark gap between plant and animal life with reference to movement. In both *The Phenomenon of Life* and *Organism and Freedom* the crux of Jonas' interpretation is that as a rooted being the plant has a "non-motile existence […] in immediate commerce with its environment" (*OF* IV: 62). He elaborates on this theme by noting that prior to the arrival of animals,

> life is passive in relation to space and active only in its internal processes. External things have to happen to it or to refrain from happening: suitable matter must come near, actual contact has to come about by the accidents of environment so that the freedom of metabolism can come into play. (*OF* III: 3)

This is clearly factually incorrect, however. Although plants lack *locomotion*, they evidently possess *motility*: a flower turns to the sun, a tree's roots take hold in the earth, and a Venus fly trap snaps shut upon its prey. Quite why Jonas failed to acknowledge this is unclear – perhaps it is because, as Scheler notes (1961: 9), a plant's pace of movement is usually so much slower than our own that it is invisible to the naked eye, giving the impression that it does not really move in an immanently teleological way.

Whatever the reason Jonas apparently recognised his error and changed tack, arguing in the later essay 'Biological Foundations of Individuality' that although plants *do* move it is unlike animal movement as not "under the agent's control" (*PE*: 205). He admits that "for the opening and closing of blossoms and even for the startling performance of certain insectivorous plants […] the outward likeness to the animal pattern is indeed strong" (*ibid.*). The key difference, he claims, is that "the 'direction' here is not central but strictly in response to local stimulation, with no central control involved" (*ibid.*). Presumably Jonas' reference to 'central control' is not meant to imply a conscious intention, given that according to his basic analysis of the organism this is not necessary for teleology. The likelihood is that he is referring to the greater unity of the animal organism courtesy of its centralised nervous system, which is lacking in plant life; indeed, a reference in *Organism and Freedom* suggests this interpretation is correct. There Jonas says that "centralization […]

raises the unity and individuality of the organism to an entirely new level", and stresses that "*centralization* is not the same as the organic *unity* of the complex whole, nor always accompanying such unity, but is a new fact in the evolution of multicellular organisms, *confined to animal life*, and coincident with the evolution of sentience" (*OF* IV: 6-10; emphasis added). Here Jonas draws a distinction between the plant's unity and the animal's centralisation – an apt observation, no doubt, but one wonders whether acknowledgement of the former undermines the distinction Jonas would like to make. It seems far truer to the phenomena to say that animal centralisation and locomotion offer a far greater and richer world than vegetative unity and motion, but that in the latter we may still identify a rudimentary sort of reaching out into the spatial world. In doing so we would do fuller justice to plant life.

This still leaves the existential dimension of being-with-others (Heidegger's *Mitsein*) unaccounted for in our analysis of plant life. Now, it is admittedly counter-intuitive to claim that plants possess a social existence, even to a minimal degree, but this may prove to be a mere prejudice. There is accumulating evidence for the ability of plants to communicate with one another through the release of volatile organic compounds in the air and soil, allowing them to alert neighbouring plants of danger (Karban 2015; Blande and Glinwood, 2016). Given that plants are non-locomotive beings, and therefore cannot flee from danger, there appears to be little individual benefit in this as an evolutionary trait. However, studies have shown that plant communication is greater between kin, and might therefore serve to evolutionarily benefit the group (File, et al., 2012; Karban et al., 2013). We recall that Jonas argued that reproduction necessitated a social existence, and here we might have evidence of communication benefitting the plant's reproductive group. These speculations are tentative, but assuming the emerging evidence of plant communication is correct it would indicate a rudimentary manifestation of being-with-others, and so bear out the notion that the existential categories can be found at least minimally in all forms of life.

We can now attempt to rectify Jonas' account of the difference between animal and human existence. His questionable claim, as mentioned above, is that the inability to make images excludes abstract thought and a symbolic world from animal life – not an *existential* distinction, therefore, but unfair all the

same, as the empirical observation Jonas offers as justification does not stand up to scrutiny. Against him one could argue that the creation and use of tools does in fact indicate a capacity for abstraction. For instance, in using a stick to draw termites from a nest a chimpanzee shows that it can take up *this* object for *that* invented end, shaping it – albeit crudely – for that purpose. We might also mention the avian capacity for nest-building, the beaver's construction of a dam, or even an ant hill, all of which are distinct from creative uses of bodily functions (such as a spider spinning a web). Jonas claims that what is different about human tool-making is that, like image-making, it is created according to the "eidetic power of imagination and eidetic control of the hand", which lies "beyond the ability of animals" (*MM*: 78-79). To be sure, by virtue of physiological advantages such as the opposable thumb a human can certainly better shape the stick, and according to more complex and disinterested ideas, but a chimpanzee must still have *some* idea of the tool – which it learns from others – in order to repeatedly make it. For further evidence we could point to those chimpanzees who have been observed using tools to make other tools, implying a chain of symbolic thinking (Sugiyama, 1985: 361), or the successful attempts to teach chimpanzees and gorillas sign-language (Savage-Rumbaugh, et al., 1998). The latter, in particular, indicates beyond reasonable doubt a capacity for symbolic thought and expression open to at least some animal life.

Finally one might question whether the sort of freedom for abstraction demonstrated in the grave – a capacity for religion, ethics, and metaphysics – does categorically set humanity apart, since this rests on Jonas' observation that "no animal buries or gives further consideration to its dead" (*MM*: 83). This may also be empirically false: Cynthia Moss reports witnessing a group of elephants who, upon encountering the carcass of an elephant not belonging their herd, "began to kick at the ground around it, digging up the dirt and putting it on the body. A few others broke off branches and palm fronds and brought them back and placed them on the carcass" (2000: 270). Clearly this is not equal to the human burial mound, which draws its ritual significance from a religious (or post-religious) metaphysics. Nevertheless, if accurately described it would indicate that the elephants have some understanding of mortality, and not just a being-toward-death manifesting in instinct. *Contra* Jonas, therefore, we can say with some confidence that at least certain higher animal species –

elephants, chimpanzees, and gorillas – are capable of behaviour which indicates a symbolic existence. Even if the capacities in question are not sufficiently central to their existence for qualification as beings who truly inhabit a symbolic world, it shows that symbolic existence is a matter of degree after all.

The qualitative difference between the symbolic existence of humans and such animals – namely, that we not only use symbols but also exist as symbolic animals – has to be explained with reference to a subtler capacity. The most plausible candidate has been put forth by Hans Lenk: second-order symbolic understanding. This is the uniquely human capacity to use symbols to conceptualise and talk about symbols, thereby creating ever-greater degrees of abstraction from the immanent. For instance, a chimpanzee may be able to use the sign 'apple' to refer to the fruit of that name, but only humans can talk *about* the sign 'apple' *as* a sign and so understand how we use it. For this reason Lenk says that the human being is "not only the *animal symbolicum*, but the *animal meta-symbolicum*, the being that not only interprets, […] but who in turn interprets its interpretations and interpretation processes" (2007: 31). It is perhaps this 'meta-symbolic' capacity which underpins the richness of the symbolic world we inhabit. Moreover, the reflexivity evident in the capacity for meta-symbolic communication appears to chime with the eccentricity identified by Plessner as the defining human characteristic: just as we both have bodies and are bodies, we can both talk about language and with language.

Our corporeal and inner existence are coloured by ambiguity courtesy of this ability to objectify ourselves and distance ourselves from ourselves. However much we may occasionally wish to 'return' to the perilous yet blissfully simple immediacy of animal being, we cannot: we eccentrically exist in a world of symbols no less than we do a world of objects. This appears to be a promising way to identify the human's *differentia specifica*, and if Jonas' theory is supplemented in this way then it seems his desire to set humans apart by their relation to symbols is tenable.

VIII. Post-Modern Ontology

Having set out Jonas' philosophy of life and considered two major objections to it, let us briefly look back at its pros and cons. On the one hand we have a

radical yet plausible metaphysics which can account for the existential nature and teleological capacities of human and non-human life. This is achieved by placing living beings under investigation, both as they appear to biology (the *Körper*) and to phenomenological reflection (the *Leib*). From this methodological perspective we can trace the development of living beings from the unicellular organism and on to the complex forms of plant, animal, and human life, each stage signifying an increase in world-openness and freedom. As stated, Jonas at times exaggerates the differences between these forms of life, in way which does an injustice to plants and animals. Perhaps here Jonas' humanism led him into error, or perhaps it was just a result of insufficient evidence available (particularly in the cases of plant communication and animal symbolic existence). Regardless, by taking full stock of the evidence we are able to correct these oversights in Jonas' *scala naturae*, and show how plants and animals reach heights of existential freedom that Western thought has generally failed to recognise.

In so doing Jonas sets about turning the page on Cartesian substance dualism and its contemporary progeny. Rather than rejecting Descartes' bifurcation of nature into mind and matter only to exclusively accept the latter – as many contemporary philosophers either intentionally or unwittingly do – Jonas weaves the two threads back together. We have here a 'post-modern' ontology (in the literal sense) which respects the scientific facts at the same time as disputing their materialist metaphysical underpinning, the latter being incompatible with the very act of self-reflection. Only an integral monism of this sort can account for the full record of Being. The upshot is not only theoretically valuable, however, but also practical: by overcoming Cartesianism we are also able to restore to non-human life its proper share of dignity and value. The groundwork for this is laid in the rehabilitation of immanent teleology to plants and animals. But what kind of ethic does this yield? One which remains anthropocentric, or casts off this legacy in favour of a biocentric or even ecocentric ethic? This is our topic for the following two chapters.

Chapter Three: Teleology, Value, and the Good

I. Moral Patients

The present chapter will deal with axiology, in particular the questions of from where value originates in Being, and how value relates to goodness. We will ask what *sorts* of values there are in the world, which beings possess them, and whether, drawing on Jonas' references to species and the *nisus* of Being, it makes sense to speak of values held not just by individuals but even the biosphere itself.

As we saw in the Introduction, central to modern nihilism is the conviction that nature itself possesses no value, positively or negatively: it simply *is*, and any value to be found in the world is instead a subjective human evaluation. From this belief follows the purported freedom to treat non-human life as we please: after all – so the argument goes – if nature possesses no interests, preferences, or purposes then it cannot be harmed and so makes no ethical claims of us. But this argument implicitly rests on the materialist conception of life as devoid of ends, which we have duly discarded. Having done so, the identification of values present in the world – the demonstration that nature *does* care – can be undertaken. We shall see that although Jonas is unable to combat nihilism to the desired extent, we are nevertheless able to reveal a far richer and greater ream of value in Being than modern thought is typically capable of. This is enough, I argue, to underpin the ethic for modern technology he seeks.

An early indication of Jonas' axiology can be found in his essay on the biologist and psychologist Kurt Goldstein.[46] There Jonas tells us:

> The wisdom of the body discloses itself only to a wise mind. The recognition of the teleological structure of all living things, which establishes self-realization as the intrinsic principle of their being, is acknowledgement of their dignity and is ultimately rooted in reverence for life. (*KGP*: 163)

[46] Jonas was undoubtedly greatly influenced by Goldstein's magnificent text, *The Organism* (1995).

This claim is only a rudimentary indication of Jonas' mature thought, however, which differs in two significant ways. Firstly, we have here the invocation of Albert Schweitzer's famous doctrine of 'reverence for life' (1965), which Jonas later rejects in favour of *responsibility* for life (*IR*: 90). Secondly, the earlier formulation refers to the *ratio cognoscendi*, or the means by which something is known: the ethical attitude precedes the ontological insight, Jonas claiming that 'the recognition of the teleological structure of all living things is ultimately rooted in reverence for life'. By contrast, the core purpose of *The Imperative* is to account for the *ratio essendi* – the reason for something's existence – in this case, the attempted derivation of the good from Being. Central to this later work is the claim for the immanent teleology of life grounding its value, and ultimately our obligations. Reconstructing and evaluating this argumentative move is the aim of both this chapter and the next, building from Jonas' existential philosophy of life.

Jonas' axiological and ethical positions can be clarified with reference to one of the foremost theoretical concerns of environmental ethics: the "demarcation problem" (Muraca, 2011: 375), i.e., the question of which beings are considerable as moral patients. Although this problem pertains to all branches of moral thinking, it has been pursued most radically in environmental ethics. The common positions and their technical labels are as follows, each representing a further widening of the 'moral circle': humans (anthropocentrism); sentient beings (pathocentrism); living beings (biocentrism); ecosystems (ecocentrism); and the biosphere – or even Earth – as a whole (holism). The first, anthropocentrism, is the most familiar, having been a historically dominant aspect of Western moral thought. The second, pathocentrism, has been hugely influential on the animal rights movement of recent decades, and was theoretically supported by the works of Peter Singer (1995) and Tom Regan (2004). The third, biocentrism, found an early formulation in Schweitzer's work and was expanded upon by environmental ethicists such as Paul Taylor (1986), while perhaps the most well-known version of the fourth, ecocentrism, is the deep ecology of Arne Næss (1989). The last, holism, has been advocated by Holmes Rolston III (1988).

In the secondary literature there is little consensus as to where Jonas' thought is situated on this widening spectrum of moral concern, which, I would

argue, reflects apparently conflicting statements in his work. For instance, in the space of a few pages he argues that the anthropocentric underpinning of prior ethical systems is inadequate to the challenges of our age (*IR*: 4), and yet goes on to formulate his categorical imperative as follows: "[a]ct so that the effects of your action are compatible with the permanence of genuine human life [on Earth]" (11). The inclusion of 'on Earth' – which is only present in the original German – indicates Jonas' concern for ecology, but at the same time does not make the Earth a *direct* object of duty. It is not surprising, then, that Richard Bernstein should comment that in this respect "[t]here is an unresolved tension in his thinking" (1995: 18). The ambiguity has allowed Jonas to be interpreted as a proponent of "following nature" (Krebs, 1999: 99), even while Robin Attfield laments Jonas' "anthropocentric tendencies" (1991: 202). In an attempt to account for this, Lawrence Vogel argues that Jonas manages to "have it both ways" by "undercutting the very distinction between anthropocentrism and non-anthropocentrism" (1995: 37). Then there are those such as Michael Hauskeller who regard Jonas' ethics as "clearly anthropocentric, but not ruthlessly so" (2015: 42).[47] Evidently some conceptual clarification is required to establish which of these interpretations is correct, and why they can all seemingly claim textual support.

We will also look in detail at the broader normative framework Jonas employs, which, as Theresa Morris rightly notes, embraces "certain aspects of Kant's ethics" and is "decidedly leery of […] utilitarian reasoning" (2013: 166-167). With a reformulation of the categorical imperative at the heart of his moral philosophy Morris is *prima facie* correct, but again we find in the secondary literature the contrasting view of Jonas' ethics as "heavily consequentialist" (McKenny, 1997: 211). Once more we shall have to establish who is right – but we will only arrive at a final answer to this question in the next chapter. We shall first of all address the issues of who and what counts as a moral patient, and what this can tell us about goodness.

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[47] See also Strachan Donnelley (1989: 647).

II. The Axiological Dimension of Teleology

(α) Behaviour

In the previous chapter we identified immanent teleology, or 'goal-directedness', as essential to the organism, and this in two forms: self-organisation and behaviour. Taking the latter first, we characterised each organism's being-in-the-world as *care*. The specificities of each case are determined by the needs of the organism, but typically in a means-end relationship. The structure of this relationship is critical to axiological considerations. In general, an end is something sought-after and obtained through a means. We are all familiar with this from our own decisions and activities. Say I decide to become a doctor with Médicins Sans Frontières so as to provide medical help to the world's needy. The 'becoming a doctor…' is the means and the 'provide medical help…' the end, linked by the 'so as to'. Of course, this requires conscious formulation based on an understanding of medicine, health, and charity. Providing medical assistance is clearly not an end, nor is becoming a doctor a means, that could exist outside of the symbolic domain of human culture.

For a more basic example of an end – one which is not only essential to human existence, but also much animal life – Jonas offers that of walking: "[n]ot the legs walk, but the walker walks with them; not the eyes see, but their possessor sees with them; and the 'in order to' also indicates, besides the purpose, a control on the part of the subject" (*IR*: 57).[48] One might be walking in order to visit a friend, collect water from the well, or one might simply be walking for the pleasure of it. Such purposes demonstrate that in human life the capacity to walk is subject to the *will*, which can even redirect some otherwise automatic bodily functions. Think here of the distinctions between seeing and looking, hearing and listening, and smelling and sniffing. The focus and control inherent to the latter of each of these distinctions suggests a deliberate intent, indicative of human beings' eccentric relations to their own bodies. Are animals also capable of willingly directing their attention? It would certainly seem so, at least some of the time. A cat hears a faint scratching and sits bolt upright, eyes and ears fixated on the source – here we suspect that it acts instinctually rather than

[48] When we say of someone that they are wandering aimlessly 'for no reason' and with no apparent destination in mind, I suspect that what is meant is that one is walking *just for the sake of it*, which is still a purpose (unless, that is, we are referring to the mentally ill, who are characterised as such partly because their purposes are so dubious or opaque to us).

wilfully. Momentarily, however, the cat realises the source of the sound was no prey, and relaxes and reclines: the difference in speed and intensity manifest in the cat's body language suggesting to us that the latter movement was deliberately undertaken.

Even if this is simply a misleading impression, at some point on the *scala naturae* descending from humans into plants the wilful direction of ends surely does drop out, then sentience altogether, yet purely organismic ends are no less real for being "silhouetted in premental form" (75). The axiological consequence is this: each organism possesses a subjective good and bad *as a matter of logical necessity*, since something can then be better or worse for it according to the satisfaction or otherwise of its ends. To pick a striking example from nature: the 'zombie fungus' *Ophiocordyceps unilateralis* kills ants of the *Camponotus leonardi* genus by infecting the body and manipulating the behaviour of the host. The ant is driven to climb the stem of a plant and, using its mandibles, secure itself to the vein of a leaf. The host thereafter dies as the fungus grows spores from inside the body of the ant outwards, through the head first. Clearly, this grisly death is a good only for the fungus, and certainly not the ant (on the contrary, for the ant it constitutes a terrible harm). But the mere *fact* of the fungus' end entails a subjective value, a 'good of its own', regardless of whether it is felt as such. We cannot, by contrast, ascribe the notion of a good of its own to a non-living being, as Paul Taylor notes:

> Suppose […] that someone tells us that we can further the good of a pile of sand by, say, erecting a shelter over it so that it does not get wet in the rain. […] Perhaps we would interpret the statement to mean that, since wet sand is no good for a certain purpose, it should be kept dry. In that case it is not the sand's own good that would be furthered, but the purpose for which it is to be used. […] Concerning the pile of sand itself, however, it is neither true nor false that keeping it dry furthers its good. The sand has no good of its own. (1986: 60-61)

The pile of sand – or river, or star, or any other inanimate being – as non-living has no ends; only organic, metabolising being has ends, and therefore a subjective good of its own.

Now, it might be objected that modern technology blurs this distinction between living and non-living. We could think, first of all, of a car, which needs petrol, oil, and water, amongst other things, to run properly and not break down. Is this not identical to the organism which requires sustenance in order to continue living? In fact there is only a superficial similarity between the relations of car to fuel and organism to sustenance. The first key difference is that the car utilises the fuel without the fuel ever becoming the car, whereas metabolism means that the organism actually reconstitutes itself. This processual being is the organic condition: for as long as the organism lives it is irreducible to its material composition, only becoming the latter when it ceases to metabolise – i.e., die.[49] A machine, on the other hand, has a material identity which is complete whether switched on or off, and it is this self-containment, the lack of any *need* grounded in its being, which explains why the machine has no world to which it relates in the manner of care. That said, it is true that the workings of more complex machines are reminiscent of an organism in their ability to respond to environmental stimuli. Cybernetic devices such as homeostats, for instance, are through feedback loops able to regulate their own functioning apparently in accordance with a central structure. This may well look like care and self-organisation, but once again it is merely a formal likeness. Here we come to the second key difference between organism and machine, which is that the teleological principle of the latter is not immanent (or self-generated, or *autopoietic*), but rather *transcendent*, placed there from without.[50]

Turning back to the issue at hand, we should note that Taylor's account of the connection between teleological ends and value risks collapsing into a circularity. We are told that if we adopt the "biocentric outlook on nature" we can conceive of an organism as having a good of its own (44-45). However, the realisation that each organism has a good of its own then acts a justification for adopting the biocentric outlook (99-100) – which has already been presupposed. By contrast, Jonas' philosophy of life gives us a solid grounding for the move to axiology. He tells us that with "any *de facto* pursued end […], attainment of it becomes a good, and frustration of it, an evil; and with this distinction the attributability of value begins" (*IR*: 79). Again, this does not refer

[49] The closest exception is the dormant state of a seed, during which it still respires.
[50] It may well be that a technology one day exists which is truly *autopoietic* – perhaps an immensely complex super-computer which somehow becomes self-conscious of its own accord. I do not rule out the possibility, only note that to date no machine possesses such properties.

to conscious valuing, but is rather a necessary counterpart of the organism's teleological constitution.[51] And crucially, as Jonas notes, this organismic value does not yet imply judgement of the objective goodness or badness of the value in question – that is a separate issue. Rather, it is "*relative* value, *for* something" (52).

(β) Self-Organisation

Self-organisation, the second form of immanent teleology, furthers the notion of each individual organism having a subjective good. As recounted in the previous chapter, the organism is structured in a particular way and largely maintains it over time, the end differing only gradually according to the developmental and aging processes. We recall that Jonas characterises the structure of the organism as a part-whole relationship: "[e]very organ in an organism serves a purpose and fulfils it by functioning […] everything is *de facto* so arranged that in effect it contributes to the maintenance and performance of the whole" (65). Since the parts are subservient to the life of the whole, we have a value-criterion by which to judge their activity. The heart, for example, pumps blood around the body: this is its function.[52] Its *purpose* is that this function aids the organism in its pursuit of continued existence, which then corresponds to a *value*. The significance of this for our axiological discussion is that, once again, the good of the organism exists prior to any psychological valuation: having a working heart is good for me on the organismic level whether I would like to be healthy or not. For all living beings, health – and its opposite, illness – pertain to a value which pre-exists conscious positing. And, as before, the step from value to subjective good is clear – the organism has a good of its own not only in its

[51] This holds even in the extreme example of suicide, which indicates the exclusively human ability to knowingly direct the will against one's own organismic *telos* of continued existence. However, two supplementary points are of note here. Firstly, in the case of suicide, the individual presumably does not *psychologically* find any positive value in their life and on this basis decides to kill themselves, finding such value only in death. Even so, their *organismic* ends and the associated values continue to exist even as they are 'overridden' by the willed ending of such valuing. Secondly, self-sacrifice and martyrdom are different to suicide altogether, since they derive their significance from the affirmation of the continued existence of *another* end, whatever this may be. It is thus self-sacrifice, rather than suicide, which characterises the actions of those animals such as female octopuses which die as a result of devotion to brooding at the expense of sustenance. Jonas, however, disagrees entirely with this interpretation of animal self-sacrifice (*IR*: 235) – arguably an oversight following from the insufficient attention he paid to reproduction and sociality.

[52] Jonas' own example of organic self-organisation is the contribution of the digestive system which, oddly, he refers to as "the digestive organ" (*IR*: 65) as though it were one such entity rather than a system of organs. Presumably this is a misleadingly literal translation of the original German compound noun "Verdauungsorgan" (*PV*: 130).

goals which reach out into its world, but also the goals immanent in its very constitution.

(γ) The Organism as End-in-Itself

The move from teleology to subjective good represents an advance in Jonas' attempt to overcome modern nihilism with a new ethic. We can go further, however, and differentiate between the different *sorts* of values which follow from natural teleology. An appropriate distinction to introduce at this juncture is that of instrumental and intrinsic value, which has preoccupied environmental ethicists since the development of the sub-discipline.

While no consensus exists in the literature as to the precise meaning of the terms, Rolston offers a useful account with the additional category of 'extrinsic' value.[53] He defines these as follows. *Instrumental* value refers to something's use-value as a means to an end posited by the valuer. For instance, "[o]bjective natural things and events may contribute to […] subjective interest satisfactions, a tree supplies firewood, a sunny day makes a picnic possible" (1994: 13). Secondly, *extrinsic* value is that which we find in something disinterestedly, without reference to instrumental needs: "[t]ourists in Yosemite do not value the sequoias as timber but as natural classics, for their age, strength, beauty, resilience and majesty" (14). From Rolston's example we can see that aesthetic valuing is one such manifestation. While we might want to say that a person who could only value the giant sequoia in instrumental terms was a philistine, we should note that extrinsic value does not exist in the world independently of the valuer, but is instead still denoted by the subject (*ibid.*). We could not say, therefore, that the hypothetical person was objectively ignorant. Finally, *intrinsic* value refers to those beings which are capable of doing the valuing: in Rolston's word-play, they are quite literally "value-able, able to produce values" (29). Such entities have *in*trinsic value as it belongs to them, is a part of them, rather than being a value imposed from without.

Which beings, then, are intrinsically valuable – able to value other beings either instrumentally or extrinsically? Rolston's examples of instrumental and extrinsic valuing given above are drawn from human experience and so

[53] In particular, John O'Neill (1992) has provided a subtle analysis of the manifold senses of intrinsic value, but for my purposes Rolston's division of intrinsic and extrinsic will be sufficient.

anthropogenic (i.e., originating in humans), but such valuing may just as plausibly belong to all organic existence (and so are, for want of a better term, biogenic). As Rolston says:

> Animals hunt and howl, find shelter, seek out their habitats and mates, care for their young, flee from threats, grow hungry, thirsty, hot, tired, excited, sleepy. They suffer injury and lick their wounds. Here we are quite convinced that value is non-anthropogenic, to say nothing of anthropocentric. (15)

In at least some of these cases – in particular hunting and seeking out mates – the value in question appears to be instrumental to the animal's need: the prey is a means to the end of satiating hunger. The same would also be true, in a non-conscious form, of the functioning in plant life: as we have seen, something is valuable for the plant insofar as it fulfils the plant's teleological needs. But what of extrinsic valuing? It would certainly be counter-intuitive to claim that animals (let alone plants) were capable of aesthetic disinterest, but then this was only one form of extrinsic valuing – the broader meaning was valuing a being without reference to instrumentality. Do animals or plants value anything in *this* sense? Rolston argues that there is one way in which all organisms do so, namely, in their striving for life. Given that "[a] life is defended for what it is in itself, without necessary further contributory reference" (17), it seems to follow that each organism values its ongoing existence extrinsically. With the capacity for both instrumental and extrinsic valuing identified in organismic activity, therefore, Rolston concludes that all life is intrinsically valuable.

Now, from the anthropogenic perspective, this discussion of non-conscious organismic valuing is self-evidently nonsensical. According to this point of view, value – whether instrumental or extrinsic – only belongs to human beings since our ends are governed by the light of reason. Therefore, on the definition given above, only human beings are of intrinsic value. Quite why reason is *necessary* for valuation – rather than additional to it – is unclear, however. More plausible is Singer's position, which we labelled *pathogenic*. This is to say that the scope of valuation pertains to humans and animals who have interests regarding the pleasure and pain they are able to feel. He says: "[t]he capacity for suffering and enjoying things is a prerequisite for having

interests at all […]. A stone cannot have interests because it cannot suffer" (1993: 57). Singer is right to claim that the stone cannot have interests, but wrong about the reason – they lack interests because they lack the necessary immanent-teleological basis. With his formulation Singer succumbs to what Rolston calls the "subjectivist fallacy" (1994: 19), namely that value is synonymous with a *felt* interest. On the contrary, through Jonas' philosophy of life we have seen that valuing is entailed by immanent teleology, which is by no means always accompanied by consciousness or the will. Put simply, organismic ends, pre-existing both consciousness and will, allow for fulfilment or frustration: a better or a worse for the organism.

Jonas' position is therefore altogether more radical than Singer's, as we can see by mapping Rolston's divisions of valuation on to Jonas' understanding of organic being. Firstly, instrumental valuing appears to belong, as its ontological correlate, to both care and the part-whole relation inherent to self-organisation. This alone would be enough to confer the status of intrinsic value to all life-forms. Additionally, however, we can argue that self-organisation serves to bring about extrinsic valuing. Although he does not use the term 'extrinsic', Jonas says: "[t]o secure survival is indeed one end of organic endowment, but when we ask 'Survival of what?' we must often count the endowment *itself* among the intrinsic goods it helps to preserve" (*MM*: 93, emphasis added). Jonas' reference here to 'intrinsic' good is unfortunate given that we have reserved this term for the *capacity* to value. However, we could say that since Jonas refers in the preceding paragraph to something valued "beyond all instrumentality" (*ibid.*), the fact that the organism maintains itself in being simply for itself, would indeed, in the terms which we have adopted from Rolston, refer to a form of extrinsic valuing.

With this last step we have arrived at a key moment in Jonas' axiology, when he declares that the organism is conceived of as an "'end in itself', that is, something being *its own end*" (*IR*: 56).[54] Each life form has this status not

[54] To my knowledge, this notion first appears in Jonas' work regarding the ordering of the parts of the universe in ancient Greek cosmology, a structure which Jonas likens to "a living body". He continues: "[t]o the same pattern corresponds every entity in nature, if in lesser degrees of completeness and self-sufficiency. Each is part of a greater whole, an end in itself and a whole for its parts" (*PL*: 95). Here Jonas is discussing the end-in-itself in the context of a strictly historical formulation of the idea, but it is clear that in reference to the organism it survives in his later work not only as a descriptive notion, but also an ethical one.

because of its capacity to feel, or to uphold the moral law (as in Kant), but rather because of its orientation toward its continued existence.

III. Greater Goods?

We have now shown how Jonas' philosophy of the organism bridges biology and axiology via teleology at the level of the individual organism. It would seem that on this basis his axiological position is biogenic. However, some environmental ethicists, Rolston foremost amongst them, have attempted to extend the domain of intrinsic value yet further, such that species, ecosystems, and even the biosphere as a whole are deemed to be loci of such valuation. Although Jonas does not make sustained arguments for these positions, there are enough hints scattered throughout his work to suggest he was at least sympathetic to the notion that species and the biosphere could have a greater axiological significance than that of mere instrumental value for us. In order to establish what he might have meant, I shall locate his comments in the debates in environmental ethics over the possible attribution of value to these collectives.

(α) Species

References to species are infrequent in Jonas' published works, which typically focus on the individual organism or life as such. The following exception suggests that the idea is, for Jonas, imbued with normative significance: "any wanton and needless extinction of species becomes a crime in itself" (*TSE*: 894).[55] Why this is the case is not fully explained by the context. However, in an unpublished manuscript Jonas offers the following observation, which introduces a different sort of value than that discussed so far:

> Now, something can be termed 'good' by its own intrinsic standards, unrelated to anything else and regardless of my likes or dislikes: for instance this living body – snake, bug or bear – if complete in its proper parts, all in good working shape, each doing its proper work in proportion to the others and the whole. It is then a 'good' specimen of its species, of which there can also be impaired, imbalanced or disordered specimens. I may wish the whole species extinct and must still grant that by its *internal*

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[55] For similar remarks see Jonas' interview with *Der Spiegel* (*CBE*: 22-23), and his lecture 'On Suffering' (*OS*: 24; 30).

> *criteria of wholeness and excellence*, this happens to be a very good representative of it. (*WGM*: 2, emphasis added)

At first the quotation appears to reiterate the idea expounded in the previous section that the individual organism is an end-in-itself by virtue of its teleological structure. However, Jonas then moves to the notion that the structure of the individual is in accordance with that of the species, and on this basis can be judged as a good or bad of its *kind*. We shall attempt to make sense of this.

The basic idea is that each species exists in a way which is particular to it, and this provides us with a standard by which to judge the individual specimen as a good (or bad) of its kind. This is, essentially, an Aristotelian notion. Aristotle tells us in the *Nicomachean Ethics* that "[t]he excellence of a thing is relative to its proper function" (1984d: 1139a). For Aristotle this applies to us as both organismic and social beings: if I am someone's friend there are criteria by which to judge whether I am a *good* friend or nor; if I am a chef there are criteria by which to judge whether I am a *good* chef or not, and so on. According to Taylor, the normative concept at work here is merit, which he describes as "apply[ing] grading or ranking standards" to the individual and determining "whether it has the 'good-making' properties (merits) in virtue of which it fulfills the standards being applied" (1986: 130). Jonas himself makes room for this in the above quotation with his reference to "a 'good' specimen of its species, of which there can also be impaired, imbalanced or disordered specimens". Again, as with the goal-directed behaviour of an individual organism, this good of its kind need not *itself* be good. For instance, a good criminal is one which commits a crime and evades capture, though we are loath to say that being a criminal is itself good. In the case of an organism Jonas likewise suggests that, regardless of our personal valuation of the species, a species-valuation is always present.

The problem with this argument is not normative but *ontological*, pertaining to what a species actually *is*. While few people – unless they doubted the existence of the external world altogether – would maintain that an organism does not exist, with species it is not so simple. Are we looking for a class or category which is really *there*, or just one more-or-less contingently imposed by us on the phenomena? Aristotle argued for the former – namely that species

were eidetically identifiable natural kinds – and it seems that with Jonas' reference to an 'internal criteria' he follows suit. But elsewhere he recognises, correctly, that a species is not fixed but merely "relatively stable, and that this stability represents only the temporary equilibrium among the forces which generally determine the structure as successful" (*PL*: 50). Having acknowledged this it then becomes difficult to see how he could argue for an internal criterion of species-valuation, since the standard by which we are to judge is lacking. For Aristotle to do so was entirely reasonable given that he had no concept of evolution, but after Darwin and the expansion of the fossil record it is difficult to view species as ongoing in the sense that Jonas would apparently like to.

It is possible, perhaps, to charitably interpret Jonas and attempt to save the concept of species as a natural kind by introducing a temporal dimension to the definition, thus accommodating evolution. This is the inspiration for the biological (as opposed to 'morphological') species concept advanced by Moritz Wagner, Theodosius Dobzhansky, and later Ernst Mayr. According to Mayr, what matters is whether a population of organisms have the ability to breed amongst themselves: "[s]pecies are groups of interbreeding natural populations that are reproductively isolated from other such groups" (1988: 318). While it might be objected that Mayr's reference to 'natural' populations unduly complicates matters, for our purposes the introduction of an interbreeding criterion allows for the concept of species to take on a temporal dimension. On this definition we could say that a generational sequence of organisms *does* constitute a natural kind, provided they are reproductively isolated and until such a time as the ancestor is no longer genetically compatible with the descendent. At this point we would then be considering two different species.

Unfortunately this definition is vulnerable to a diachronic 'family resemblances' problem. For instance, the following scenario is at least logically possible: specimen *A*, existing at the present time, and specimen *B*, which existed at some point in the fairly distant past, are closely related enough to have been able to breed and therefore constitute members of the same species. However, specimen *C*, which existed in the very distant past is too far removed from *A* to have been able to breed with it, but *is* closely related enough to *B* to have been able to breed with the latter. We would then have a situation whereby *A* and *B* belong to one species, and *B* and *C* belong to another. But to

say that specimen *B* simultaneously belonged to more than one species seems absurd, and is certainly not what we understand by the term 'species'. A second problem is the synchronic implications of the notion of reproductive links. Firstly, as Hans-Johann Glock notes, there are organisms which reproduce asexually (2012: 124), each instance of which might then have to be considered a single species. Moreover, there are species – as the term is generally understood – which are able to interbreed, and have done so not just in captivity but also in the wild. For example, as a result of climate change polar bears are moving into grizzly bear territory in northern Canada, with the two species occasionally interbreeding. Since polar bears and grizzly bears are no longer geographically isolated, and evidently able to have offspring, ought we now consider them a single species? According to Mayr we should not, given that the interbreeding is not natural but rather a consequence of anthropogenic climate change. Yet this seems arbitrary: is the dog not a distinct species, despite having been bred from domesticated wolves?

Both problems might be solved by the 'evolutionary species concept' (sometimes also known as the 'cladistic' concept) which emphasises the ancestry of organisms in order to delimit one population from another as species. One could argue that a species refers, after all, back to the first fossil or collected specimen of its kind discovered, and that this is the referent for the possibility of reproduction – in the given case, presumably the first crossbred polar-grizzly bear. But then the question turns to what essential and not simply contingent difference the original classification was made on, as John Dupré notes (2001: 209). Although Dupré goes on to list several criteria for classification in defence of the evolutionary species concept, these are inescapably rough.

Are we then condemned to say that biological goodness is appropriate only to the individual organism as it develops autopoietically? Not necessarily. We could, perhaps, take a cue from Jonas and switch to an 'existential' perspective: one which attempts to tie the being of the organism to its physiological characteristics. *Contra* Aristotle, we must say that although species are only relatively stable lineages, with ill-defined and overlapping borders. But we might nevertheless be able to capture what marks these out from one another with the notion of a "mode of being" (*IR*: 81), or a "form of life"

(Skidelsky, *forthcoming*). These concepts are meant to circumvent Aristotelian essences through admitting plasticity of organic form, yet still account for the eidetic continuity we witness across extensive timespans. Rolston makes the very same attempt when claiming that "[a] species is a coherent, ongoing form of life", which nevertheless "reforms itself […] and sometimes passes over to a new species" (1989: 200, 202). And because of this degree of continuity we can say that there is a limited sense in which species have goods. The good of a horse of the present day will no doubt differ by degree from the goods of its ancestral species, insofar as these species are a different mode of being having a different organismic constitution. But the good of the present-day horse surely *is* the same as those of its more recent predecessors, and perhaps even the same good as those of the horses depicted on the walls of the Chauvet-Pont-d'Arc Cave some 30,000 years ago.

This alternative is only a tentative suggestion, which I shall attempt to refine later. For our immediate purposes we may note that this ontological quandary is probably why the notion of species-valuation remained undeveloped in Jonas' writings, at least compared to the "hard order of ecology" (*IR*: 137), which I turn to now.

(β) The Biosphere

As stated, Jonas' greater concern is with the biosphere, references to which are scattered throughout his work from the late 1960s onwards, and which features prominently in *The Imperative* (6-8; 136-140). The biosphere has a conceptual advantage over the notion of a species as it is rather more easily identifiable: it is the totality of all living things on planet Earth and the relations between them. This is not to say, of course, that there are no vital connections between the biosphere and non-living entities such as the atmosphere, or extra-terrestrial beings like the Sun, upon both of which the biosphere's existence is dependent. But the boundaries of the biosphere itself are clear, and – helpfully for our purposes – as a collective it is axiologically comprehensive, referring to all known beings capable of valuing.

Of critical importance is that Jonas refutes the "'Aristotelian' idea of a safe teleology of 'Nature' (*physis*) as a whole that attends to itself and automatically ensures the harmonizing of the many purposes into one" (138). In

other words, just as we are forced to abandon the notion of the *eidos* of a species as anachronistic, so too are we led to the conclusion that there is no permanence or harmony to the biosphere. Rather:

> [E]ncroaching on other life is *eo ipso* given with belonging to the kingdom of life, as each kind lives on others or codetermines their environment, and therefore bare, natural self-preservation of each means perpetual interference with the rest of life's balance. […] The sum total of these mutually limiting interferences, always involving destruction in the particulars, is on the whole symbiotic but not static, with those comings, goings, and stayings known to us from the dynamics of prehuman evolution. (137)

Most radically of all, the entire biosphere's symbiosis is disrupted with the advent of modern technological civilisation, itself, through us, a part of nature. This is conceptually problematic since it suggests no grounds for the kind of extrinsic valuing identified in the individual organism, which, in contrast, acts in pursuit of continued existence and thus posits itself as valuable. As Jonas memorably puts it: "Nature could not have incurred a greater hazard than to produce man" (138).

Where, then, does non-instrumental value fit in this picture of an antagonistic and self-imperiling biosphere? Jonas points toward an answer in that the interaction of living beings comprising the biosphere, though often hostile for those individual valuers, is nevertheless the framework which allows valuing beings to exist. This constitutes one of life's basic tensions: some individual organisms' ends will be subordinate to the "more comprehensive ends of the biosystem" in order for life as a whole to flourish (235). Taking Jonas' invocation of ends here as literal, we can once again flesh out his thinking by comparing it to that of Rolston. In this instance the relevant concept is that of "systemic value" (1988: 188) applied to the biosphere as a whole. Rolston defines systemic value as a "productive process; its products are intrinsic values woven into instrumental relationships" (*ibid.*). In producing valuing beings and their inter-relationships – however antagonistic these may be – the biosphere appears to perpetuate its own existence, presupposing this

as extrinsically valuable to it. As such, the system itself would also be intrinsically valuable.

However, this firstly raises a moral worry regarding the subordination of the individual to the collective. Rolston says "[t]he objective, systemic process is an *overriding value*, not because it is indifferent to individuals but because the process is both prior to and productive of individuality" (191, emphasis added). The quote appears to preempt and counter the charge of eco-fascism, or at the very least accusations of "a detached indifference to individual welfare" (Callicott, 1984: 303). This is a genuine concern for the simple reason that attributing intrinsic value to a system like the biosphere, which requires death and *a fortiori* suffering to function, entails that organisms otherwise deemed to have a good of their own are subsidiary to the greater good. Rolston essentially admits as much when he says that "[s]ubjective self-satisfactions are, *and ought to be*, sufficiently contained within the objectively satisfactory system" (1988: 191, emphasis added). The descriptive claim seems justified, but the normative claim less so. Jonas, too, has no qualms about endorsing such a position: rejecting a "sentimental" approach to the interdependencies of the biosphere, he claims "[i]n simple words: to eat and be eaten is the principle of existence" (*IR*: 137). Again, even if we accept this principle as factually necessary, the attribution of intrinsic value to it makes us decidedly uneasy.

This concern aside, perhaps the most pressing problem with the notion of systemic value is whether or not it is actually a meaningful concept. Apparently without realising it, Jonas' work on the organism undermines the idea. The reason is that, in contrast to even the lowly amoeba, the biosphere is not itself a purposeful being but *only a collective* of such beings. Put another way: unlike an organism, the form of the biosphere is not *autopoietic*, organising its parts, but is rather reducible *to* its parts. It is true that some ecologists have attempted to interpret the biosphere as *autopoietic*: James Lovelock's Gaia hypothesis, for instance, conceives of the Earth as a complex, self-regulating system of interactions, forming a 'super-organism' of individual organisms in much the same way as an individual organism is formed of cells (2006). However, this likeness appears to be merely formal. Although an organism consists of cells, the *arrangement* of these is the work of the organism as an immanently teleological unit – in Jonas' words, "the membership of elements in

an organism is an achievement of the latter for its sake" (*OF* II: 33). This accounts for the high degree of formal cohesion among parts, standing in stark contrast to the largely autonomous organisms comprising the biosphere, which are not ordered by the Earth, and do not act for *its* good but *their own* (and of course, the Earth's non-living components do not act purposefully at all).

This raises the question of whether any good of its own can be attributed to the biosphere which is not simply an aggregate of those of its component parts. Rolston certainly thinks it can, telling us: "[t]he value in this system is not just the sum of the part values" (1988: 188). But given that the biosphere is only a collective it is hard to see how this can be. The good of a family, or a nation, or any other social group, is a *common* good formed of an aggregate of its individual components' goods. We cannot say that there is some sort of greater, hypostasised good belonging *to the group itself*, and the same is true of the biosphere. Elsewhere Rolston refines his position by conceding that "[n]othing matters to Earth, perhaps, but everything matters on Earth, for Earth" (1994: 28). But this amounts to an admission that the Earth has no good of its own, and consequently no intrinsic value. The biosphere can only be instrumentally good for its component valuing beings, as Robin Attfield remarks:

> Certainly everything which is of [intrinsic] value (and located anywhere near our planet) is located in the biosphere, and the systems of the biosphere are necessary for the preservation of all these creatures. But that does not give the biosphere or its systems intrinsic value. Rather it shows them to have instrumental value, since what is of value in its own right is causally dependent on them. (1991: 159)

This seems to me unanswerable. Accordingly, an account of the systemic good of the biosphere, based on what Jonas referred to as its 'ends', is indefensible.

This cursory look at two different types of good hinted at in Jonas' work, and elaborated upon via Taylor and Rolston's comparable theories – a species-relative merit and the systemic value of the biosphere – has led to something of a dead-end. The former, attributing merit to an individual with reference to the collective good of its kind, makes *logical* sense but seems to lack an *ontological* foundation. However counterintuitive, establishing the reality of species as natural rather than conventional, which would be the condition of possibility for a

'good of its kind', proves problematic. Conversely, the reality of the biosphere is uncontroversial: there are indeed living beings on planet Earth which impact upon one another, the sum total of which can be called the 'biosphere'. This, however, is a mere collective rather than an immanently teleological system, and so, lacking ends, one cannot attribute valuation and therefore intrinsic value to it.

IV. From Goods to the Good

Through the negative conclusions of the previous section we have arrived at a concrete axiological position: namely, a biogenic rather than 'ecogenic', or holistic, theory of the origin of value. This is enough to refute the nihilistic doctrine that humanity is alone in an uncaring world with its projected meanings. Rather, humans are situated atop the scale of living beings which all share in the condition of valuing continued existence, and thereby possess intrinsic value. As Jonas succinctly puts it, "Nature harbors values because it harbors ends and is thus anything but value-free" (*IR*: 78). However, the demonstration of this does not represent a *victory* over nihilism – as Jonas notes, "no obligation can be derived" from the discovery of values in nature, which "seem to enjoy no other dignity than that of mere facts" (79). Any ethic appropriate to technological civilisation built on this basis cannot, therefore, be regarded as binding.

To overcome this limitation Jonas attempts to demonstrate the objectivity of his axiological findings. Unfortunately his attempt to do so – though admirably bold – is probably the philosophically weakest aspect of his system. Jonas freely confesses to running "head-on against the stone wall of two of the most firmly entrenched dogmas of our time: that there is no metaphysical truth, and that no 'ought' can be derived from 'being'" (*OG*: 51). He commendably "refuse[s] to be intimidated by either" (*ibid.*), but this has predictably exposed him to criticism, in particular from his German interlocutors. Karl-Otto Apel, for example, claims that Jonas "reaches back behind Kant" in his argumentation, reverting "to a religio-metaphysical belief that is incapable of a rational foundation" (1996: 225, 219). Similarly, Ullrich Melle claims that he "falls back on a pre-transcendental, objectivist metaphysics", although he concedes that this recourse "is not completely uncritical, i.e., dogmatic [...] since Jonas does

not claim ultimate justification or absolute truth for it" (1998: 340-341). Perhaps most straightforwardly, Wolfgang Kuhlmann laments Jonas' "unsuccessful philosophical foundation of the proposed basic norms" (1994: 282).[56] We shall see that although there is truth in these accusations, Jonas' movement from goods to the good is not without merit.

Somewhat polemically, Jonas observes that both the prohibition of metaphysics and the truth of the fact-value distinction have today "almost attained the status of articles of faith" (*MM*: 192). He is right, however, to note that both can and should be freely challenged; no philosophical theory is beyond reproach. Having accounted in the previous chapter for the validity and necessity of Jonas' integral monism as an alternative to the dominant scientific materialism, I take him to be on strong ground here. The second of Jonas' philosophical *faux pas* is his rejection of the is-ought gap: Hume's observation that a normative conclusion does not logically follow from a statement regarding the way the world is. The famous passage from *A Treatise on Human Nature* is worth quoting in full:

> In every system of morality, which I have hitherto met with, [...] I am surpriz'd to find, that instead of the usual copulations of propositions, *is*, and *is not*, I meet with no proposition that is not connected with an *ought*, or an *ought not*. [...] For as this *ought*, or *ought not* expresses some new relation or affirmation, 'tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason should be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it. (1969: 521)

In order to overcome this problem one must provide an incontrovertible normative principle which can mediate the is- and the ought-statements. In his attempt to do so, however, Jonas falls short.

His answer to Hume comes in two stages. The first relies for its persuasive force on the concept, discussed in the previous chapter, which I have called the *nisus* of Being – namely, its tendency towards greater complexity – a speculation which alone can explain why evolution is not merely

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[56] It should be noted that Kuhlmann is sympathetic to both Jonas' pre-theoretical moral intuitions and his ethic of responsibility (300) – he just does not accept that the former can objectively demonstrate the latter.

change, but also an *advance*. Jonas suggests that the biosphere has an instrumental value in systemically sustaining the accomplishments of Being's *nisus* – life itself – as becomes clear in the following quotation:

> Great is the power of tigers and elephants, greater that of termites and locusts, greater still that of bacteria and viruses. But it is blind and unfree, although driven by purpose; and it finds its natural boundary in the counterplay of all the other forces which carry on the natural purpose just as blindly and choicelessly and in the process hold the manifold whole in symbiotic equilibrium. It can be said that here the natural purpose is administered severely but well, that is, *the intrinsic task of being fulfils itself automatically*. (*IR*: 129, emphasis added)

Jonas here refers to a 'task' and 'purpose' of Being, thereby lending the notion of *nisus* a fully teleological aspect which, properly understood as tendency, it does not possess. As such, we can only make sense of the quotation by assuming that he is speaking figuratively. But the key point to grasp is that life as such, preserved in being by the biosphere, is an accomplishment – one unforeseen and by no means inevitable – of the *nisus* of Being.

What has this to do with the refutation of Hume's Law? It is intended as the ultimate metaphysical refutation of the doctrine that nature does not care one way or the other, that what-is has no regard for what-should-be. For if Jonas is correct, through *nisus* we have a 'preference' for the manifestation of life and inwardness in Being over their remaining silent, and it is here that the deepest axiological vein can be located. In the pivotal passage of *The Imperative*, Jonas argues that "[i]n purposiveness as such […] we can see a fundamental self-affirmation of [B]eing, which posits it *absolutely* as the better over against non[B]eing. In every purpose [B]eing declares itself for itself and against nothingness" (81). Elsewhere Jonas articulates the idea as follows: "life says 'yes' to itself […] which ever reasserts the value of Being against its lapsing into nothingness" (*MM*: 91). In either formulation the crucial point is that Being as such is not axiologically neutral. On the contrary, having given rise to life – which "is its own purpose, i.e., an end actively willing itself and pursuing itself" (173) – Being, that which *is*, declares what *ought* to be. In this way Jonas hopes to close the is-ought gap.

Assuming one finds Jonas' speculative arguments for the *nisus* of Being persuasive, we have here a powerful axiological challenge to modern nihilism. Nevertheless, by itself it is insufficient for the express purpose of overcoming the fact-value distinction. As Jonas himself concedes, it does not *logically* follow from that the fact that Being says 'yes' to itself that it is objectively good; "it can always be doubted whether this whole toilsome and terrible drama is worth the trouble" (*IR*: 49). To this end, and constituting the second step in his response to Hume, Jonas rather disappointingly falls back on an argument from intuition: he claims as "axiomatic" and grasped "with intuitive certainty" that "the mere capacity to have any purposes at all [is] a good-in-itself" (80). Obviously the veracity of this intuition, even if universally shared, cannot be simply assumed – hence the scorn Jonas drew from his German critics. In his defense he does offer a justification of sorts: that the denial of this axiom is paradoxical, since it would betray a value-preference for the non-existence of values. Jonas wonders whether this makes his axiom an analytical statement, but admits that he is "not certain" that it does, only that "there is plainly no going back behind it for something more basic to underpin it" (*ibid.*).[57] One might add that although a value-preference for the non-existence of values may well be logically contradictory, it makes perfect emotional sense: this is, after all, precisely the sentiment underpinning what Nietzsche identified as the 'passive nihilism' of Buddhism and Schopenhauer's philosophy.

After what Gerald McKenny calls Jonas' "herculean labors" (1997: 62) to identify an objective value, the fact he concludes his ontological grounding for goodness with an argument from intuition is somewhat anticlimactic. Although we are able to describe the individual organism as intrinsically good courtesy of its *telos*, and even life as such as an end-in-itself based on the *nisus* of Being, we cannot prove that either is really, objectively good: the sceptic will always note in response that these are only subjective facts, and that no binding 'ought' can be derived therefrom. To his credit, Jonas subsequently admitted as much, noting that "[t]he validity of such intuition can, however, be debated; indeed, any

[57] Vittorio Hösle has defended this aspect of Jonas' ethics from the position of discourse ethics, arguing that what Jonas has identified here is a transcendental limit of reason. Hösle suggests that Jonas' axiom "could be grounded with the transcendental-pragmatic reflection that arguments themselves have a teleological structure which is already presupposed when we try to deny it" (2001: 44). Jonas does not pursue this line, however, presumably because he is wedded to an unashamedly metaphysical ontology and axiology. And, as will become apparent, I shall offer an alternative metaethical solution.

individual can deny having it" (*MM*: 107). This is where Jonas' critics are correct: he ultimately fails to defeat nihilism by accounting for an objective good.

V. Moral Traditions

There are, however, ways to account for the force of the intuition Jonas cites. Although these alternatives concede any claim to objectivity, they nevertheless allow us to shore up his theory. Lawrence Vogel suggests a "Humean story that would build on feelings," which might not have "the systematic force of Jonas' cosmic deontology, but it may be more concrete and genuinely persuasive" (1995: 38). In that very spirit, Theresa Morris argues that Jonas' position can be defended as "full knowledge and [teleological] understanding of the natural world and the place of the human within it will often lead naturally to a recognition of value, and a response that includes obligation" (2013: 117). Clearly, this 'often' is not a 'must', and so represents a subjectivist adaptation of Jonas' original position.

After writing *The Imperative*, Jonas himself conceded that a "combination of biologism and subjectivism", as advocated by Morris, "cannot really be refuted" (*MM*: 108). That said, we may be able to go further and explain *why* a recognition of value is liable to bring with it a sense of moral obligation. The answer, I suggest, is that we are not only organismic but also *symbolic* beings, belonging to a particular historical and moral tradition that we might call the Greco-Roman-Judeo-Christian West. I will now pursue this line, which typically goes by the name of relativism, as an alternative to both Morris and Vogel's subjectivism and Jonas' original objectivist attempt. Moral relativism is not, I suspect, a position Jonas would have happily endorsed, but it allows us to resolve the present issue consistently with his wider thought.

(α) Hermeneutics and Finitude

We saw in the previous chapter that human beings not only have a world shaped by our organismic being, but also a cultural world courtesy of our symbolic being, and which is to a great extent intertwined with the former. Although non-human life expresses itself through movement and certain functions, some of which are intelligible to us, in human life "this whole natural groundwork is overlaid with system upon system of invented, constructed, and

freely manipulated expressions and symbols, culminating in speech and imagery" (*PE*: 249). Bodily expression remains one way in which humans communicate, but language is our foremost means of understanding one another. This is particularly true of understanding the record of the past, which is itself evidently not physically present:

> The word is […] the eminently 'historical' above the substructure of the ever-repeated themes of the species. Through the agency of the word history produces itself; in its medium, it expresses itself; with its record, historical understanding has to deal first and last. (257)

In this way Jonas seeks to explain how language allows for much understanding, at the same time as accounting for a "subhistoric" and pre-linguistic "biological dimension which we tacitly presuppose" in understanding all life (253). Although we cannot always be sure of having arrived at an accurate (let alone complete) understanding of other human beings, *as* human beings we nevertheless share a common ground which allows for understanding to take place. And of course, with effort we are able to come to a better understanding of one another, particularly among contemporaries with whom we can participate in immediate dialogue (hence why Plato elevated speech above writing).

However, in stressing the possibility of shared understanding across history and culture Jonas arguably overstates the extent to which this occurs. One might say that he does not offer a full account of our hermeneutic situation, which also includes what is *particular* to historical traditions and inaccessible to pre-cultural and 'sub-historic' understanding. One such phenomenon, I will argue, is ethical judgement. To begin to make sense of this claim we can turn back to Heidegger, and in particular Gadamer, for further explanation of our historicity. For Heidegger, our existing in a historical moment and for a limited duration conditioned the "fore-structure" of *Dasein*'s being-in-the-world (2010a: 146-147). This was the hermeneutic consequence of our thrownness: that we cannot but understand according to the context in which we happen to exist. Even if this picture is exaggerated – as Jonas shows with reference to the understanding of life inherent to corporeal being – it is nevertheless instructive regarding the cultural world we inhabit as symbolic beings.

Gadamer, even more so than Heidegger, brought this line of thinking to fruition. Central to Gadamer's 'philosophical hermeneutics' are the concepts of tradition and horizon, which together illuminate our historical finitude. The general hermeneutic method begins by looking beyond our immediate circumstances to the historical, cultural, and linguistic context in which consciousness is situated. To do this is to acquire what Gadamer calls "historical consciousness" (2004: 303) of living within a tradition – where this term denotes not something local or institutional, but rather something like 'the Western tradition'. This temporal and cross-cultural perspective is the condition of possibility for historical and anthropological enquiry, but for a hermeneutical theory it is insufficient. For what is essential, yet goes unacknowledged in historical consciousness, is that understanding not only *occurs from* a particular time and place, but is largely *relative to* that time and place. Recognition of this, which Gadamer calls "historically effected consciousness (*wirkungsgeschichtliches Bewußtsein*)" (301), transforms our self-understanding. We now realise that to understand historically or anthropologically is not to lever consciousness out of one historical-cultural tradition and into another. It is, on the contrary, to recognise that this is an illusory goal and that all understanding must in fact take place from a given standpoint.

Historically-effected consciousness is not hermetically sealed in a place and time, however – clearly, we do interpret entities which originate from outside our linguistic, cultural, and historical context. It is because of this openness that Gadamer characterises consciousness as a "horizon" (*ibid.*), and the bringing together of two different historically- or culturally-situated beings a "fusion of horizons" (305). This notion can be better understood by considering a real-life example. For clarity's sake we can imagine a Western anthropologist undertaking ethnographic research of an island society. Philosophical hermeneutics can help us see how the anthropologist understands the behaviour of the islanders to whose culture they do not belong. Habermas describes the central structures of difference which must be transcended in order for understanding to take place:

> Each of the partners between whom communication must be established […] lives within a horizon. […] This is true both for the vertical plane, on

> which we overcome a historical distance through understanding, as well as for the process of understanding on a horizontal plane, which mediates a linguistic difference that is geographical or cultural. (1988: 151)

The example of the anthropologist and islanders is a horizontal – that is, geographic and cultural – rather than a vertical, or historical, act of interpretation. But either makes the encounter a hermeneutic challenge: the greater the historical or cultural distance, the greater the obstacle to achieving a fusion of horizons.

Recognition of these difficulties does not make Gadamer's theory solipsistic. The fact that a fusion of horizons *can* take place entails that both parties have a shared ground which allows for a bridging of horizontal and vertical differences. But what is this shared ground? Gadamer argues that it is language. Have been thrown into being, we belong to a particular linguistic tradition and have no choice in the matter; that English is my mother tongue is as much a part of my facticity as my being born male and toward the end of the twentieth century. The language we use governs much of our lives – inside and out, in thought and in action – hence we not only possess a language, but are at the same time possessed by it. Gadamer goes so far as to claim that language "operates in all understanding" (1976: 29), and is "*the universal medium in which understanding occurs*" (2004: 390). Even if this is not *entirely* true, as Jonas showed with regards to corporeal understanding, what is true is that our symbolic being accounts for the vast majority of what can be expressed and understood. Just as what we do cannot be understood without reference to the body that we are, what we say and think is made possible by the language we are delivered over to. Together these constitute the horizon of our understanding, and therefore the conjoining of Gadamer and Jonas' hermeneutics allows us to acquire a fuller picture of our historicity.

(β) Sentiment and Custom

What has any of this to do with the question of the goodness of Being, which motivated our turn to hermeneutics? The answer is that an understanding of historicity allows us to explain why the existence of value is liable to strike us as objectively valuable. The connecting thread is that our thrownness into

being, including the taking up of a historico-linguistic tradition, determines what is ethical for us. In other words, our horizon of understanding is also a *moral* horizon. This is compatible, I would argue, with Jonas' philosophical anthropology, which stresses humanity's moral being as a formal aspect of our transcendence but does not presuppose a universal moral content. Specific moral injunctions are instead accounted for by the tradition into which we are thrown – even if the capacity for morality itself belongs to *that which* is thrown. We shall explore this idea through an engagement with the work of Alasdair MacIntyre, which is, by his own admission, heavily indebted to Gadamer (1976; 2002). On this basis we may, I believe, improve Jonas' theory.

MacIntyre's seminal text, *After Virtue* (2007), is a critique of Western moral thinking from the Enlightenment onwards and a call to return to a prior, erroneously discredited, form of ethics. In short, MacIntyre's diagnosis is this: our historical moment is characterised by conflicting moral discourses and prescriptions, such that confusion reigns over what constitutes right action both individually and collectively (2). Following the death of God we lack any divine authority by which to appeal when contemplating right and wrong. This has a philosophical reflection in the theory of emotivism: that statements regarding what is good and bad have no factual content, but are instead expressions of subjective emotional states, which may, or may not, lead to consensus (21). We might add that Heidegger's existentialism – according to which *Dasein* must make commitments but without any normative guidance in doing so – is another reflection of the same predicament. Do we, in a given situation, prioritise consequences and attempt to maximise utility, or do we rather adhere strictly to principles? Are our claims to moral rights founded on what universally benefits us, or do they rather accord with the dignity that belongs to us as rational beings? There are no categorical answers to these questions because, as Nietzsche most forcibly showed in his devastating analyses of modern ethics, neither Kantianism nor utilitarianism can compensate for the death of God.

Worse, this is not a matter of individual failure on the parts of Kant, Hume, or Mill, as though we simply require a yet-greater philosopher to correct their mistakes (which is in fact the pretence of much academic philosophy). Rather, according to MacIntyre, the 'Enlightenment project' of philosophers attempting to rationally justify right and wrong *had* to fail "because of certain

shared characteristics deriving from their highly specific shared historical background" (51). What is that background? It is, once again, the anti-Aristotelian turn taken by the West in the seventeenth century. The scientific revolution led to an "elimination of any notion of essential human nature and with it the abandonment of any notion of a *telos*" toward which ethics, as it had been previously understood, was orientated (55). The destruction of a conception of humanity-as-it-should-be – *eudaimonia* for Aristotle, beatitude for Aquinas – left in its wake "a moral scheme composed of two remaining elements whose relationship becomes quite unclear" (*ibid.*). These two elements are, on the one hand, "a certain content for morality" belonging to the Greco-Roman-Judeo-Christian tradition, and, on the other hand, "a certain view of untutored-human-nature-as-it-is" (*ibid.*). As the original purpose of our moral injunctions was to help realise humanity as it *should* be, these "are clearly not going to be such that they could be deduced from true statements about human nature", which was precisely what the Enlightenment moral philosophers had attempted to do: Kant from the perspective of reason, Hume from the passions (54). All subsequent attempts to rationally account for a specific moral content – and Kant's has not yet been matched for philosophical brilliance – were doomed to fall victim to the same problem, as it belongs not to the individuals concerned but rather their historical situation.

Our moral beliefs are instead best accounted for as a combination of sentiment and custom. This is to say that morality originates in *emotions* rather than reason, and that its content is largely shaped by the *tradition* to which we belong. Taking the former first, Hume was right: whatever we approve or disapprove of, find just or unjust, think admirable or despicable, ultimately cannot be demonstrated to objectively hold these properties. They are rather qualities projected onto the phenomena by moral beings. As we have seen, Jonas' philosophy ultimately encounters this problem: at the most abstract level he rationally demonstrates the existence of subjective values in living beings, but cannot, in the end, demonstrate the objective value of values, leaving us with an argument from intuition. Nevertheless, the latter has a strong persuasive force, and this is due to the sentimental appeal that reasons can conjure. Hume was again correct to observe that "reason is perfectly inert, and can never either

produce or prevent any action" (1969: 509). But it may alert us to something emotionally compelling, leading us to act accordingly.

Hume was incorrect, however, to suppose that what "constitutes virtue or happiness and vice or misery" – i.e., a specific account of what is good – "depends on some internal sense or feeling which nature has made universal in the whole species" (1975: 169). Here he conforms to the Enlightenment attempt to think outside of the hermeneutic standpoint of tradition which is in fact presupposed. As Gadamer showed us, our horizon of understanding is in fact constituted in large part by the tradition into which we are thrown, such that the fore-structure, or 'prejudices', with which we are endowed allows us to understand symbolic existence at all. Hume unfortunately exemplifies "the fundamental prejudice of the Enlightenment", which is "the prejudice against prejudice itself" (2004: 273) – hence the negative connotations attached to the word today. Proper recognition of the fore-structure of understanding, however, reveals these prejudices to be neither arbitrary nor necessarily pernicious – although if left unexamined they certainly *can* become that – but rather the basis for any understanding of others at all.

Hume was closer to the mark when speculating in the *Treatise* that at least much of what we deem virtuous "arises from the circumstances and necessity of mankind" (1969: 529) – provided, that is, we take him to mean that the virtues follow from our social and historical being. For as we have seen, the collective pre-exists the individual who inherits the tradition in question, and the significance of this fact is precisely that moral beliefs are neither universal nor subjective, by formed by *custom*. The emotions we feel and aesthetic judgements (in the broad sense) that we make of phenomena are highly contextualised: even if all human beings feel displeasure at intense physical pain, this subjective valuation has different *moral* significance according to different traditions. If the Buddhist tradition adheres to universal compassion for the suffering of others, it is fair to say that the pre-Christian Nordic peoples did not. As emotion is ultimately the ground of morality, what is regarded as good, right, and just varies – to a greater or lesser extent – depending on the traditions in question. Moreover, there can be no correct answer independent *of* tradition: as we have seen, the symbolic rather than corporeal dimension of our hermeneutic situation, to which judgements of right and wrong belong, is

defined by the tradition into which we have been thrown. Hence Gadamer concludes that "[t]he real force of morals […] is based on tradition", this being "the ground of their validity" (2004: 282). In our case that moral tradition is largely Judeo-Christian (with some remaining elements of Greco-Roman and other pagan virtues), and it is on *this* basis that we find Jonas' claim for the intuitive certainty of the objective value of values persuasive. The combination of a teleological understanding of life and the demonstration of axiological consequences is liable to bring with it a normative conclusion – that the existence of subjective goods represents an objective good – *because of the ethical tradition into which we are thrown*.

VI. Post-Modern Virtue Ethics

Sentiment and custom, rather than reason, may account for moral beliefs, but evidently neither are immune to rational contestation: the sceptic can always deviate from their moral tradition because it is, as Gadamer says, "freely taken over" (*ibid.*). Indeed, a great part of the history of ethics has consisted of the constructive questioning of tradition: we need only name Jesus, the Buddha, Socrates, or – exemplifying *de*structive questioning – Nietzsche. Even if it is socially and psychologically hard to actually live by such a deviation (it being no coincidence that two of these figures were put to death and the others self-imposed exiles), it is very much possible to intellectually do so. The reason for this is, as Habermas notes, that questioning the tradition one belongs to breaks its "quasi-natural" status: even if its content is subsequently accepted, one's relation to it is altered through the act of contestation (1988: 168). Here the freedom of our reason and the finitude of our thrownness are in productive tension, allowing for a tradition to change.

Where, then, do we go from here? Ought we, with Nietzsche, declare our ethical tradition to be nothing more than a manifestation of the will-to-power perversely turned against itself? MacIntyre suggests that this *would* be the intellectually honest conclusion *if*, and only if, the original anti-Aristotelian turn taken in the seventeenth century were valid – for, as we recall from the Introduction, it was this epochal event which paved the way for modern nihilism. Hence the reverse is equally true: if "Aristotle's position in ethics and politics – or something very like it – could be sustained, the whole Nietzschean enterprise

would be pointless” (2007: 117). And on the basis of our previous findings we may say that core aspects of modernity’s intellectual revolution *are* in fact mistaken. In spite of what scientific materialism claims, all living beings are immanently teleological both in their activity and self-organisation, and Being itself has a tendency toward life which we have here called its *nisus*. These findings represent a radical break with modern ontology, with similar consequences in axiology, as demonstrated in the present chapter.

The first question is whether this revived teleology can fulfil the role that MacIntyre believes it occupied in pre-modern moral systems: namely, providing an essential standard by which to orient ethical action, both individually and collectively. It must be admitted that the kind of teleology we have rehabilitated – immanent rather than transcendent – cannot do so. Just as a Christian virtue ethics is unsustainable after the death of God, so too is an orthodox Aristotelian virtue ethics after Darwin. We have already seen in this very chapter that the idea of species as fixed and determinate, allowing for standards by which to judge each member, has to be abandoned. Unfortunately this was precisely the form that Aristotle’s ethics took: according to that schema, the human species has a rationally discoverable essence which provides the *telos* for individuals and collectives to aim toward. MacIntyre recognises this problem, and admits that Aristotle’s “metaphysical biology” has to be supplanted (196). The question now is whether ‘something like’ Aristotle’s ethics can be revived regardless. MacIntyre shows that it can, and his proposed alternative is two-fold: the good as it manifests in our *symbolic* being, and the good pertaining to *organismic* being.

(α) The Good in Symbolic Being

MacIntyre’s method in *After Virtue* is to identify virtue in practices (understood broadly) which are shaped by a tradition. The basic idea is that our thrownness into social existence involves participating in practices which possess “internal goods” (191). The virtues are the qualities which allow us to achieve these goods, and the vices those traits which hinder our achieving them (*ibid.*). The task of practical wisdom is then to reconcile the competing obligations of practices in a single life, as we must: this is our *telos*.

For example, at the most basic level, utterly unchosen, is my having been born into a family unit. *That* I am a son and a brother entails duties because the family unit has a good of love, care, and respect, as defined by the tradition I belong to. I am free to ignore these obligations, of course, but doing so would mark me out as a bad family member, bringing with it the shame of others' judgement (even if a subjective sense of guilt, which also ought to be present, is absent). And each family unit is itself to be judged according to the most fundamental morals of the tradition: should the adult members fail to respect one another or care for the children, then the family has to change accordingly. Likewise, *that* I belong from birth to a particular state brings with it certain obligations, which if I ignore make me a bad citizen. These obligations once consisted in participation in public life, contributing to the commonweal, and defending the integrity of the *polis* from internal chaos and external threats. Today we have recognisable (if much weakened) counterparts to each in voting, paying taxes, abiding by the law, and – albeit rarely – military conscription. Once again, the state is itself to be judged by the standards of the tradition, such that it *ought to be just*, and should it fail to be so then one's obligations to it are diminished accordingly. One's obligations to a completely unjust state are perhaps reduced to revolutionarily overthrowing the government, or even committing to its military defeat, as Jonas exemplified in the case of Nazi Germany.

Such obligations can clearly come into conflict with other practices – work, leisure, friendships, romantic relationships, and so on – each of which have their own internal goods as defined by a tradition. Even the obligations of family and state described above can dramatically compete: Sartre famously spoke of a student who, during the Occupation, wanted to know whether he should take up arms with the Free French Forces in Britain or stay in France to care for his mother (1946: 35-37). Sartre's response was to tell the student that he was condemned to freely choose in the face of competing demands, since no moral code could recommend one action over the other. Sartre was correct to the extent that the student faced what MacIntyre calls a "tragic confrontation of good with good", but overlooked the fact that "there may be better or worse ways" to work through these impasses (2007: 224). The criterion for judging this 'better or worse' is the extent to which one successfully reconciles the virtues in

"a life that can be conceived and evaluated as a whole" (205). Acts and their goodness can usually only be fully judged in the context of the actor's life as a whole, just as each individual's life cannot be judged without reference to their acts. Thus Sartre's student may have been bound by conflicting duties – to care for his mother and to help liberate his country from tyranny – but like all of us he could only live a single life, and the wise choice would be that which helped him do so in a balanced way. Had he previously displayed a lack of family loyalty (leaving the care of his vulnerable mother to his late brother, say) then committing to help her now would go way some way redressing this. Conversely, had he until now shown little public spiritedness, then risking his life for the liberation of France would be the ultimate way to contribute to the common good.[58] Thus we can decide, with some guidance, how to live well in the face of competing demands.

Proceeding in this way allows us to revive a relativist virtue ethics.[59] MacIntyre's theory does not overcome nihilism in the way Jonas would like, therefore, but it is still able to account for the good beyond mere subjectivity: we can identify a moral *telos* in our living a single life and belonging to a tradition, a tradition that, as we have seen, supports Jonas' claim for the objective value of values as intuitively valid. In so doing we once again refute in part the anti-Aristotelian turn of modernity, arriving at a 'post-modern' virtue ethics in much the same way as we developed a post-modern ontology in the previous chapter.

Thus far, however, these two domains are only distantly linked: the connecting thread is that our moral tradition explains *why* the recognition of living beings as teleological – and thus possessors of subjective value – is liable to strike us as objectively valuable. In other words, ontology and ethics are bridged by the *symbolic* realm, in the form of a tradition, rather than being rooted in the strictly *organismic* dimension of our being. This is valid as far as it

[58] And had his life until now been characterised by a perfect balance of commitments to his mother and his country, then his future self would have to act as guarantor, repaying the debt to whichever he chose against in the moment of decision. Set out in this way there is still no simple answer: it would be easier to care for his mother after the War than to repay an unspecified duty to his country, but only if they both survived the Occupation, which is precisely what the other course of action makes doubtful.

[59] MacIntyre staunchly denies that he is a relativist (2007: xii), highly implausibly, in my opinion, since on the very next page he reaffirms that "there are no neutral standards available by appeal to which *any* rational agent whatsoever could determine which tradition is superior to which" (xiii). Perhaps, if we are being charitable, we could say that MacIntrye's philosophy is perspectivist rather than relativist, but I suspect that this may be a distinction without a difference.

goes, but not entirely in keeping with the spirit of Jonas' thought which has much more to say about our corporeality than our historicity. More pressingly, it does not allow us to say what constitutes the good of a life which is *not* symbolic, as in the case of plants and most animals. It would seem apt, therefore, to tie Jonas' neo-Aristotelian ontology closer to the neo-Aristotelian ethics I have sketched out here. I propose to do so through an engagement with the second way in which MacIntyre rehabilitates virtue ethics: namely, connecting the good to the demands of organismic being, taking the human condition as an example.

(β) The Good in Organismic Being

In *Dependent Rational Animals*, MacIntyre's other critical text, he seeks to demonstrate that what is good for us, and the virtues which help us realise this good, are rooted in our biological constitution. Now, we have already stressed above that invoking a species norm is ontologically problematic. The issue, to reiterate, is that species lack the determinate essence Aristotle supposed them to have, which allowed him to conceive of an individual specimen as a good or bad of its kind. After Darwin we must acknowledge that species are, as Jonas says, merely "relatively stable, and that this stability represents only the temporary equilibrium among the forces which generally determine the structure as successful" (*PL*: 50). The upshot is that we cannot point to an essence of 'toad', for example, in order to objectively judge the individual specimen as a good or bad toad, and in the very same way we are prevented from appealing to a human essence which would allow us to definitively judge individual people as good or bad human beings. Precisely this ontological indeterminacy undermines the neo-Aristotelian naturalism of Martha Nussbaum (2004), Rosalind Hursthouse (1999), and Philippa Foot (2001) the last leaning particularly heavily on the idea of species norms.

It was for this very reason that MacIntyre set Aristotle's "metaphysical biology" aside in the first place. And yet in *Dependent Rational Animals* he does, at least at times, invoke something similar. He tells us, for instance, that what a "plant or animal needs is what it needs to flourish *qua* member of its particular species. And what it needs to flourish is to develop the distinctive powers that it possesses *qua* member of that species" (1999: 64). There is a

degree to which thinking in this way is pragmatically indispensable, of course. Regarding needs, I can only identify the sustenance I require to survive by asking what others like me require. I will look to other humans for proof that, for example, I simply cannot survive on wood, and disregard the fact that some other living beings, such as termites, can. Therefore we cannot *in practice* identify what is good for me without invoking a minimal account of the kind of being that I am. But of course, we would like a far stronger definition of the human good than this, and I shall now attempt to provide it. We concluded the earlier discussion of species with reference to what Jonas called 'modes of being', and noted that this existential route might be a less problematic way to identify the good of a kind. The challenge is to go beyond our largely formal definition – derived from Jonas' philosophical anthropology – of humanity as the definitively symbolic being, but *without* resorting to an Aristotelian essence. The concept which I will use to this end is not human *nature*, but the human *condition*.

For a preliminary definition of the human condition we may turn to Hannah Arendt's magisterial work of that name (1958). Arendt points to four kinds of activity – *labour*, *work*, *action*, and *thinking* (6) – which define a human life lived between the poles of *natality* and *mortality* (11). Each such life is in turn made possible by the Earth: "the very quintessence of the human condition" (2). Now, it is true that all living beings labour in Arendt's sense, that they are born, must die, and their doing so is made possible by the Earth. Therefore action and thinking aside, which are for her symbolic activities, these are not specifically human traits (although to live with an *understanding* of our natality and mortality may qualify as such). We might also add that some humans, living in great luxury, are relieved of the necessity of labouring. Nevertheless, whatever we would want to call human life, from our most distant ancestors to the present day, must surely have existed in a way which conformed to these criteria, such that were *all* humans in a given community to cease labouring then human life would quickly end.[60]

[60] This would hold even if mass automation – which Arendt presciently discusses (4) – came to pass, as someone, somewhere would still have to tend to the machines which laboured (or oversee the computer systems which controlled the machines that tended to the machines that laboured).

Now, as we have seen from Jonas' philosophical anthropology, these activities and existential structures cannot be separated from certain physical traits, in particular: sight, a high relative brain size, the opposable thumb, and upright posture. Again, this holds even if some humans lack some of these physical traits: human life only is what it is because of them, and were we to collectively lose any of them we would no longer be recognisably human. Moreover, because the human condition has its basis in this bodily form, we may then make certain claims regarding the qualities of the latter. To this end Edward Skidelsky (forthcoming) introduces the idea of capacities – which might be intellectual, physical, or even psychological – with given parameters. Physical strength, for example, is

> relative to particular forms of life. A strong man suffers nothing by comparison with a gorilla, for his is a specifically *human* strength, perfectly adequate to the tasks that humans are called on to perform […]. Of course, there is a good deal of cultural and historical variety here. Some ways of life demand more in the way of physical strength than others. But this is a variety within limits. No human society calls on its members to pluck trees out by their roots or to kill buffalo barehanded. These are not 'normal' human activities. (*Ibid.*)

In the same way, it is remarkable for a human being to live for much more than a century, whereas a giant tortoise would be expected to do so. Likewise – to take a non-physical case – it makes no sense to ask why a duck does not evaluate the relative worth of its desires, but regarding human beings an inability to do so is unusual. And the baseline and upper limit presupposed in each capacity is what allows us to say that someone is strong or weak, old or young, wise or foolish, and so on. This definition of the human condition – which could admittedly be much further refined – therefore allows for judgements about human beings, without, I think, resorting to an unsustainable species essentialism.

What matters for our purposes is that the human condition thus understood provides a sufficient ontological foundation for what MacIntyre calls "the virtues of acknowledged dependence" (1999: 133). Precisely because natality, mortality, and sociality belong to the human condition, because each of

us is vulnerable to harm, limited in capacities, and dependent on others, certain qualities will help to compensate. In other words, when I acknowledge my dependence on others, abandoning the libertarian fantasy of total individualism, I see that certain virtues allow me and others like me to flourish. What are these virtues? MacIntyre points to just generosity, beneficence, *misericordia* (mercy), hospitality, respect, and demonstrating humanity as the virtues which best do so (121-128). It is fairly clear how some of these account for the vulnerabilities of the human condition: doing good by others, for example, will help them overcome their weaknesses, and hospitality will help alert us to who is in need of help. These might at first sound like the virtues of fortunate but magnanimous individuals caring for those worse off. But MacIntyre's point is rather that the human condition entails that *all of us* require such treatment from others, regardless of our station in life. Hence the just generosity MacIntyre invokes has an inbuilt reciprocity: it is "a generosity that I owe to all those others who also owe it to me" (120). Crucially, the end point is not to encourage excessive dependency on the good will of others, but to reveal that we are all of us already dependent on others for our basic existence, and recognition of this allows for a more substantial conception of the human good.

VII. From Virtue to Responsibility

Through MacIntyre's virtue ethics we are able to explain not only why the existence of value strikes us as objectively valuable – because we belong to a certain moral tradition – but also how this symbolically-derived tradition intertwines with a good connected to our very organismic being. For the avoidance of misunderstanding it must be stressed that this intertwining, as I have called it, is neither proof of the *correctness* of the good of the moral tradition we have inherited or the good of the human condition. For the sceptic will, once again, note that the *facts* of the human condition do not entail that we *ought* to be justly generous, humane, and so on. In other words, it cannot be demonstrated that this moral content follows logically from our natality, mortality, sociality, and so on. To give an obvious counter-example, the Spartans understood the human condition to entail a very different set of virtues to ourselves. But what this supplementary theory does allow for is the broadening of our theory of moral relativism, from the good of traditions to the good of the human condition. Even if the latter only derives substantive content

from the perspective of the former – which is why our position remains relativist – we can nevertheless develop a richer and more demanding relativism than the vulgar sort typically encountered. On this basis – which is rather different to the one Jonas envisaged, but still consistent with his wider thought – we turn to his great contribution to ethics: the imperative of responsibility.

Chapter Four: New Dimensions of Responsibility

I. Old and New Ethics

One of the debates central to environmental philosophy is whether the ecological crisis requires new ethical principles by which to act individually and collectively, or whether the necessary ideas are already present, albeit supressed, in traditional moral thought. An equivalent question is largely absent from Anglophone bioethics, meaning that Jonas' search for a new ethic appropriate to the technological age is best situated in the former area of practical philosophy. I shall sketch out the debate and show how Jonas contributes to it.

The starting point was Lynn White Jr's 1967 article 'The Historical Roots of Our Ecological Crisis'. White argues that "we continue to live, as we have lived for about 1700 years, very largely in a context of Christian axioms" and that "in its Western form, Christianity is the most anthropocentric religion the world has seen" (1967: 1205). White's justification for the latter claim is that firstly, the creation story of Genesis teaches that "no item in the physical creation had any purpose save to serve man's purpose", and secondly, that "[b]y destroying pagan animism Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects" (*ibid.*). He then suggests that since Christianity continues to essentially underwrite Western life "the remedy must also be essentially religious", and on that basis he recommends that we look to Zen Buddhism and (in particular) Saint Francis of Assisi for a corrective: Francis' belief in the equality of all creatures making him, White says, the "greatest spiritual revolutionary in Western history" and a potential "patron saint for ecologists" (1207).

White acknowledges that his reading of Christianity is sweeping, but maintains that Christianity "bears a huge burden of guilt" (1206). His critique was subsequently challenged as too strong by J. Baird Callicott, Robin Attfield, and John Passmore, all of whom point toward the alternative Biblical tradition of stewardship: the idea that "human beings hold the Earth as a trust" for the sake of future generations (Attfield, 2014: 21). Attfield argues that White's reading of Genesis is a basic misinterpretation, and that no despotic or anthropocentric interpretation of the Old Testament "could be credited at all" (31). He insists that

the key (though oft-overlooked) distinction is between *dominion* and *domination*, where the former implies benign control and the latter exploitation (22). Attfield is right to draw our attention to the stewardship interpretation, but it cannot be justified with reference to such a questionable semantic distinction, and in any case, God's accompanying command to "subdue" the earth is unequivocal (Genesis 1:28). Callicott is able to account for this discrepancy by taking a less absolutist line than either White or Attfield, arguing that the conflict between despotism and stewardship is actually in the text itself. Drawing on Biblical scholarship he notes that Genesis is likely woven together from different sources: the Priestly version of creation (comprising Genesis 1-2:4) contains the key textual support for the despotic reading, whilst the older Yahwist creation myth (Genesis 2:4-4:26) better supports a stewardship interpretation (Callicott, 1989: 138). Notably, the command to "dress" and "keep" the garden (Genesis 2:15) implies cultivation and a relation of care, so Callicott is right to say that Genesis provides support for both readings and that Christian scripture is consequently not entirely hostile to environmental concerns.

Passmore is closer to Callicott insofar as he holds the message of Genesis to be ambiguous (1980: 27-29), but he also advances the debate. In contrast to White's somewhat monolithic history, Passmore argues that the ecologically crucial moment in Western history was not Christianisation but modernity's fusion of humanism and the despotic interpretation of Christianity. As we have seen, one reading of Genesis could sanction the view that everything was made for humanity's sake, but this alone "did not encourage man to undertake the transformation of nature" (17). On the contrary, it could just as conceivably sanction quietism. "It is only when coupled with a Pelagian, humanistic, attitude to man, which sees him not as essentially corrupt but as having the duty to create, by his own efforts, a second nature, […] that it can either provoke or be used to justify a scientific-technological revolution" (20). Passmore singles out Bacon and Descartes as the foremost exponents of this doctrine (19-20) which continues, in a secularised form, to underwrite contemporary civilisation. He concludes that Christian metaphysics and ethics are not solely to blame for the origin of the ecological crisis: rather, the Renaissance fusion of a particular interpretation of that worldview with the competing Western tradition of humanism led to the modern belief in "nature as

nothing but a system of resources, man's relationships with which [are] in no respect subject to moral censure" (27).

Finally, Passmore tackles the second of White's justifications: that forgoing animism made environmental exploitation possible, meaning that the adoption of Eastern traditions such as Zen might act as a counterweight. Passmore notes that "[n]owhere […] is ecological destruction more apparent than in today's Japan, for all its tradition of nature worship" (176), to which we might add that in recent decades almost all of Asia, whether traditionally Hindu, Islamic, Buddhist, or Taoist, has industrialised in an ecologically destructive manner. Passmore suggests that a new ethic, if it is to take hold in the West, must draw on alternative currents within that tradition, namely the stewardship interpretation of Christianity and the German Idealist notion of perfecting nature through co-operation with it (32-40).

It is at this point that Jonas may be brought in, since his ideas complement Passmore's and take the debate yet further. As discussed in earlier chapters, Jonas shows that the *direct* origin of the ecological crisis lies in the reconceptualisation of nature as matter in modernity, a theoretical revolution that stripped Being of teleology and cosmic significance. However, he claims that the way was paved to modernity, both metaphysically and morally, by the Gnosticism of antiquity. Firstly:

> The created world of Genesis is not a god and is not to be worshipped instead of god. […] Jewish monotheism had abolished the deities of nature and all intermediary powers, leaving God and world in clean-cut division. The Christian hierarchy of angels and saints bridged, not the gulf between God and the world, but that between God and the human soul, which itself is not of the natural order. (*OF* I: 17)

He continues: "[t]hus the idea of a mindless or 'blind' nature which yet behaves lawfully – that is, which keeps an intelligible order without being intelligent – had become metaphysically possible" (*ibid.*). And later, Jonas claims that Adam's naming of every living creature in Genesis "is the first step towards man's coming mastery over nature" (*OF* V: 36). Thus its stark dualism and anthropocentrism make Christianity the chief culprit. However, the Greco-Roman tradition is not exempt from blame either. Although it *metaphysically*

"calls for the retention of the older pan-psychism" (*OF* I: 16), it nevertheless *morally* informs the "ruthless anthropocentrism" of "the Hellenic-Judeo-Christian ethic of the West" (*IR*: 45). Following our reading of Callicott it seems that Jonas' attribution of blame to Genesis is too strong and must be qualified. Otherwise, however, we may plausibly trace the origin of the ecological crisis to the scientific revolution, which was itself made possible by the deeper Gnostic tendency of the West.

As we have seen, Jonas seeks to metaphysically counter the Gnosticism of modernity by reinstating a meaningful notion of immanent teleology and the *scala naturae* into the organic world, which together account for the manifold values inherent in Being. In terms of an ethic which could draw on these axiological findings and rise to the challenges of technological civilisation, Jonas begins by discussing what makes previous ethical systems insufficient. He notes that all share four basic characteristics which limit their scope. Firstly, as human action could not affect the integrity of the biosphere our dealings with it "did not constitute a sphere of authentic ethical significance". Secondly, "all traditional ethics is anthropocentric", as even in our dealings with *individual* plants and animals these were not considered to be of moral concern. Thirdly, "the entity 'man' and his basic condition was considered constant in essence and not itself an object of reshaping *techne*".[61] Fourthly, and finally, "[t]he good and evil about which action had to care lay close to the act, either in the praxis itself or in its immediate reach […]. Ethics accordingly was of the here and now" (4-5, emphasis removed). The clearest example of an ethic sharing all four characteristics is the Biblical exhortation to 'Love thy neighbour', referring only to human beings in spatial and temporal proximity (5). For the most part such injunctions were adequate: although pre-modern humans certainly made greater inroads into the natural world than they were presumably aware of at the time, it is true to say that overall the symbiotic balance remained intact.[62] As such, there was little practical need – although there may of course have been a *moral* one – for an environmental ethic.

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[61] *Technē* being logically distinct from *phronēsis*, under which rubric Stoic and Buddhist ideas of self-cultivation would fall.

[62] Plato is sometimes cited as providing an early awareness of anthropogenic environmental degradation, but his lamentation of the state of Attica's forests and topsoil in the *Critias* is not really to do with human influence, but rather natural disasters (1997: 111a-112d).

Now, to claim that *all* previous ethics share these four characteristics is not strictly true, as demonstrated by our recognition of Christian stewardship. In this connection one could also mention the Buddhist and Jain ethic of non-violence toward all living beings – although in the former, at least, this is a virtue-like component of achieving *Nirvana* rather than a direct duty (James and Cooper, 2005). A few pages later Jonas seems to recognise that there are indeed exceptions, referring to stewardship of the natural world (*IR*: 8), and in a separate essay softens his claim to encompass only "*most* former ethical systems, religious and secular" (*TSE*: 894, emphasis added). In line with this weaker argument it can be plausibly argued that the core of what we in the previous chapter called the Western moral tradition – classical virtue, Catholicism and Protestantism, and later Kantianism and utilitarianism – have generally conformed to the characteristics Jonas gives above. Regarding the source of a new ethic, religious or secular, he is clear that the former is no longer an option: "religion in eclipse cannot relieve ethics of its task" (*IR*: 23). From a pragmatic point of view one sympathises with Jonas over White's call to engage with Zen and Franciscan theology. Jonas clearly regrets the demise of the sacred – "the category most thoroughly destroyed by the scientific enlightenment" (*ibid.*) – and attempts to accommodate for this loss with an objective, yet secular, version of the stewardship ethic (*OS*: 29). We saw in the last chapter that this hoped-for objectivity eludes Jonas. Nevertheless, as he draws on core aspects of the Western moral tradition in a secular fashion, his new ethic can be defended on the 'deep' relativist basis provided.

II. The Problem of the Future

The need for a new ethic can be best justified with reference to the temporal horizon of power radically opened up by technological civilisation, which traditional ethics cannot accommodate. On utilitarian or deontological grounds, for instance, we can establish obligations to future generations, assuming that they *will* exist. But the novel threat of contemporary technology is precisely that through either the biotechnological reshaping of humanity, or through a global calamity such as nuclear war or catastrophic climate change, future generations might *never* exist. Why then *should* human beings continue to be? Would anything essential really be lost in the event of our extinction, or radical transformation, and if so, are we obliged to preserve it? These questions, which

in earlier epochs must have seemed hypothetical, now very much demand answers.

The problem, as stated, is that no traditional moral philosophy can provide any. This most obviously applies to virtue ethics. Jonas begins *The Imperative* with a reading of the Chorus of Sophocles' *Antigone*, as an example of the ancient Greek ambivalence toward nature (*IR*: 2-4). According to Sophocles, nature is to be respected only as a force in its own right: an attitude which is no longer appropriate, and perhaps no longer possible since we have so effectively subdued it. But while virtue ethics can certainly make room for respect for nature and care for non-human life (Sandler, 2007), it cannot accommodate considerations of future generations without assuming their existence, since the cultivation of good character requires that there *be* character in the first place.

The same basic limitation affects rights theory. On most models, moral rights are derived from an individual's justified and inalienable claim to something, life being "the most fundamental of all rights" on which all others rest (*RD*: 31). A right, whether morally or legally grounded, entails obligations to uphold those rights in practice: hence we might suppose that future generations have a right to life, entailing duties for us to procreate and leave behind a habitable world.[63] But, as Jonas correctly points out, only an entity which *has* claims can make them of us, which first of all means that the entity must *exist*, and of course "[t]he non-existent makes no demands and can therefore not suffer violation of its rights" (*IR*: 38-39). Furthermore, since rights arguably rest on a relationship of reciprocity – your right entails my duty and *vice versa* – by virtue of their non-existence future generations are incapable of having duties towards us, which would again mean that they are incapable of bearing rights.[64] It is clear, therefore, that the concept of moral rights cannot establish obligations

[63] My reference here to 'upholding' a right is deliberately left ambiguous as depending on the nature of the right – for instance, a claim right or a liberty right – it can entail different things. A liberty right (such as freedom of speech) merely entails that others do not actively prevent someone from having that freedom, whereas a claim right (such as a right to legal representation in court) entails that others are obliged to assist them in achieving it.

[64] As stated, the principle of reciprocity is not a universally accepted component of rights theory, as becomes clear regarding the rights nevertheless attributed to infants, the severely mentally ill, and animals. Jonas does subscribe to the principle of reciprocity (*IR*: 38), arguing that it applies to infants as they are *potentially* able to have duties and thereby rights. Animals, on the other hand, can never have duties and therefore cannot have rights either (*OS*: 26-27). Even if Jonas is wrong, and the principle of reciprocity is not necessary for rights, the problem of future generations' non-existence still stands.

to future generations without simply assuming their existence, which is precisely what is newly endangered.

This problem applies equally to Kantian and consequentialist attempts to account for future generations, but demonstrating this requires a more substantial discussion. Derek Parfit famously illustrated certain difficulties of applying classical utilitarian thinking to future generations with the "non-identity problem" (1984: 351-379). In short, the problem is that when considering the utility (or, if preferred, the benefitting and harming) of future people we run into the problem that certain morally-relevant actions affect *who* exists, such that had we acted otherwise a particular person would have not come to be. On this basis it is difficult to see how such individuals could be harmed by said action – provided their life is not so bad as to be not even worth living – since in the alternative scenario the different action would lead to a different person existing altogether (359). Parfit brings out these undesirable implications with a thought experiment, which I here greatly simplify. Say that we are considering Policy A which would bring about a higher standard of living in the next century than Policy B, the harmful alternative. Policy A will lead, he says, to people making different life-decisions and consequently different people being born at different times than if we were to implement Policy B. Given that after long enough (Parfit thinks three centuries) no-one would be alive as a result of implementing Policy A who would *also* be alive had we implemented Policy B, and *vice versa*, we can say that nobody is either benefitted or harmed by the policy we adopt.

On the macro level this argument clearly only applies to events significant enough to eventually affect everyone's life: Parfit mentions technological developments such as the invention of railways and cars (361), but we might also think of major wars or economic upheavals. That is precisely why his argument is relevant, however, since we are here concerned with the new global and temporal reach of our actions. The conclusion Parfit draws is that the consequentialist will have to abandon the person-affecting harm principle and endorse an impersonal utility calculus instead, which allows one to say that Policy A is preferable. However, even this move cannot address the problem Jonas raises, as one still has to assume the existence of future generations *per se* to make such a calculation. In other words, what the theory cannot do is explain why there ought to be people in the first place; only the

utility of those already in existence can be taken into account. The utilitarian might respond by saying that it is better for people to exist than for them not to, as it is better for some happiness to exist than none at all. But when we ask *who* exactly it is better for, the utilitarian can only respond: for those already assumed to exist. For this reason consequentialism, like a rights-based approach, is an insufficient ethical framework for considering the existence of future generations in light of global crises.

Finally there is Kant's theory, which at its most elementary states that I must act in accordance with the moral law holding for each rational being. This essentially means that the principle guiding my action has to be binding in and of itself, without recourse to ulterior motives or ends which would render it applicable only in certain cases. Hence an imperative which takes the form 'if *x* then *y*' is merely hypothetical, while an imperative that holds for all moral agents under all circumstances is categorical. Hence the principal formulation of Kant's categorical imperative is: "[a]ct only according to that maxim whereby you can at the same time will that it should become a universal law" (1993: 30). This is a purely formal version, however, and Kant provides two further formulations of the categorical imperative – one moral, the other political – which he held to be synonymous.[65] The second formulation requires us to "[a]ct in such a way that you treat humanity, whether in your own person or in the person of another, always at the same time as an end and never simply as a means" (36). And the third formulation runs: "[a] rational being must always regard himself as legislator in a kingdom of ends rendered possible by freedom of the will, whether as member or as sovereign" (40).

Jonas argues that all of these formulations of the categorical imperative – the Formulae of Universal Law, Humanity, and the Kingdom of Ends, respectively – once more pertain only to already existing beings and those which we assume will exist: "[*g*]*iven* the existence of a community of human agents […], the action must be such that it can without self-contradiction be imagined as a general practice *of that community*" (11, emphasis added). The reason for this is that "there is no self-contradiction in the thought that humanity would once come to an end, therefore also none in the thought that the

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[65] Christine Korsgaard has pointed out that Kant's imperatives are not, in fact, synonymous and that the first is more permissive than the others (1986: 327). However, Jonas' criticism is centred on that formulation, and therefore it also applies to the stricter versions.

happiness of present and proximate generations would be bought with the happiness or even nonexistence of later ones” (*ibid.*). And again:

> Just as I can will my own end, I can will that of humanity. Without falling into contradiction with myself, I can prefer a short fireworks display of the most extreme ‘self-fulfilment’, for myself or for the world, to the boredom of an endless continuation in mediocrity. (*Ibid.*)

Regarding the second and third formulations, it seems yet clearer that neither can provide a justification for the continued existence of human beings, since they refer to the obligations we have towards ends-in-themselves, not that ends-in-themselves ought to be. If correct, this means that the categorical imperative is incapable of deriving a duty amongst an existing community to ensure that there be future communities. Let us see if this is the case.

Jonas’ claim that ‘I can will my own end’ is at face value curious since Kant famously argued that suicide violated an “irremissible”, or perfect duty – as opposed to a “meritorious”, or imperfect duty – to oneself (1993: 32). Kant says: “[o]ne sees at once a contradiction in a system of nature whose law would destroy life by means of the very same feeling that acts so as to stimulate the furtherance of life” (30). However, Jonas may be right insofar as there is a difference between their claims. Kant regards the act of suicide on the basis of “self-love” (*ibid.*) – for which we could perhaps substitute the term ‘self-indulgence’ – as logically contradictory since it requires the termination of that same self. Jonas, on the other hand, has in mind the *eventual* coming-to-an-end of oneself (which will happen in any case) and humanity (which he wants to argue should not occur). To break this down somewhat, we can imagine that I formulate the maxim of my action as: ‘live a life of consumption that is beyond ecologically sustainable limits for the sake of greater pleasure’. Upon universalisation we of course see that the Earth’s resources would quickly expire, leading to the impossibility of future generations living so indulgently, and perhaps not existing at all. Clearly this is an unattractive prospect, but it does not entail a contradiction in conception: adopting such a maxim appears to be logically valid since it does not lead to the destruction of those present-day ends acting out of self-indulgence. Again, it only applies if we *assume* the existence of future generations of ends, and consequently we cannot on this

basis derive a perfect, irremissible duty to live sustainably and so guarantee their existence.

On the other hand, and maintaining the assumption that the first formulation binds the actions of a contemporary community, one might address the issue from a proactive angle by asking whether there is a moral obligation to procreate. If such a duty could be established then Kantianism would seemingly deal with the problem of future generations' existence, as each generation would be obligated to generate the next. If I formulate the maxim of my action 'do not procreate', when universalised I see that this would lead to the extinction of humanity. Once more, however, although this is an unappealing prospect it does not seem to constitute a contradiction in conception, since the eventual extinction of humanity is again compatible with willing the end of my maxim: a refusal to procreate is perfectly compatible with the identical actions of those beings capable of being bound by the moral law. Curiously, Kant did believe that procreation formed part of "a human being's duties to himself", not in virtue of one's rationality but rather as an end of one's "animality" (1996: 175). However, as Roger Sullivan notes, "[i]t is not clear why the preservation of the [human] race should be classed, along with self-preservation and self-development, as an end that pure practical reason identifies as morally obligatory for each *individual*" (1989: 354). This, I take it, is where Jonas' theory is intended to surpass Kant's: by conceiving of the preservation of humanity as a *general* duty from which the individual's may be derived (*IR*: 12; 40).

III. The Imperative of Responsibility

We now turn to Jonas' solution to the above problem. Having shown the existing theories to be individually inadequate, Jonas draws on aspects of each to develop his moral philosophy – to supplement, not replace, traditional ethics. He states that "the intrusion of distant future and global scales into our everyday, mundane decisions is an ethical novum which technology has thrust on us; and the ethical category pre-eminently summoned by this novel fact is: *responsibility*" (*TSE*: 893). Why? Because responsibility is a correlate of free action, and "the claims on responsibility grow proportionately with the deeds of *power*" (*ibid.*). Since we now have the power to dictate not only the condition, but the very *existence* of future generations and the biosphere, we require an

ethic which can accommodate this change. In this way Jonas justifies the form his "ethics of the future" (*IR*: 27) and the environment takes:

> [I]t comes about that technology […] installs in man a role which only religion has sometimes assigned to him: that of steward or guardian of creation. By enhancing his might to the point where it becomes palpably dangerous to the total scheme of things, technology extends man's responsibility to the future of life on earth, now exposed to, and defenceless against, the abuse of that might. Environmental ethics […] is the expression of this unprecedented widening of our responsibility. (*TSE*: 894-895)

Jonas seeks to show that this instance of responsibility can be accounted for both subjectively and objectively. The reason is not only that this strengthens his theory, but also that it is clearly possible to be mistaken about when one is, in fact, responsible for others. Three criteria must hold for objective responsibility, therefore: *moral agency* on the part of the subject, *moral considerability* on the part of the object, and the subject having *power* over the object. We shall look at each in detail.

(α) The Formal Aspects of Responsibility

Perhaps the most basic criterion for responsibility is moral agency. In everyday life we ascribe responsibility to individual persons: we would say, for example, that if I ran through an antiques shop and smashed a priceless vase then I would be responsible for this in two ways. Firstly I am *causally* responsible in that the vase smashed because of my actions alone and, secondly, I am *morally* responsible for my reckless behaviour since as a mentally competent adult I should know to act with care around valuable objects, yet failed to do so. Here harm is not done directly to a morally considerable being, but only indirectly to the shopkeeper via the destroyed antique (and perhaps to ourselves, in failing to act virtuously). It is not the first sort, causal responsibility, that we are concerned with here, but the latter, moral responsibility.

Clearly, most beings lack moral responsibility even if they can be said to be causally responsible for events. Geological phenomena, plants, and animals

all have causal power – and in some cases a power far greater than any human's – but this alone is insufficient for being morally responsible: whilst I can be held accountable for recklessly smashing antiques, the bull in the china shop cannot. Only *moral agents*, those with the power to freely exercise their will and act accordingly, are answerable for their deeds. Only (adult) humans are free in this way, a freedom made possible by our eccentric relation to our own bodies which involves the ability to objectify our own actions and motives.[66] Thus we are morally responsible not only for the actions we do undertake, but also for those we ought to have undertaken but failed to. For instance, if I babysit my friend's young daughter and through lack of precaution fail to prevent her running into traffic, I am morally responsible for it. We can, moreover, ascribe *collective* moral responsibility to groups of adults, as illustrated by the hypothetical case of my wife and I both babysitting in the above example and both failing to take the appropriate measures.

As stated, Jonas' theory of responsibility is not merely formal, pertaining to *who* is morally responsible. It is primarily a theory of *what* we are responsible for over and above our own actions: a "substantive, goal-committed concept of responsibility" for "[t]he well-being, the interest, the fate of others, [wherever this] has, by circumstance or agreement, come under my care" (*IR*: 93). This sort of responsibility manifests in a variety of ways in everyday life, but in moral and political philosophy it exists primarily in the social contract theories of Hobbes, Locke, and Rousseau, and, as we have seen, in the Christian tradition of stewardship. Stewardship is an example of circumstantial responsibility, God having supposedly placed humanity in charge of the natural world, whilst the social contract is evidently responsibility by agreement (or, in its weaker forms, tacit consent). If the notion has played scarcely a greater role in Western philosophy than that it is because, as Jonas says, this form of responsibility tracks the *power* of the moral agent over the morally considerable being: a power which was historically confined only to the immediate. Power, our second

[66] Jonas only briefly touches upon the metaphysical question of moral responsibility in *The Imperative of Responsibility*, and appears to adopt a compatibilist position: "freedom […] is not absolute but confined to the latitude which physical necessity itself allows it" (221). And again: "[f]reedom consists and lives in pitting itself against necessity" (198). His most extensive discussion of the issue is in the lecture course *Problems of Freedom* (*PF*), but there his own position emerges only obliquely via interpretations of Aristotle and the Stoics. A full treatment of this issue represents too great a digression here, however, and so we shall proceed on the assumption that Jonas' compatibilist claims are tenable on the basis of his integral-monistic ontology, which portrayed life as an ascending scale of freedom.

criterion, is essential to the phenomenon because to have responsibility *for* something entails that it comes under my sphere of influence; it must be something that I can, at least in principle, act upon. Where such causal power is lacking moral responsibility is a logical impossibility: I could not, for example, be responsible for the condition of life on distant planets (if indeed it exists), since it lies beyond my power to affect.

Of course, power over another being does not alone entail responsibility for it. For instance, on a whim I could destroy all the material goods in my possession and yet have done nothing wrong (unless one argues on Aristotelian grounds that such destructive behaviour is a vice). The objects themselves are not morally considerable, and I have no dependents who would be harmed through the destruction of my property. Power only becomes a matter for ethics in those cases where it directly or indirectly concerns a morally considerable being: it is this which ultimately grounds “the ought-to-do of the subject” (*ibid.*). Our third criteria, then, is *moral considerability*. We have already covered Jonas’ argument for the existence of morally considerable beings in the preceding chapter, arguing that the immanent teleology of living beings, and the *nisus* of Being toward life, meant that these had intrinsic value and subjective goods. Unfortunately Jonas’ argument for the objective value of these values was ultimately found wanting, and therefore any responsibility for these beings cannot be incontrovertibly proven. Nevertheless, we argued that according to the moral tradition to which we belong a teleological understanding of life, and recognition of its intrinsic value, is apt to lead to an intuitive sense of its objective goodness. On these relativist grounds we may transcend pure subjectivism to reach a responsibility for others which exists “over against the will” (84).

Responsibility of the sort Jonas is concerned with is not only experienced as a moral state of affairs, however. Central to the phenomenon is that it is also *felt*. For this reason Jonas seeks to account for the way in which the morally considerable being makes a demand upon the moral agent, which he characterises as being “called to its care” (93). This occurs when the above conditions of responsibility meet in our encroaching on a *vulnerable* being, the “perishable *qua* perishable” (87). To be vulnerable is to have ends, and thus a subjective good, which is open to harm. Consider, by contrast, a being which

was both absolutely good and invulnerable: a god, say. Despite its goodness, such a being cannot be an object of responsibility for me since I *objectively* have no power over it and its invulnerability makes no *subjective* demand of me; the two sides are complementary. The true call of responsibility depends on my bearing witness to vulnerability and its possible protection through my person. Hence Jonas modifies Kant's dictum 'ought implies can' to instead read: "[y]ou ought *because* you can" (128, emphasis added).

In stressing both the cognitive and non-cognitive aspects of responsibility, Jonas goes a step beyond Kant who argued that "moral worth depends […] not on the realization of the object of the action, but merely on the principle of volition according to which, *without regards to any objects of the faculty of desire*, the action has been done" (1993: 13, emphasis added). Emotion does play a supplementary role in Kant's ethics, but only through our "reverence" for the "moral law within" (2015: 129, emphasis removed). What this means in practice is that I am moved to act not by the particulars of any situation to which the moral law applies – helping those in dire need, say – but simply by *the law itself*. Evidently this follows from the formalism of Kant's ethics, but minimal reflection on the experience of responsibility reveals his claim to be inadequate as a normative dictum. The more convincing position was advocated by Hume. Although, as we have seen, Hume took morality to be primarily a matter of sentiment – reason being the "slave of the passions" (1969: 462) – he also noted that reason plays a role in alerting us to the existence of a fact which then sparks a motivating emotion in us (511).

Jonas' approach is intended to bridge reason and emotion, Kant's theory and Hume's, by arguing that in the case of responsibility "the two sides are mutually complementary and both are integral" (*IR*: 85). Thus he writes: "not the moral law motivates moral action but the appeal of a possible good-in-itself in the world, which confronts my will and demands to be heard – *in accordance with* the moral law" (*ibid.*). Of course, my interpretation of Jonas finds fault in his rational argumentation, and construes his meta-ethics as, at the last, Humean. Fortunately, in the case of responsibility at least, Hume's theory can satisfactorily account for the role played by reason. When it is demonstrated that I have a power over a morally-considerable being – thereby fulfilling the above criteria – the accompanying feeling is the motivating force to *take*

responsibility for it. Conversely, a misplaced feeling of responsibility can be diminished by the rational realisation that I am not, in fact, responsible for that being, should any of the necessary criteria not hold. As such, we may account for responsibility as a moral phenomenon ultimately grounded in sentiment, but which is nevertheless responsive to reasons insofar as they are persuasive.

(β) Responsibility for the 'Idea of Man'

As the above criteria suggest, Jonas' theory entails that the "precarious, vulnerable, and revocable character, the peculiar mode of transience, of all *life*, […] makes it alone a proper object of 'caring'" (98). Although I might care deeply about certain inanimate beings, this is ultimately only for some other purpose which has its origin *in* a living being (that artistic beauty elevates the soul, for example). Only life, teleologically pursuing continued existence and so constituting an end-in-itself, is a proper object of responsibility. More will be said specifically about responsibility for non-human life later. First of all, we must look to one instance of responsibility in particular which stands out in our experience.

Jonas observes that the "timeless archetype of all responsibility" (130) is the parent's responsibility for the newborn, which is "so spontaneous that it needs no invoking the moral law, [and] is the primordial human case of the coincidence of objective responsibility and the subjective feeling of the same" (90). This responsibility is clearly not contractual, but rather circumstantial, the child having been brought into being through sexual reproduction. This fact alone does not point toward its uniqueness, however: after all, through creative acts we can be causally responsible for the existence of many new beings (artworks, buildings, laws, etc.). But the moral responsibility which follows in the case of the infant is qualitatively different from any other. First of all, as Jonas says, no invocation of the moral law can fully account for its subjective force: when confronted with a newborn baby its "mere breathing uncontradictably addresses an ought to the world around, namely, to take care of him. Look and you know" (131). Jonas' point here is phenomenological: in the immediate experience of the newborn, shorn of reductive abstractions, the *is* and the *ought* are given as one. In other words, to properly perceive the infant is nothing less than to perceive an ethical demand: "the plain factual 'is' evidently coincides

with an ‘ought’ – which does not, therefore, admit for itself the concept of a ‘mere is’ at all” (130).

Phenomenologically speaking this is undoubtedly correct: it is fundamentally mistaken to separate the factual statement that a newborn child is crying out, helpless, from the normative claim that it demands my protection. Rather, the moral command is *there* in our perception of the child, and only a complete reprobate could deny it. Logically, however, the sceptic can always draw a distinction between the ‘is’ and the ‘ought’. This move, forcing us on to the terrain of reasons – which are here insufficient – leads us to try to explain, as far as is possible, why we find Jonas’ description of the incontrovertible call of responsibility so compelling. Unfortunately the answer is not, as Jonas would like to claim, that we are *objectively* responsible for the newborn: as we have seen, no moral injunction can be so proven. It is instead, I suggest, because this instance of responsibility is both *the most fundamental ethical experience prescribed by our tradition*, and *follows as closely as possible from our organic being*. This is how I shall make sense of Jonas’ claim that it is a responsibility “instituted by nature” (94).

Since pertaining to our organic being, it is unsurprising that responsibility for the newborn has antecedents in animal life. Living beings which rear their young in broods realise a form of sociality which is unprecedented in comparison to prior manifestations of that existential structure. As Jonas says, with regards to mammalian life:

> The relation of the mother to her young cannot be compared with anything else in the field of animal emotions and whatever is found elsewhere of protective and tender instincts [–] e.g., also in sex-relations, which of themselves are of much earlier origin in evolution [–] has its roots in the rearing situation. (*OF* IV: 69)

Notice that reproduction, the biologically prior fact, is subsequently transformed by the new heights of social existence achieved in rearing. This, Jonas speculates, allows for “the development of the whole scale of emotions which we comprise under the name of ‘love’” (68-69). Romantic love aside, the intense bond evidenced in mammalian rearing is also, I suggest, the ground for moral responsibility for the newborn, since conforming to the same relation between

adult and infant. In the latter something qualitatively different occurs, however: humans alone can experience intuitive care for their offspring as a *moral* responsibility, a responsibility *for* the end-in-itself of the infant.

Once again, it must be stressed that even if responsibility for the newborn has its ground in animal existence in the way I suggest, this does not prove that it gives rise to *objective* moral duties. For although our moral being *allows* intuitive animalistic care to become responsibility proper, whether it does so or not is a matter of our symbolic being. History, language, and culture constitute traditions which bequeath a certain ethical content, ultimately meaning that judgements of right and wrong are relative. This entails, of course, that while the organismic good of care for the infant can be transformed into a moral good, certain traditions do not do so. The practice of exposure, common enough throughout world history, is proof of this. But what matters is that our tradition *does* construe care for infant human life as a moral good; indeed, not only *a* moral good, but *the most fundamental* of all such goods, and it is for this reason that we find the sceptic's division of the 'is' and the 'ought' so objectionable here. Jonas concedes that that not every culture has recognised responsibility for the newborn as the first of all duties: "[f]or although the ontological capacity for responsibility cannot be lost, psychological openness to it is an historically acquired, vulnerable possession" (*MM*: 106). Nevertheless, he argues that this particular instance of responsibility is worth protecting and promoting due to its unique significance. This next step in Jonas' theory of responsibility is one of the most remarkable in his entire philosophical system.

In terms of duration, responsibility for the newborn is neither momentary nor usually lifelong, but rather dependent on the development of the child. More specifically, it continues "until the fulfilment of the immanent-teleological promise of eventual self-sufficiency releases [the parent] from the duty" (*IR*: 131). In other words, as the infant becomes a child, an adolescent, and finally an adult, the parent is gradually released from the total responsibility to which they were initially committed. But this responsibility is not merely tied to organismic development, as is made starkly clear by cases of severe mental disability where the parent's responsibility never expires. What is it, then, which in adulthood relieves the parent of their duty of care? It is the achievement of full personhood and the ability to account for oneself: the capacity for *moral*

responsibility. And this means that the *telos* of the parent's responsibility for the infant is the *coming-to-be of another responsible being*.

It is in this aspect of responsibility for the newborn that we may locate transcendent significance, the objective side thereby harmonising with the subjective experience of absolute responsibility. Jonas' argument for the former is, if I understand him correctly, as follows. Although all living beings, as morally considerable, can become for us objects of responsibility, the fact that human beings alone are *capable* of taking responsibility sets us *above* the rest of life in the order of moral significance. Not only does this tell us *why* the existence of human beings is our principal responsibility, it also tells us *how* human beings should continue to be: i.e., morally responsible. This argument is most explicitly set out by Jonas as follows:

> The appearance of this value [i.e., responsibility] in the world does not simply add another value to the already value-rich landscape of *being* but surpasses all that has gone before with something that generically transcends it. This represents a qualitative intensification of the valuableness of *Being as a whole*, the ultimate object of our responsibility. Thereby […] the capacity for responsibility as such […] becomes *its own object* in that having it obligates us to perpetuate *its presence in the world*. (*MM*: 106)

In other words: humanity is of a qualitatively greater significance than other life thanks to its capacity for morality, a significance that demands humanity's continued existence *as* responsible beings, and to which we are subjectively committed in witnessing the infant. Hence Jonas concludes: "[w]ith every newborn child humanity begins anew, and in that sense also the responsibility for the continuation of mankind" (*IR*: 131).

Now, it will be noted that the object of responsibility which Jonas prizes so highly is not human life *per se*, but rather our *capacity* for morality. This Jonas concedes, stating: "the possibility of there being responsibility in the world, which is bound to the existence of men, is of all objects of responsibility the first" (*IR*: 99). And again: "*the presence of man in the world* […] has itself become an *object* of obligation: the obligation namely to ensure the very premise of all obligation, that is, the *foothold* for a moral universe in the physical

world" (10). As the latter quotation makes clear, Jonas is not claiming that all human beings are good persons and deserving of continued existence on that basis (nor, it goes without saying, that only good persons are deserving of life). In fact, he suggests that if it were possible to devise a universal calculus of the good and the bad brought about through human history the latter would probably outweigh the former (99). Regardless of humanity's dubious moral record the worth of its existence is accredited by its moral being, and the ever-present *possibility* for moral goodness this represents. Because this is only a possibility, an ideal, "we are, strictly speaking, not responsible to the future human individuals but to the *idea* of Man, which is such that it demands the presence of its embodiment in the world" (43).[67]

Having established this duty as absolute, Jonas summarises it in a series of purportedly synonymous categorical imperatives, the principal formulation of which is: "[a]ct so that the effects of your action are compatible with the permanence of genuine human life [on Earth]" (11).[68] Thus his theory is given a Kantian veneer, Jonas' new categorical imperative being intended to supplement the old. Reflection reveals, however, that Jonas' imperative of responsibility only applies when humans already exist. One wonders, therefore, whether it is truly categorical since it appears not to hold in all logically possible situations: for instance, the possible world in which the extinction of the dinosaurs did not occur (which paved the way for the triumph of mammalian and eventually human life), or simply the one in which life could not realise itself on Earth at all. Jonas is unconcerned by this, admitting as much and claiming that it is nevertheless categorical:

> Groundless itself (*for there could be no commandment to invent such creatures in the first place*), brought about with all the opaque

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[67] Clearly, this also means that any non-human life – or even artificial intelligence – which had the capacity for morality would also count as an embodiment of the idea of Man. It has been argued that some non-human animals may in fact be moral agents, insofar as their behaviour is logically consistent with acting for moral reasons (Rowlands, 2012). I am dubious about this claim, but if correct it would certainly revolutionise Jonas' theory. More troublingly, any humans who lacked the capacity for moral agency would not count as candidates for the idea of Man. As I have indicated, however, our responsibility in these cases remains intact on legitimate subjective grounds, even if it cannot be rationally accounted for by Jonas' theory.

[68] As with Kant's categorical imperatives, Jonas' are not synonymous: the third version refers to "humanity" *per se* rather than "genuine human life" or the "wholeness of man", which are intended to capture the fact that our responsibility is to humanity as a moral being (*IR*: 11). Moreover, only the third makes the requirement that this has to be on Earth explicit (although the first also does in the original German).

> contingency of brute fact, the ontological imperative institutes on its own authority the primordial 'cause in the world' to which a mankind once in existence, even if initially by blind chance, is henceforth committed. (100, emphasis added)

Accordingly his imperative holds that *if* humanity exists *then* its existence must be safeguarded on Earth. This would represent an overselling of the status of his imperative, but one might defend Jonas by noting that all imperatives share this presupposition yet some are nonetheless conceivably categorical, such as Kant's Formula of Humanity. In other words, *any* moral command must be issued to existing moral agents in order to have purchase; ethics as such is moot without this ontological given. As Jonas' imperative holds in the only world there is, I am inclined to say that its status as hypothetical or categorical is for all intents and purposes irrelevant.

With this we may conclude our basic reconstruction of Jonas' theory of responsibility. It is, in short, an argument for the duty to ensure the continued existence of human beings, who, as far as we know, are alone in embodying the transcendent worth of the idea of Man: moral goodness. And because we are committed to preserving human life on the basis of our moral being, moral beings we must remain. Even if this command is not fully rationally demonstrable – as no moral injunction can be – it is compellingly argued for, drawing on and aligning with the subjective experience of responsibility. In our bearing witness to the newborn in its utmost vulnerability we are unconditionally called to its care: a care which has its antecedent in immediate organismic being, but which ultimately reaches well beyond this. It might be objected that the moral relativism adopted in the previous chapter is too weak to uphold this conclusion, but I see no reason to think so. Although responsibility for the newborn is ultimately relative to moral traditions, those which recognise this obligation connect the human condition to a transcendent duty. In this way we can uphold Jonas' ultimate riposte to Heidegger, whose analysis of the call of conscience in *Being and Time* was purely formal and devoid of content. Jonas, by contrast, concludes that "[i]n the light of such self-transcending width, it becomes apparent that responsibility as such is nothing else but the moral complement to the ontological constitution of our *temporality*" (107).

IV. Future Generations and Global Ethics

We may now turn back to the more concrete questions of our duties to future generations and life on Earth: concerns forced upon us by modern technology, but which traditional morality cannot fully account for. It must be admitted that Jonas' theory is also limited in its own way, since it permits little fine-grained detail here. Specific obligations – the just distribution of resources, say – are not accounted for except in the broadest of terms. This is a consequence of the nature of his theory of responsibility, which is intended to account for our most fundamental duties, acting as a basis and orienting principle for other theories (utilitarianism, virtue ethics, or Rawlsian justice, say). For this reason the following will remain at a fairly high level of abstraction.

Taking our obligations to future generations first, we may split these into two fundamental categories: obligations pertaining to their *being*, and obligations pertaining to their *well*-being. The former is straightforwardly accounted for by Jonas' theory of responsibility since our principal obligation is to the continued existence of human life (objectively, because we have the capacity for morality, subjectively complemented by our experience of responsibility for the newborn). This is, after all, the great theoretical achievement of his ethics. The question is then what we owe to future generations regarding their well-being. At the most general level, we may say that following logically from the duty to bring about future generations is the obligation to leave behind a habitable world, which in turn means that a sustainable form of life has to be achieved in the present. As this principally concerns technological and economic systems, rather than individual behaviour, the *means* of achieving this change are largely political, and we shall address how Jonas thinks this should be done in the next chapter.

More specifically, we might ask what resources, institutions, and goods we should leave behind. For all moral theories this question necessarily has a degree of uncertainty about it, since we do not know precisely what the material requirements of future generations will be: technological change and population booms or slumps could have effects we cannot predict. But we may provide the outlines of an answer by recalling that Jonas' theory demands not only the existence of *human beings*, but human beings capable of responsibility:

> [R]especting this transcendent horizon, the intent of the responsibility must be not so much to determine as to enable, that is, to prepare and keep the capacity for itself in those to come intact, never foreclosing the future exercise of responsibility by them. […] Its highest duty, therefore, is to see that responsibility itself is not stifled, whether from its source within or from constraints without. (*Ibid.*)

Evidently this entails, as a bare minimum, the provision of adequate but sustainable sources of energy and sustenance, shelter, and stable political institutions. Cultural goods are less obviously accounted for, with the notable exception of education: whether conducted formally or otherwise, the moral component of education is arguably the highest aspect of what we owe to those to come since pertaining to the source of responsibility within. If these all sound like obvious aspects of any generational legacy, recall that at present our unsustainable form of life makes their provision anything but certain.

It is true that Jonas' theory alone cannot tell us in quantitative terms what 'adequate but sustainable' sources of energy and sustenance would amount to: only economists and health experts can do so. But as a point of principle it can guide the latter, in particular speaking against a practice – frequently adopted by economists and policy-makers regarding the well-being of future generations – known as discounting. This is the idea that the (instrumental or extrinsic) value of a given resource is greater in the present than in the future, based on widely-shared subjective preferences, and even if the thing itself is unchanged. Now, there is certainly a banal sense in which this is true. Say someone offers me £100, which I can have either now or in ten years' time. Assuming that my personal needs are stable, that inflation is nil, and the relative value of currencies are identical across that decade – all meaning that the £100 is worth exactly the same at the two points in time – it is normal to prefer to have the money now. Why wait when we can have it immediately? Moreover, it is equally common to prefer an offer of *less* money now over more later – £100 now versus £120 in a decade, for example – simply *because* I can have the former right away. Crucially, this implies that I value the present over ten years hence by at least 20%. At some point my preference will almost certainly tip toward posterity (few of us are likely to take £100 now over £1000 in a decade), but the

widespread preference for goods in the present allows us to calculate their relative worth across time, and discount value accordingly.

Whether this logic can be translated to the needs of future generations is dubious, however. This is clearest if we consider a concrete example of resource allocation. We might well prefer to squander the proceeds of an oil field right now, rather than stagger their usage across time. The logic of discounting would then hold. But those who come to exist decades hence are then denied the resource they could have accessed, despite the fact that its value to such individuals will be the same for *their* present as it is for me in mine. That is to say: discounting discriminates against future generations for our benefit. Of course, only *we* can make decisions now, so why should we then give weight to the envisioned preferences of future generations? Here Jonas' theory of responsibility forcefully responds: because we are *duty-bound* to bring about those future human beings, and the moral worth of each of us – existing now or yet to be – is exactly the same. While other theories (Kant's in particular) afford equal moral significance to existing human beings, only Jonas' can satisfactorily extend that logic to future human beings by showing that their existence is not morally optional, but rather *demanded*. The upshot is that we can justifiably discount value for ourselves across time, but not when comparing our present to that of future generations, and therefore the value afforded to goods must not be less in projections of the future. This conceptual shift alone would constitute a step toward sustainability.

Remaining at a relatively abstract level of debate, we may switch focus from intergenerational to in*tra*generational ethics, and ask what Jonas' theory of responsibility concretely tells us about the obligations of contemporaries to one another. After all, the ecological crisis does not just threaten the well-being of future generations, but also that of people of the present. Moreover these harms are not borne equally, nor by those who are best able to cope, nor even by those who are causally responsible for the harms coming about in the first place (any of which would have some claim to being a just distribution). Rather, the harms of climate change and associated ecological degradation are disproportionately borne by those who are *least* well-equipped to cope, and *least* causally responsible; i.e., the citizens of poorer nations. On this basis it might seem as though a global justice framework would be best suited to

account for the wrongs committed against contemporaries, and the duties owed to one another: particularly since the inexistence of the vulnerable – the problem Jonas' theory tackles and which no other can – is not here an issue. Nevertheless, the theory of responsibility can contribute to our understanding of this area, as I will demonstrate.

Jonas offers an intragenerational ethic thanks to the nature of responsibility itself. The call of care for the infant, which points toward our futural obligations, may be the first and most forceful example of responsibility, but the phenomenon can be both subjectively felt and justifiably extended to contemporaries. Subjectively speaking, I take it as given that the feeling of responsibility for other adults is known to all of us. As to its rational justification, Jonas notes that responsibility is, in principle, "reversible and includes possible reciprocity. Generically, indeed, the reciprocity is always there, insofar as I, who am responsible for someone, am always, by living among men, also someone else's responsibility. This follows from the nonautarky of man" (98), a aprt of the human condition. Clearly, there can never be a total asymmetry of power and vulnerability between adults of the sort exemplified by the parent-child relationship, hence the subjective force of the former is so much weaker than the latter. Nevertheless, socio-economic circumstances can be such that dramatic power imbalances occur (homelessness and destitution, for instance). Ontologically this follows, as Jonas says, from the basic precarity of all life coupled with the social dimension of existence, which for human beings takes the form of communal living. Morally it follows from those traditions – and we would be astonished if this did not include *most* moral traditions – which recognise some degree of obligation amongst kin and neighbour. Of course, our moral tradition compels us to recognise responsibility for the vulnerable good which is in our power to protect. As a consequence, having responsibility for family members, friends, fellow citizens, and human beings as such is also appropriate wherever they are endangered and within the reach of our care. And equally my vulnerability means that I, too, can be an object of responsibility for any of those others, provided the conditions hold.

Climate change is one such case, and because of its scale perhaps the most dramatic in human history. With Jonas, we may note firstly that "[s]hared danger surely establishes *reciprocal duties*" amongst those who are *both* its

cause *and* subject to its effects, as is true in the case of Westerners (236). Curiously, however, he suggests that the relevant moral demand here is not responsibility, but rather the "virtues which the trial of the situation may require": in particular, "courage, resolution, [and] constancy" (*ibid.*). The rare invocation of virtue here is welcome, but it is not clear why the presence of the latter should exclude responsibility, rather than assisting in the carrying out of our duties, as Kant would argue. After all, the logic of the ecological crisis is that we have endangered each other and have the power to alleviate the threat. Since Jonas' criteria are thereby fulfilled, it follows that we the guilty are in fact responsible for protecting one another from the harms of climate change, and that certain virtues will help us do so.

In cases where the shared danger is the result of *unilateral* action between adults, Jonas suggests that responsibility is indeed the appropriate ethical concept (*ibid.*). Of course, this is also the case with climate change. Citizens of poorer nations are at risk of ecological harm overwhelmingly because of the actions and behaviour of citizens of industrialised nations.[69] Think, for example, of people in the low-lying Pacific islands at risk of being submerged by rising sea levels: this is our fault, whereas they have done little, if anything, to bring it about. In a case such as this the emotional side of responsibility is clearly far weaker than that of the parent for the child, but it is nevertheless present, and can be heightened by images or accounts of the threat which traverse the spatial distance. Then it becomes clear that *these* people's lives are endangered by *our* way of life, and thus the emotive dimension of responsibility may align with the rational.

One might object that Jonas' framing risks condescension: that our having *responsibility* for the global poor infantilises the latter, or at least affords them less dignity than conceiving of them as candidates for just treatment does. This is unfortunate, if true, since there is little ethnocentrism to be found in Jonas' philosophy: as all humans share the same existential precarity, and fulfil the idea of Man as moral beings, responsibility is always in principle reversible across the globe. In an ideal world, perhaps, no group of adults would have to be an object of responsibility for another. But the present situation, which is a

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[69] Jonas does suggest, however, that poorer nations are obliged to assist in the fight against climate change in at least one respect, namely, a reduction of extremely high birth rates (*IHJ*: 366).

result of technological and socio-economic circumstance, means that we are not equal in terms of the power to affect one another. And this inequality of power entails a responsibility on the part of Westerners: a responsibility to free the global poor from the danger in which we have placed them. Jonas' theory of responsibility can thereby not only underpin, but also actively orient other accounts of our intergenerational and intragenerational climate obligations. If few specifics can be drawn out then this is simply the price to paid for such a fundamental theory, which could be complemented by more explicitly consequentialist or virtue-based frameworks. These would have to point, however, toward the ultimate object of our obligations: the continued existence of humanity as a moral being.

V. Duties to Non-Human Life

We are now in the position to answer a question posed right at the beginning of the previous chapter: whether Jonas' theory is deontological, consequentialist, or Aristotelian in nature. With its emphasis on responsibility as a duty, with virtues playing only a facilitating role, it seems fair to say that Jonas' ethic is primarily Kantian: a "cosmic deontology", as Lawrence Vogel said (1995: 38). However, it departs from Kant's moral philosophy in two key respects. The latter asked only what existing rational beings are obliged to do by the moral law – "an ever-present order of abstract compatibility" – whereas Jonas' imperative "extrapolates into a predictable real *future* as the open-ended dimension of our responsibility" (*IR*: 12). His theory is thus teleological in a way that Kant's is not, establishing a duty to the continued realisation of a particular being. Secondly, with its accommodation of the emotive aspect of responsibility it has a strong Humean element. And of course, my revision of Jonas' metaethics made his theory yet more Humean, at the same time as introducing a neo-Aristotelian component in the form of our thrownness into tradition. We can therefore say that the deontological interpretation is closest to the truth, but not the whole story.

(α) Anthropocentrism and Biocentrism

The second question raised at the beginning of the last chapter – whether or not Jonas' theory of responsibility is anthropocentric – poses a greater difficulty. Given that he developed a biogenic axiology, built on a

teleological philosophy of life, it might seem strange that the moral consideration of living beings as such shrank into the background of Jonas' ethical concerns in favour of humanity. Why, after all, should we privilege human life if life as such is of intrinsic value? Is his doing so an indefensible anthropocentric bias following, perhaps, from stressing the subjective force of responsibility for the infant? Jonas thinks not, and with good reason. His focus on our obligations to humanity is explained by a conscious attempt to fuse together responsibility for life and responsibility for future generations, thus bypassing the anthropocentric-biocentric distinction. Early on in *The Imperative* he raises the issue of anthrpocentrism, wondering whether our responsibility for life is a direct moral duty, or rather just an indirect requirement for the survival of human life (6-8). Several chapters later he answers his own question by stating that "we can subsume both duties [to future generations and non-human life] as one under the heading 'responsibility toward man' without falling into a narrow anthropocentric view" (136). We shall examine how Jonas comes to this conclusion.

In the pivotal section regarding non-human life's moral significance (136-140) Jonas makes two arguments. Firstly, he offers the common-sense observation that "care for the future of all nature on this planet [is] a necessary condition of man's own" (136). If this were the only reason for being concerned about the existence of a functioning biosphere then his ethic would undoubtedly be anthropocentric, and philosophically indefensible given his recognition of life's intrinsic (and not simply instrumental or extrinsic) value. However, Jonas's second argument moves beyond mere utility by way of a thought experiment: he asks that we consider a future wherein humanity had entirely replaced non-human life with an artificial environment. The prospect of such a future focuses the mind on the possibility that "the plenitude of life, evolved in aeons of creative toil and now delivered into our hands, has a claim to our care in its own right" (*ibid.*). He justifies this as follows:

> [E]ven if the prerogative of man were still insisted upon as an absolute, it would now have to include a *duty toward nature* as both a condition of his own survival and *an integral component of his unstunted being*. We have intimated that one may go further and say that the common destiny of man and nature, newly discovered in the common danger, makes us

> rediscover *nature's own dignity and commands us to care for her integrity* over and above the utilitarian aspect. (137, emphasis added)

Jonas believes the two reasons highlighted justify the claim that his ethic moves beyond a narrow anthropocentrism, so we shall take them one at a time.

The first is somewhat ambiguous in that it is unclear whether having a duty as such (i.e., being a moral agent) is the integral component of a full human life, or if it is that the duty is *toward nature* which is essential. From the context it initially seems as though the latter is correct. This would, however, have the repugnant implication that the ecological crisis alone has allowed us to fully realise ourselves, since, for Jonas, prior to endangering the biosphere we could not be responsible for it. This would also be inconsistent with his philosophical anthropology which holds that "genuine man is always already there and was there throughout known history" (200). For this reason I interpret Jonas' claim as follows. Humanity's relation to the Earth *is* essential to our being, but not because we now happen to be responsible for it. Rather, the Earth is our "worldly home in the most sublime sense of the word" because it is where humanity carves out its world, and realises itself (137). As Hannah Arendt notes, "[t]he earth is the very quintessence of the human condition, […] providing human beings with a habitat in which they can move and breathe without artifice" (1958: 2).[70] According to this line of thinking we *belong* to the natural world in the fullest sense of the word, and a humanity living within an entirely artificial environment "would only result in the dehumanization of man, the atrophy of his essence" (*IR*: 136). A moral duty *to nature* is not, therefore, integral to being human, even if our existing on Earth is.

The alternative interpretation – that it is responsibility *per se* which is integral to being human, not that it now encompasses life on Earth – is consistent with Jonas' wider thought. He says that the hypothetical artificial future dehumanises us because it contradicts the reason for preserving humanity "as sanctioned by the dignity of his essence", namely, that we are responsible (137). Destroying nature would mean destroying an object of our responsibility, and there would then be nothing to confront "the arbitrariness of our might" (*ibid.*). This would contravene the idea of Man *qua* responsible being,

[70] Both here demonstrate their debt to Heidegger, who proclaimed that "[d]welling is the manner in which mortals are on the earth" (1977: 350).

and *this* is the reason Jonas argues that nature has become for us a "metaphysical responsibility" (136). As he puts it elsewhere: "it is not so much a moral duty, it is really a metaphysical or ontological duty of ours to minimize our necessary, our on-the-whole inevitable [and] destructive impact on our environment" (*OS*: 29-30). The 'not so much' reiterates that there is a moral duty to life as such, but this is folded into responsibility for *our* future because it now "comprises the rest under its obligation" (*IR*: 137). The argument thus escapes crude anthropocentrism by subsuming nature's survival under the idea of Man, hence Jonas' claim that the "causes converge from the human angle" (136).

(β) Dignity and Integrity

Jonas' second claim, which he thought fully evaded the charge of anthropocentrism, was that "the common destiny of man and nature, newly discovered in the common danger, makes us rediscover nature's own dignity and commands us to care for her integrity over and above the utilitarian aspect". The key notions to be extracted here are those of nature's 'dignity' and 'integrity'. Since these are somewhat vague terms, and Jonas does not define them precisely, his meaning must be inferred from the context. Doing so will allow us to justify Jonas' grading of human beings above non-humans in the scheme of moral significance.

At various points in his writings Jonas refers to the dignity or integrity of living beings, species, and nature as a whole, usually in criticism of the scientific materialist account which denies these entities such qualities. For instance, characterising the Baconian worldview, Jonas reformulates the famous line from Dostoevsky's *The Brothers Karamazov* "[w]ithout God [...] everything is permitted" (1990: 589), to read: "[i]f nature sanctions nothing, then it permits everything. Whatever man does to it, he does not violate an immanent integrity, to which it and all its works have lost title" (*PE*: 71). Jonas' use of integrity here refers, in the last clause of the latter sentence, to both nature as a whole and its 'works', which implies species or individual organisms (or both). On the same theme, he says that scientific materialism has divested nature "of any dignity of ends", and yet "a silent plea for sparing its integrity seems to issue from the threatened plenitude of the living world" (*IR*: 8). By contrast, as part of his

recasting of the Darwinian revolution as a blow to materialism (as recounted in Chapter Two), Jonas says the re-established connection between humans and nature meant “some dignity had been restored to the realm of life as a whole” (*PL*: 57). Finally, there are references throughout his work to the dignity (*IR*: 46; 99; 197-198) and integrity (21; 34; 202) of human beings, in particular to the idea of Man.

We shall try to shed some light on Jonas’ invocations of dignity and integrity, taking the latter first. The general sense of integrity is captured nicely by Jan Vorstenbosch, who defines it as the “‘wholeness’, ‘intactness’, and ‘unharmed or undamaged’ state of something, presumably a living being” (1993: 110). Vorstenbosch’s application is unnecessarily limited, however, since we can also speak of the integrity of collectives, such as a family or parliament, and even non-living beings such as a building or artwork. What these beings have in common, as Vorstenbosch notes, is that there is a particular way in which they ought to be. They have, in other words, a *telos*, either immanent and *autopoietic* or transcendent and externally ascribed: the orange tree organises and maintains itself through metabolising, whereas the building is supposed to be in accordance with the architect’s intention.[71] Given that Jonas refers to ‘immanent integrity’ it seems he has the former concept in mind, and his application of it to living beings and nature as a whole allows us to employ a distinction of Michael Hauskeller’s and say that Jonas is here invoking “biological integrity”, and “ecological integrity”, respectively (2007: 37).[72]

Now, the problem we encountered in the previous chapter was that whilst it makes sense to speak of the immanent *telos* of an organism, one cannot say the same of the biosphere, which is not a self-organising being but rather a *system* of beings whose actions affect one another, and only more or less maintain equilibrium. For this reason it seems that one may only speak of ecological integrity in the same sense as familial integrity, i.e., a standard which is ascribed to the unit. Immanent integrity therefore appears to apply only to individual living beings insofar as they are ‘whole’ and ‘intact’ in accordance with

[71] Cf. Jonas’ discussion of biological and social purposes in the third chapter of *The Imperative of Responsibility*, ‘Concerning Ends and Their Status in Reality’, (51-78).
[72] The Anglo-American conception of ecological integrity seems to have its roots in Aldo Leopold’s famous ‘land ethic’ from *A Sand County Almanac*: “[a] thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise” (2001: 189).

their *teloi*. But which is true of the integrity of the *idea* of Man – i.e., the human being as responsible – invoked by Jonas? If there is no immanent integrity without a biological *telos* it appears that the idea of Man, *qua* idea, also cannot be said to possess this status. It would presumably then follow that the integrity of the idea of Man is ascribed, somewhat like the moral integrity of a parliament or court of law. On this basis, at least, there appears to be no reason for prioritising humanity in our moral considerations, since all living beings possess immanent integrity whilst the idea of Man does not. So while the appeal to integrity duly absolves Jonas of the charge of anthropocentrism, it actually undercuts his claim for humanity's "superior right" (*IR*: 137), which would require a strong qualitative distinction. This is the function of his use of dignity.

As mentioned above, Jonas refers to both 'human dignity' and the 'dignity of ends' as such. Hauskeller draws a distinction between "personal dignity" and "non-personal dignity" (2007: 63) which neatly corresponds to the notions invoked by Jonas. Historically speaking, the two conceptions of dignity emerged from different traditions which over time became conflated under a single term (*ibid.*). Personal dignity comes from the notion of *dignitas*, which human beings alone are supposed to enjoy by virtue of being made in the image of God: the *imago Dei*. Although Jonas claims that central to the *imago Dei* is the ability to perceive good and evil, presupposing language and reason (*MM*: 75-76), this interpretation is surely incorrect since knowledge of good and evil are supposed to have derived not from Creation but rather the Fall. It is in fact language and reason – the *logos* – which constitutes the substance of the *imago Dei* according to Christian tradition. The ability to act in accordance with the Good is in fact the Kantian twist given to *dignitas*. Kant says: "morality is the condition under which alone a rational being can be an end in himself [...]. Hence morality and humanity, insofar as it is capable of morality, alone have dignity" (1993: 40-41). Thus dignity, for Kant, refers to the status of personhood attained in moral autonomy. Jonas invokes Kant's conception of personal dignity (*IR*: 89), likewise pointing to the capacity for responsibility as the criterion for being "a member of the moral order" (99). Humanity's record in realising its responsibilities is of course mixed, hence Jonas concludes that the "dignity of man *per se* can only be spoken of as potential, or it is the speech of unpardonable vanity" (*ibid.*). For Jonas, then, personal dignity, emerging from

the tradition of *dignitas*, belongs to human beings alone insofar as they have the capacity for moral agency and responsibility.

The second tradition which constitutes our contemporary understanding of dignity is *bonitas*. *Bonitas*, according to Hauskeller, derives from the notion that "everything created by God is good. […] It emphasizes the community: the common needs, the vulnerability and mortality of everything that is alive" (2007: 63). In drawing on notions of need, vulnerability, and mortality as shared properties of living beings, *bonitas* chimes with Jonas' invocation of the 'dignity of ends' belonging to living beings as such. As we saw in the second chapter, Jonas characterises organic life – both human and non-human – by the paradox of needful freedom: the very same immanent teleology which characterises metabolism and grants a degree of world-openness simultaneously makes the organism's existence dependent on the satisfaction of those ends. Now, given that *bonitas*, or non-personal dignity, refers to the status acquired by virtue of being able to value, it appears to coincide with the notion of intrinsic value as expounded in the previous chapter. Indeed, that is precisely the equivalence Hauskeller draws: "[i]f there is a particular kind of dignity (that is, *intrinsic value*) that does not arise from moral autonomy but from having a good of one's own, then this dignity is something that humans and (other) animals have in common" (62, emphasis added). On the basis of our previous findings we might add that plants, too – indeed all forms of life – possess non-personal dignity courtesy of their teleologically-grounded needs.

VI. Morality and Human Dignity

By comparing these two traditions we can make sense of Jonas' invocation of life's 'dignity of ends' as non-personal *bonitas*, and his references to human dignity as referring to our unique personal dignity, or *dignitas*. At face value this would indeed seem to give humans a qualitatively 'higher' status than non-human life, insofar as they alone possess personal *and* non-personal dignity, whereas non-human life has only the latter to take into account in our moral considerations. Although Jonas does not sketch out the claim in detail, it does indeed seem as though he holds that the 'higher', more existentially free the animal, the greater its dignity and capacity to be wronged (*OS*: 24-25). To be sure, this position has an intuitive plausibility, but there is a complication: we

noted that Jonas drew on Kant's understanding of human *dignitas* based on our capacity for moral agency. For Kant this form of dignity is equivalent to "absolute worth" (1993: 35), which Hauskeller notes is functionally identical to intrinsic value – the very concept to which *bonitas* is also supposed to pertain. Hauskeller continues: "what personal dignity […] on the one hand, and non-personal dignity, *bonitas*, or simply integrity, have in common is the notion of intrinsic value, which is supposed to be the value a thing has in its own right and not by reason of its being valued by others" (2007: 64). If correct this means that there can be no ranking of humanity as higher than non-human life: although humans also have the status of personal dignity, since it arguably refers back to intrinsic value this would not make it qualitatively different from non-personal dignity which refers to the same.

All these paths – dignity, integrity, intrinsic value, and something being an end-in-itself – appear to lead back to the possession of an immanent *telos* which characterises life. As such, it would seem Jonas' claim that humanity's moral being 'surpasses all that has gone before with something that generically transcends it' is only half-correct: although responsibility corresponds to a uniquely human personal dignity – and in that sense is distinguished from the dignity of all other life – this difference only denotes another aspect of the intrinsic value possessed by all life. This would leave us, as a result, with a resoundingly biocentric ethics, at odds with Jonas' original intentions. Of course, one might reasonably ask why we should *want* a principle which allows us to morally distinguish between human and non-human life. The answer, I suggest, is to supplement our theory of biogenic intrinsic value which cannot otherwise decide in favour of a human being over a bacterium. The gulf that exists between the call of responsibility for these beings is simply too great to ignore, and remains so even if we substitute a conscious animal for the bacterium. The question is then whether, according to the interpretation of Jonas' philosophy provided, it is *possible* to justify an overriding obligation to humanity whilst respecting the intrinsic value of all living beings. I believe that it is.

One option is to follow Jonas' suggestion that the "egoism of the species – each species – takes precedence […] and the particular exercise of man's might *vis-à-vis* the rest of the living world is a natural right based on faculty alone" (*IR*: 137). At first this looks suspiciously like a 'might is right' argument.

However, in a later lecture he supplemented the idea that superior power legitimates its own use by arguing that there are nevertheless moral constraints on our conduct toward non-human life. Firstly, he suggests, we ought not to treat individual animals cruelly:

> And not out of respect, not out of awe, not out of admiration, but from simple decency. It is just indecent to relish in making a sentient being suffer merely for the sake of enjoying their suffering, or enjoying one's powers of destruction and inflicting pain. So this has little to do with the general question of how we should relate to the living world[;] it has more to do with the question of what kind of human beings we ought to be. (*OS*: 25)

This point appears, then, to be a virtue-based case against cruelty rather than one of responsibility for the integrity or dignity of non-human life. The latter only arises when he discusses the *general* treatment of non-human life, in particular the methods of mechanised agriculture which deny animals a life in accordance with their immanent *teloi*, and thus their biological integrity.[73] So we can see that, at least in his later work, Jonas did not advocate the use of force against individual living beings with the sole condition that the biosphere remains intact. There are also questions of moral character, which Jonas claims follow from "limiting the guilt which is ours by our dealings with the natural world" (24). However, one might ask whether invoking such moral restrictions is really consistent with the general argument that "our right to use all the rest of the living kingdom […] simply derives from our power, because this is the only warrant in the whole realm of life which, as it were, entitles from the beginning a species to do what it does" (28). The latter claim holds for non-human beings, to be sure, but *precisely because* they are not moral beings subject to the demands of duty and virtue. For this reason we cannot accept it as a principle of human conduct.

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[73] "[Think of w]hat we do to our domestic animals – the way we deprive our chickens of any life of their own by not having them in the barnyard anymore[,] and not in the chicken coop[,] but having […] egg factories in which a chicken never even experiences a life of a chicken in the open world. [Think of o]ur meat factories. Or the denial of sexual intercourse, the fruits of which we constantly demand from them, but with artificial insemination. I recently visited such an establishment for horses, and learned that the females never meet a male and the males never meet a female. There we do something on a grand scale […]. I have other impressions on a visit to Europe where I can see how the cows are still grazing on meadows, how they are driven out to the mountain meadows in the early summer, and have a life outside and are returned to their stables and so on, and it's a joy to see those cows" (*OS*: 25).

The more fruitful alternative is to find an overarching principle allowing us to divide (formal) moral considerability and (relative) moral significance. The failure to do so has hampered biocentrism ever since Kenneth Goodpaster first observed that moral considerability and moral significance were not equated (1978: 311). The idea that an egalitarianism of intrinsic value need not entail an egalitarianism of obligation was defended by both Rolston and Attfield, the latter arguing that "because of the good which creatures concerned stand to gain or lose, lives in which some capacities are realized are more valuable than those in which they are not or cannot be" (1991: 176). In practice this is intended to prioritise sentient over non-sentient life, and human beings over both, according to the degree of mental capacities present. However, as Paul Taylor notes, this ranking of significance cannot follow from the biocentrism to which Attfield and Goodpaster are committed. He asks: "is it not unreasonable to judge nonhumans by the values of human civilization, rather than by values connected with what it is for a member of *that* species to live a good life?" (1986: 131). Invocation of species norms aside, Taylor is correct: if each living being has a good-of-its-*own* (the basis of its intrinsic value) then we cannot say that one sort of subjective good is better than another, unless there exists an independent standard beyond these subjective goods by which to measure them.

This would seem to settle the point – except that Jonas' philosophy, unlike those of Taylor, Rolston, Goodpaster, and Attfield, *does* contain such a standard: the *nisus* of Being. Although we failed in the last chapter to rationally demonstrate the objective value of values, we *were* able to make sense of the idea of Being's striving upwards to new heights of psycho-physical freedom, from inanimate nature through to plant, animal, and finally human life. To reiterate, on Jonas' schema this is not a transcendent *telos* entailing that humanity was posited as a goal by a divine agent. It is instead the weaker notion that time enough and favourable circumstances – as on Earth – will allow an immanent *tendency* in Being to manifest: the tendency toward life and freedom. As Jonas says: "[i]n organic life, nature has made its interest manifest and progressively satisfies it, at the rising cost of concomitant frustration and extinction, in the staggering variety of life's forms" (*IR*: 81). On this basis Being itself has a good-of-its-own in that the fulfilment or frustration of its *nisus* allows

for one to speak of a better or a worse for it. We can then say that it is better for Being that life came into existence than if it had not, and better again that vegetative and then sentient life followed. And of course, this striving has culminated in humanity: the qualitatively significant feature of which is its moral being.

It is this last point which is crucial: the unique personal dignity of human beings, guaranteed by the capacity for morality, then becomes the crowning achievement of Being: "[t]his blindly self-enacting 'yes' gains obligating force in the seeing freedom of man, who as the supreme outcome of nature's purposive labor is no longer its automatic executor but, with the power obtained from knowledge, can become its destroyer as well" (82). It is this additional claim which allows Jonas to escape Taylor's criticism of Attfield, Rolston, and Goodpaster. Recall that Taylor claims that:

> One entity is correctly judged morally superior to another if it is the case that, when valid moral standards are applied to both entities, the first fulfils them to a greater degree than the second. This would not be the case, however, if humans were being judged superior to animals and plants, since the latter are not moral agents. (1986: 132)

Contra Taylor, Jonas' philosophy allows us to say that humans, when judged according to the *nisus* of Being and insofar as they have the capacity for morality, are indeed of greater moral significance than non-human life according to a standard independent of any lifeform. It is thus human personal dignity, or the idea of Man as a responsible being, which rescues my interpretation of Jonas' ethics from a biocentric egalitarianism. If integrity and non-personal dignity are aspects of intrinsic value, humanity's personal dignity – the capacity for morality – indicates something greater still: a cosmic significance.

VII. A Future for Life on Earth

Jonas' ethics thereby achieves an appealing balance of human and non-human interests. The demonstration of the integrity, non-personal dignity, and intrinsic value of all life fulfils the moral promise of his biogenic axiology: all these qualities make non-human life an object of responsibility in its own right, and thus his thought escapes the crude anthropocentrism which has underpinned so

much of Western thought. At the same time, Jonas' ethics has a humanist streak in affirming the transcendent value of the idea of Man, requiring the continued existence of humanity as its bearer, who for that reason occupy a privileged place in the hierarchy of moral significance. We may conclude, therefore, that Jonas' philosophy is axiologically biogenic, yet ethically weakly anthropocentric.

Where my interpretation of his position lacks intuitive appeal is in its remaining egalitarianism between the interests of animals and plants. The former cannot be more morally significant than the latter, since neither has the capacity for morality, and so neither obtains the status of personal dignity which allowed for the qualitative distinction between otherwise equivalent appeals to intrinsic value. Jonas himself equivocates on this point. He argues that "the gradings of world openness, capacities, modes of experience, modes of action, [and] modes of life" mean that "certain instances of life […] have higher value and greater goodness" (*OS*: 27). This may be so, according to the independent standard provided by Being's *nisus*, but we still cannot say that we owe more to a higher animal than a lower one, or a lower animal lower animal than a plant, since all possess only non-personal dignity. Jonas seemingly contradicts himself on precisely this issue, speaking of a "grading of life as an underpinning for differentiating modes of behaviour towards them", yet also claiming that higher beings are *not* "entitled to particular advantages" (*ibid.*).[74] We must conclude, on the basis of the arguments above, that only an egalitarianism between animals and plants stands to reason. This is regrettable, but we were at least able to uphold what Jonas correctly regards as the transcendent value of humanity amidst the already value-rich landscape of Being.

What does this mean in practical terms? Once again, we must admit that Jonas' ethic provides us with a broad principle of action rather than a calculus for fine-grained decision-making: such is the shortcoming of his theory, which would have to be supplemented with an adequate theory of justice in order to be comprehensive. Nevertheless, *as* a broad principle it allows us to firmly conclude that non-human life deserves a future for its own sake, prior to the fact that its continued existence is necessary for our own. And for metaphysical

[74] The explanation of this discrepancy is perhaps the aforementioned distinction Jonas makes between our virtue-based conduct toward individuals, and our obligations toward species, or 'forms of life'.

reasons we must not replace the natural world with artifice: this would contravene the idea of Man as a responsible being, the continued existence of which is the object of our overriding obligations. For this very reason, however, we are relieved from the paralysing consequences of a biocentric egalitarianism. We are permitted to take non-human life to the necessary extent, even if in so doing, according to Jonas, “we incur a certain amount of guilt”: for “life, as soon as it is manifold in form, is of necessity […] combined with conflict, and conflict [u]nto death” (23-24). Our task, in short, is to achieve a sustainable present so as to ensure a future for life on Earth. This is the new task of politics in the age of technology, and the topic of our next chapter.

Chapter Five: The Politics of Nature

I. From Principle to Practice

The concluding chapters of *The Imperative of Responsibility* are concerned with the political realisation of our new planetary and intergenerational responsibilities. This shift in focus is not so surprising when we recall that the development of modern technology, as both a metaphysical and a socio-economic revolution, provided the original impetus for Jonas to devise a new ethic. As we have seen, the technological reach of action in contemporary society has spatially and temporally outstripped the scope of our historically-given norms, and so Jonas sought to rectify the situation by supplementing the latter. This attempt includes, almost as a matter of course, reflection on the way in which his ethical principle might be put into practice:

> If the realm of making has invaded the space of essential action, then morality must invade the realm of making, from which it has formerly stayed aloof, and must do so in the form of public policy. […] In fact, the changed nature of human action changes the very nature of politics. (*IR*: 9)

Jonas' claim that morality has "formerly stayed aloof" from production at first appears strange: the two are strongly connected in socialist economies, and even politicians in the United States, at the time of its inception, held economics to be subordinate to civic virtue (Sandel, 1998: 123-200). We can, however, make sense of Jonas' criticism by levelling it at contemporary (neo)liberal democracies, which indeed allow the market unprecedented freedom.

Jonas' ethics, by contrast, taking the form of a categorical imperative, generates a concrete obligation around which to organise action when transposed into the political domain. His attempt to do so results in two key insights: firstly he devises an early formulation of the precautionary principle, and secondly he recasts the state's duties along ecological lines. As such, Jonas politically prioritises ecology over biotechnology, even though both pose a threat to the image of Man. The reason is that the latter is a 'micro-level' crisis, whereas the former is a macro-level "approaching storm […] that we, its unintentional creators, have the planetary duty of trying to avert" (51). It follows

that although politics, like ethics, previously pertained only to the affairs of humans in states – the *polis* – it must now reach beyond and account for the very Earth which is the condition of possibility for such polities. Jonas writes: “the boundary between ‘city’ and ‘nature’ has been obliterated”, and, as such, “[i]ssues never legislated come into the purview of the laws which the *total city* must give itself so that there will be a world for the generations of man to come” (*IR*: 10, emphasis added). The central problem is that this ‘total city’ exists technologically and economically but not politically, which is the principal way of ensuring our new responsibilities are upheld. Rectifying this is the political task of a theory of responsibility.

However astute Jonas’ diagnosis will prove to be, his aforementioned solutions are controversial. The better received of the two is his formulation of the precautionary principle, which has since become an accepted environmental policy mechanism in Europe. By contrast, Jonas’ statecraft was and still is subject to a significant degree of opprobrium. His vision has been variously characterised as “antihumanist” (Ferry, 1995: 81), “paternalistic” (Bernstein, 1995: 17), and even an “eco-tyranny” (Furnari, 2006: 152). It cannot be denied that these criticisms are, at face value, not without justification. However, on an alternative reading of Jonas’ work all are the result of a basic interpretative error: according to Nathan Dinneen (2014; 2017), Jonas’ flirtation with authoritarianism is merely a heuristic device, and not at all to be taken literally. In this chapter I set out Jonas’ political theory and come to a settled position on this debate, using a range of sources rather than just *The Imperative of Responsibility*. Doing so also reveals moments in Jonas’ last works which point towards a different theory of citizenship and the state than developed in *The Imperative*. Although these suggestions and asides go undeveloped, a degree of extrapolation shows that Jonas was moving towards a theory of civic republicanism.[75] But we must first return to Jonas’ philosophical anthropology and the place of politics therein.

[75] I shall nevertheless remain closer to Jonas’ thought than Murray Bookchin (1982) and David Levy (1987), both of whom use aspects of his thinking to develop their own quite different political philosophies: social ecology and conservative environmentalism, respectively.

II. The Nature of Politics

Two political themes recur throughout Jonas' work: freedom and the *polis*. Jonas' interest in the latter is perhaps not surprising given his close friendships with Hannah Arendt and Leo Strauss, even if he rarely discusses their work.[76] The former theme, freedom, runs like a thread throughout Jonas' *œuvre*. It is the focus of an early publication on St. Augustine (*APF*), is covered in great depth in the lecture course *Problems of Freedom*, and of course, it characterises his philosophy of life, as indicated by *Organism and Freedom*. The last is both Jonas' richest contribution to understanding freedom and the analytically necessary starting point, since the phenomenon is constitutive of organismic being as such.

We saw in the second chapter that Jonas identifies freedom as an achievement of metabolism, which is the defining property of life. In reconstituting itself the organism obtains a formal independence from substance, although the ceaseless nature of this process and its reliance on material satisfaction means that this freedom is far from unconstrained: it is instead a paradoxically needful freedom. If freedom is therefore *formally* co-existent with life, in tracking the various teleological means of satisfying metabolic needs it also admits of *degrees*. We recall that the freedom of the plant is apparently minimal, seemingly restricted to growth, photosynthesis, and some motility (although we noted that the emerging science of plant 'intelligence' and communication may yet complicate this analysis). Animals, by contrast, possessing sentience, emotion, and locomotion attain a progressively greater degree of freedom from the strictures of their environments, building a richer world. Finally, humans possess the greatest freedom of all lifeforms in their vastly increased ability to make images, speak, think abstractly, and radically reshape their surroundings.

To clarify Jonas' usage of freedom here we may refer to its positive and negative variants, which he mentions only in passing (*PF*: 267). The classic distinction, generally attributed to Isiah Berlin (2002: 166-217), is as follows: positive freedom is the ability to act wilfully, whilst negative freedom is the

[76] Exceptions include an obituary to Arendt (*HA*) and reflections on her more overtly philosophical thought (*AKT*). The two also briefly appeared in public debate together (Arendt, 1979). Jonas' references to Strauss are even less frequent.

absence of external interference. A third form of freedom, which Berlin does not consider, belongs to the civic republican tradition and conceives of freedom as non-domination. The relevance of this alternative will become apparent later; for now, the positive-negative distinction is sufficient to elucidate the freedom belonging to organismic being. Taking both conceptualisations together, we might say that the degree of an organism's freedom is the extent to which it can set itself ends and carry these out without external interference. Hence a rabbit is far freer than a weed in the *positive* sense, but a fox is *negatively* far freer than the rabbit on which it preys, despite the two mammals sharing many of the same capacities and so being roughly equally free in the positive sense.

Problematically, however, Jonas' usage of freedom to describe life stresses the positive dimension alone. For him, organismic freedom is determined by life's process of individuation in which it increasingly wrests itself from the remainder of Being. The importance of this oversight cannot be overstated: conceiving of life's freedom solely in terms of the capacity to act, and not *also* in terms of non-interference or non-domination, has fateful consequences for Jonas' political theory, as we shall see.

Positive freedom is sufficient, however, to describe the human capacities which give rise to politics as a sphere of existence. In his philosophical anthropology Jonas stressed the freedom identifiable in our faculties of creativity (demonstrated by the invention of tools and images) and reason (courtesy of language and metaphysics), which together make us the *animal symbolicum*. Recalling Arendt's terminology, we may say that while all life labours – i.e., individually or collectively engage in the activity of sustaining their lives – few animals work, and humans, apparently alone amongst living beings, also engage in action (1958: 8-9). The realm of work concerns the creation of material and cultural artefacts, bestowing a degree of permanence to an otherwise transient existence, whilst action corresponds to the symbolic organisation of our collective life: at its highest permitting immortality in the form of words and deeds remembered through the ages. Jonas concurs, arguing that symbolic existence is the condition of possibility for politics, the latter being "a new dimension of existence closed to animals other than man" (*PF*: 260). At the same time, should politics succeed in providing an ordered life it increases the opportunities to exercise our symbolic capacities. As Jonas says, it "affords [the]

power to act otherwise than by dictate of sheer necessity", and is therefore the "real phenomenon of [human] freedom" (267-268). Although Jonas holds up the Greek *polis* and Roman *res publica* as the paradigmatic examples of political units, the concept is meant to far exceed the institutions and cultures of antiquity. Politics is for him a philosophical anthropological notion, like Aristotle's *zōon politikon*, but requiring only a symbolically organised life beyond the family unit.

To reiterate, Jonas' understanding of politics here is as a *capacity* – a manifestation of our existential freedom – which does not logically entail any particular political *content*; nor, we might note, does it prohibit any. But there is nevertheless a worry that his biological and anthropological conception of freedom as purely positive, and not *also* negative, allows Jonas to endorse a positive theory of freedom when considering the state and citizenry. We shall return to this point later on, at present merely noting that the ontological ground of politics is humanity's symbolic existence, which is itself the highest manifestation of life's movement toward freedom. We shall now look at how Jonas substantiates his formal analysis of politics with his ethic of responsibility, leading first of all to his influential formulation of the precautionary principle.

III. New Rules for Action

(α) The Heuristic of Fear

As discussed in the previous chapter, Jonas' categorical imperative holds that we must safeguard the existence of human beings on Earth in accordance with the idea of Man. To bring this ethic to bear on the realm of public policy, Jonas calls for a "science of hypothetical prediction, a 'comparative futurology'", to underpin a "heuristics of fear" which might guide our actions (26, x). In introducing such a dubious-sounding concept it should be noted straight away that the heuristic of fear is supposed to respond to scientific, rather than arbitrary, predictions. Jonas has in mind descriptive analyses of "presently recognizable trends in the technologic-industrial process" allowing for the forecasting of "certain, probable, or possible outcome[s]" (26, 30). We might then ask who would make such assessments. Jonas suggests that "the biologist, the agronomist, the chemist, the geologist, the meteorologist, […] the economist and engineer" could pool their knowledge to form a "global

environmental science" (189). Their predictions, he says, would have to be of "a still higher degree" of rigour than that "which suffices for the short-range prediction intrinsic to each work of technology by itself", because such a forecast "is on principle inadequate for the long-range prediction" (28-29). What the criteria are for this rigour, and who decides upon them, is not addressed – this being presumably a matter for the scientific community. The end result might, perhaps, look like a more ambitious version of the Intergovernmental Panel on Climate Change.

Of course, policy does not rest on scientific knowledge alone, but also concerns what is and what is not desirable. As such, the heuristic of fear would also utilise narrative to bring hypothetical situations to life. In this connection Jonas mentions Aldous Huxley's *Brave New World*: a "well informed thought-experiment" (30) pertaining to biotechnology and which to this day has not lost its power to repulse. A contemporary example fitting Jonas' criteria might be *The Road* by Cormac McCarthy, which envisions a world in ecological and societal collapse. The particular value of such works – provided they are scientifically and technologically plausible – is in "developing an attitude open to the stirrings of fear in the face of merely conjectural and distant forecasts – a new kind of *éducation sentimentale*" (28). For an example we might quote McCarthy, who imagines a future Earth devoid of life so as to inspire care for it now:

> Once there were brook trout in the streams in the mountains. You could see them standing in the amber current where white edges of their fins wimpled softly in the flow. They smelled of moss in your hand. Polished and muscular and torsional. On their backs were vermiculate patterns that were maps of the world in its becoming. Maps and mazes. Of a thing which could not be put back. Not be made right again. In the deep glens where they lived all things were older than man and they hummed of mystery. (2006: 306-307)

The legitimacy of drawing on such texts follows from Jonas' theory of responsibility, which sought to be not only rationally demonstrable, but also to account for the *feeling* of responsibility for the vulnerable good. Hence we are not to be guided by a "pathological […] but rather a spiritual sort of fear" for

what might be lost through human (in)action: both the vulnerable good itself, and the idea of Man in failing to fulfil our obligation to care for that good (*IR*: 28).

Even if one accepts Jonas' elision of the descriptive and the normative one might ask why he focuses on fear and not, say, hope. His reason for doing so is reminiscent of the moral psychology advocated by Hobbes, "who also, instead of love for the *summum bonum*, made fear of a *summum malum* […] the starting point for morality" (*ibid.*). Hobbes tells us that humans in the state of nature are in "continuall feare, and danger of violent death", and for this reason are driven to peaceful co-operation and the establishment of civil society (1914: 65-66). It is each individual's fear of what might be lost – their life – which alerts them to what is most valuable: security.

Now, according to Jonas this is an example of the pathological fear that is unsuitable as a basis for collective decision-making: individual security, whilst of great value, is not an absolute never to be risked. There are, after all, things worth dying for. The general structure of the principle, however, remains sound: "the perception of the *malum* is infinitely easier to us than the perception of the *bonum* […] an evil forces itself upon us by its mere presence, whereas the beneficial can be present unobtrusively and remain unperceived, unless we reflect on it" (27). In the case of imagined but realistic future scenarios we are led to that object within which we must not risk: the existence and essence of humanity. Having perceived the threat, brought to our attention by the faculty of fear and applied to an object whose intrinsic value we can rationally account for, we can then act so as to not bring that harm about. The paradox here, as Jean-Pierre Dupuy observes, is that the imagined threat must in one sense be our future, and yet not actually become our present (2012: 588). Jonas alludes to this in the following: "[t]he prophecy of doom is made to avert its coming, and it would be the height of injustice later to deride the 'alarmists' because 'it did not turn out so bad after all'. To have been wrong may be their merit" (*IR*: 120).

(β) The Precautionary Principle

Jonas admits that the "uncertainty of prognostications" (28) poses a problem for his heuristic. In short, when applied to hypothetical situations it only prohibits actions of which we can be more certain than not of the consequences. For example, it is highly likely that a nuclear war would make

humane life an impossibility – and perhaps even extinguish human life itself – and so it clearly falls foul of his method. However, there are technologies which present us with great uncertainty as to their effects. The development of artificial intelligence could lead to sustainable material security for all, or to the effective obsolescence of humanity. According to Nick Bostrom (2014) – no Luddite he – it could even result in the very extinction of the human race. The problem is that we cannot predict with much certainty which is correct: the benefits and harms are at this stage too remote and conjectural. How then are we to know which assessment we should side with? To deal with this impasse Jonas offers an early formulation of a new rule by which to guide collective high-stakes actions in the face of uncertainty: the precautionary principle.

In the event that a particular action or technology poses the threat of catastrophe – however uncertain the threat, and benign the other possible outcomes – Jonas recommends that we give precedence to “the bad over the good prognosis” (*IR*: 31). The reason harks back to his categorical imperative: any action in which either the existence or essence of humanity are at stake is ruled out in advance. It is essential to note, however, that the risk to life must pertain to the whole rather than the individual or group.[77] One common *reductio ad absurdum* of the precautionary principle is that it rules out *any* action which poses a great and irreversible threat to life: travelling by aeroplane, say, or even crossing the road in busy traffic. Certainly, either activity risks an irreversible loss of life for minimal gains. But to say that precautionary logic rules them out is a wilful misunderstanding of the principle, or at least of Jonas’ version of it. Individuals and groups have justifiably risked their lives throughout history, and there is no reason why contemporary technology should change this. What contemporary civilisation *does* endanger, in extreme cases, is the existence of humanity as such, and it is *this* which Jonas’ precautionary principle is designed to counter. Hence Jonas states – even coming close to using the phrase ‘precautionary principle’ – “we must bow to the command to allow, in matters of such capital eventualities, more weight to threat than to promise and to avoid apocalyptic prospects even at the price of thereby perhaps missing

[77] But not when it concerns a threat to the *essence* of humanity, which is as violated in a single instance as it is *en masse*. This will be argued in the next chapter in the context of biotechnology and scientific research.

eschatological fulfilments. It is the *command of caution*" (32; emphasis added).[78]

If the purpose of precaution is the avoidance of infinite loss, its price is the renouncing of finite gains. In this respect his theory is reminiscent of Pascal's wager, albeit with one key difference. Pascal's argument famously holds that it is better to live a life according to God than not, as the cost of doing so and being wrong is minimal compared to wrongly doubting God's existence and being subsequently condemned to eternal damnation. We might say that Jonas' theory likewise bids us to avoid catastrophe in the future by making a comparably minimal sacrifice now. The difference is that unlike in Pascal's version, where heavenly bliss is one possibility, there is no future utopia to be had, only the preservation of the status quo. However, if Jonas is correct, this is no reason for despair: the avoidance of the infinite loss in the future presupposes that we possess something of equivalent value *now*, namely, human life on Earth. For all the overwhelming (but necessary) negativity of his formulation, Jonas' precautionary principle is therefore also motivated by an affirmative rationale: "an emergency ethics of the endangered future must translate into collective action the 'Yes to Being' demanded of man by the totality of things" (140).

Kerry Whiteside is perhaps the only English-language commentator to recognise Jonas' influence on the precautionary principle, and raises key questions about his formulation of it.[79] Above all, Whiteside observes that the largely Kantian basis of Jonas' conception – the new categorical imperative – means that although we are unconditionally barred from taking certain actions, these actions are in practice relatively few (2006: 107-108). In other words, what we gain in clarity we lose in breadth of application, as "it is made in such a way that it almost never applies" (108). As noted above, nuclear warfare is one example which falls foul of Jonas' formulation, but we hardly need a new principle of action to know not to start one. By contrast, other technologies

[78] The original German for the precautionary principle is '*Vorsorgeprinzip*'. Nowhere, to my knowledge, does Jonas use this precise formulation, but his great work is of course *Das Prinzip Verantwortung* (literally, the responsibility principle), in which he repeatedly refers to *Vorsorge* (*PV*: 85, 90, 218, 219). In the English translation Jonas and Herr slightly awkwardly render *Vorsorge* as "farsighted providence" and "promotional care" (*IR*: 39, 121).
[79] Jan Schmidt (2014) and Nathalie Frogneux (2014), from the German and French traditions respectively, insightfully discuss Jonas' thinking in this regard.

which are often seen as paramount cases for a precautionary approach do not fall under the remit of Jonas' version of the principle. Take agricultural genetic engineering: opponents sometimes claim that a proliferation of genetically modified crops and livestock could be damaging for biodiversity and the global food supply. Crucially, such effects are possibly irreversible as the intervention is designed to be hereditary. But no opponent of genetically modified organisms, however strident, believes that it risks the end of human life on Earth or humanity as a responsible being, as Jonas' principle demands for a precautionary veto.

We could pick a number of other technologies – nuclear power, geoengineering, synthetic biology – the widespread adoption of which could have disastrous ecological effects and yet not come under the remit of Jonasian precaution. It is presumably for this reason that where the precautionary principle has been adopted in law it is in a weaker but more broadly applicable form. Take, for instance, Principle 15 of the UN's Rio Declaration on Environment and Development:

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. (United Nations, 1992)

The advantage this strictly consequentialist formulation has over Jonas' is that it applies to threats of serious or irreversible harm to the *environment*, and not just when the existence or essence of humanity is at stake. However, the stipulation that the principle be "widely applied" by states – which is already vague – is further weakened by the caveat "according to their capabilities", just as the remit of precaution is here limited only to uncertainty not being "used as a reason for postponing cost-effective measures". Clearly this formulation also has serious flaws, albeit of a different sort to Jonas'.

A slightly more robust consequentialist version of the precautionary principle can be found in Article 11b of the earlier UN World Charter for Nature, which states:

> Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed. (United Nations, 1982)

The principle as it is expressed here still poses problems. The first clause refers only to those technologies *likely* to pose a significant risk to nature, rather than posing a significant risk *simpliciter*. Then the second clause seeks to weigh “expected benefits” against “potential damage to nature”, and so only the latter phrase explicitly refers to the environment or non-human life whereas the former could be taken to encompass just human interests. As such, any activity which overwhelmingly benefitted humans, even if it were at the expense of the environment, might not be ruled out. Moreover, the final clause – “the activities should not proceed” – replaces the mandatory ‘shall’ from the first clause with the normative ‘should’, which is not synonymous. Nevertheless, the value of such a formulation is that at least some potentially harmful technologies, such as those mentioned above, are brought under its remit.

This brief comparison of varieties of the precautionary principle shows that Jonas’ strict but narrow formulation is not the only version available. It is, however, the only one which follows from his premise of the new categorical imperative. Does this pose a problem for Jonas? I would argue not. Firstly, it is simply not the case that “critics are right to dismiss versions [of the precautionary principle] that follow a logic analogous to Pascal’s wager, because that argument requires the assumption of an infinite catastrophe, which is seldom, if ever, the case in environmental decisions” (Johnson, 2012: 9). We might be justified in dismissing a principle if it *never* applied in real-world scenarios, but why should we do so if it *does* apply in some cases, albeit rarely? Secondly, remember the scope of Jonas’ imperative of responsibility: to supplement, rather than replace, traditional morality. Conventional consequentialist reasoning can justify a broader but weaker version of the precautionary principle, whereas Jonas’ version categorically tells us what we must not put at stake; the two are complementary, not mutually exclusive. Finally, recall that the level at which Jonas envisioned the application of his principle was not just that of individual technologies, but also the general

trajectory of contemporary civilisation, which is indeed bound for catastrophe. We turn now to how this is to be institutionally enacted.

IV. Farewell to Utopia

Øjvind Larsen criticises Jonas for not making the institutional link between his ethics and politics sufficiently clear, claiming that he "does not take the necessary next step, which must be to point out how the principle of responsibility could be an actual force in political life that could resist the dominance of technological-instrumental rationality" (2009: 129). As discussed, this is the very purpose of Jonas' heuristic of fear and precautionary principle, and therefore Larsen's charge is *prima facie* erroneous. It does, however, lead us to wonder how, according to Jonas, the recommendations derived from the heuristic of fear are to be transmitted into concrete action. Which political and economic systems are most capable of doing so?

Given the context of the Cold War in which he was writing, Jonas develops an answer by examining the relative virtues of the two available systems: capitalism and communism. His approach is reminiscent of Aristotle's *Politics* (1984f) which proceeds by comparing the political systems of ancient Greece. The difference is that Jonas' investigation is not guided by "the question as to which of the various political ideologies and programs is inherently best for human beings", which he dubiously claims is now "not significant" (*M*: 202, 210). Instead he asks only "which offers the greatest likelihood of meeting successfully the completely new challenge confronting human society: how we can live with nature – or how nature can survive together with us" (210). From these remarks it is easy to see how Jonas arrives at such a controversial vision of the state, a vision which, it must be said, draws inspiration from some of the most questionable political theorists in the Western canon: not only Hobbes, but also Plato, Machiavelli, and Lenin. In Jonas' defence, however, he first of all develops an astute critique of the utopianism built in to modern civilisation, both capitalist and communist.

We recall from the first chapter, on Jonas' philosophy of technology, that part of technology's interaction with socio-economic life was at the level of ideology. Two notions were discussed in this regard: progress and utopianism. We defined progress as the belief in technological development as a good in

itself, one which goes awry only under a malign influence. We then identified a utopianism in the work of Descartes, Bacon, contemporary transhumanists, and eco-modernists through their invocation of a paradisiacal end of history made possible by science and technology. In addition to these explicit manifestations, Jonas diagnoses a latent utopianism in the productionism of modern civilisation *per se*. As discussed in Chapter One, through competition, innovation, and ever-greater consumption, creating new 'needs' where previously there were few, we are supposed to arrive at material satisfaction. We have for decades now been aware that such a vision sows the seeds of ecological ruin, and yet contemporary civilisation carries on as though there were no limits to such activity. Thus what was in Bacon's time merely "Promethean arrogance" has become a wilfully blind utopianism (143). Although a productionist tendency belongs to both of the political systems he examines – the capitalist West and the then-communist East – he regarded it as stronger in the former, indeed, as almost synonymous with capitalism, which is characterised (or perhaps caricatured) as "the unrestrained use of the world's resources, of the environment, of nature, impelled by the pocket-motive and competition" (*CR*: 217). As such, Jonas is sceptical on *a priori* grounds that it could rise to the challenge, demanded by his imperative, of averting the course of disaster (*IR*: 145-146).

What of Soviet communism, the only readily available alternative at the time?[80] Jonas notes that the moral force of Marxist-Leninism is that it "proposes to bring the fruits of the Baconian revolution under the rule of the best interests of man" (143). Of course, this once again poses a fundamental problem since the Baconian revolution is precisely the source of our ecological predicament. The fact that the techno-utopian drive is here inspired by a sense of distributive justice is commendable, but little help regarding the question of ecological limits. Jonas takes Ernst Bloch as the "foremost prophet" (188) of this dimension of Marxism, since the theme of utopia is so explicit in his work and acts as a foil for Jonas' politics of responsibility.[81] Bloch's key work, *The Principle of Hope* (1986), envisions a society freed from the necessity of human

[80] Although Jonas uses the terms Marxism, socialism, and communism interchangeably, by all of them he really means the ideology and political economy of the USSR, which I here call Marxist-Leninism or Soviet communism.
[81] Indeed, the very title of *Das Prinzip Verantwortung* is a response to Bloch's *Das Prinzip Hoffnung*.

labour through the rational application of technology and equitable distribution of goods. Jonas criticises Bloch's vision partly on principle, regarding the transfer of meaningful work to automated industry as unbefitting of humanity's creative capacities (*IR*: 197-201). But the relevant objection here is the practical one of consumptive limits: if the Earth cannot withstand continued capitalist production, then neither can it contain an "onslaught on resources" in the name of utopian communism (187). Hence the "dawning truth of ecology puts a hitherto unknown damper on progressivist faith, socialist no less than capitalist" (189).[82]

The virtues of the Soviet communist system, if any are to be found, will then be in its ability to constrain rather than promote the Baconian ideal. Jonas argues, again on *a priori* grounds, that Marxist-Leninism holds the "promise of a greater *rationality* in the management of the Baconian heritage" (145). Empirically, of course, this belief has to contend with a record of bureaucratic inefficiency and the fact that 'communism in one country' finds itself at odds with actively – or at least ideologically – hostile foreign powers, and is almost necessarily driven to raise production in response. Even if we suppose that there were a communist world state (hardly an imminent possibility, even in the 1970s), Jonas notes that centralisation of the sort associated with a command economy would require efficient infrastructure, communications, and bureaucracy, and this alone could be sufficient impetus for technological development and economic growth (*TPT*: 36).[83] To all this we must add that following the collapse of the Soviet Union its unprecedented degree of environmental mismanagement became clear – this being, for Jonas, "one of the great disappointments" of the Soviet experiment (*CBE*: 29).[84] Prior to the

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[82] It might be objected that in taking Bloch as his representative of Marxist thinking Jonas unfairly represents the school of thought. There are, after all, those such as André Gorz who have sought to reconcile Marxism with environmentalism. Gorz argues that "*the ecological movement is not an end in itself but a stage in a larger struggle*", and that only a "cultural revolution that abolishes the constraints of capitalism" could establish "a new relationship between the individual and society and between people and nature" (1980: 3-4). While Gorz's socialism eschews any Baconian influence in terms of production, it nevertheless remains explicitly utopian. In an extended narrative section Gorz describes in detail "one of several possible utopias", including a 24-hour working week, free public transportation, decentralised and self-sufficient economic units, organic farming, lifelong holistic education, and so on (42). How this is to be achieved is not clear, but as an ideal it arguably escapes Jonas' critique.
[83] Perhaps here, too, is a trace of Heidegger's influence on Jonas in the former's claim that both the USSR and the USA were "metaphysically the same" (2000: 48) since "determined by planetary technology" (1990: 54).
[84] Elsewhere he rightly warns that "we should be careful not in our jubilation [following the USSR's demise] to think that it is capitalism, that is the unrestrained use of the world's

emergence of this latter evidence, however, he thought it better able to act in accordance with ecological limits than a capitalist economy.

Jonas' central political claim in *The Imperative of Responsibility*, then, is that we should opt for a Marxist-Leninism shorn of its utopian productionism. And with these means must go their envisioned end: a communist society composed of 'true', i.e., emancipated, humans, this being the theory's "noblest and hence most dangerous temptation" (*IR*: 156). Why dangerous? Precisely because it bids us to forego what is of ultimate value – the existence and essence of humanity – for an imaginary perfected form of that being. Such eschatological promise justifies virtually all means, not least the Baconianism which unwittingly puts that very end at risk. Jonas does not reject the egalitarianism of Marxist-Leninism, which he claims ought to be preserved (144). But its productionist aspect contravenes the heuristic of fear by imperilling that which must not be imperilled: genuine humanity, which "is always already there" in having the capacity for morality (200). Protecting *this* being is the object of a politics of responsibility, necessitating the abandonment of radical hope for material emancipation, and leading Jonas to advocate a "post-Marxist", or anti-utopian, form of Marxist-Leninism (127).

V. The Statesman and Tyranny

Jonas' preference for an ecologically-minded command economy over the free market is, I would argue, forgivable in itself. Although he takes the Soviet Union as his paradigm case, there is no *necessary* connection between production for need and totalitarianism, and so nothing said in praise of an austere form of Marxist-Leninist economics should entail approval for its political model. Unfortunately this is not a distinction Jonas upholds. As Walter Weisskopf notes, by framing his discussion in terms of the central Cold War belligerents Jonas pairs capitalism with democracy and socialism with dictatorship (2014: 32). And, since he is concerned with which system is in principle best for the relationship between humanity and the natural world, rather than for human beings *alone*, Marxist-Leninism appears to offer better prospects. But there is another reason why Jonas arrives at this unhappy conclusion, which is that he

resources, of the environment, of nature, impelled by the pocket-motive and competition which we should now salute as having been vindicated" (*CR*: 217).

takes his theory of responsibility to entail, almost by logical extension, a paternalistic form of government. We shall see if this is really the case, and how it feeds into his acquiescence to an authoritarian politics.

Jonas draws a parallel between private and public responsibility, between the responsibility of the parent for the infant and that of the statesman for their citizens.[85] The basis of his comparison is as follows: firstly, both have other humans as their object, in accordance with his imperative. Secondly, both pertain to the "totality", "continuity", and "future" of those beings (*IR*: 98). The quality of totality, refers to "all aspects" of the object of responsibility, "from naked existence to highest interests" (101). In the case of the infant this makes sense, but regarding citizens is surely too strong a claim. In defence of it Jonas cites Aristotle, who argued that the state "came into being so that human life would be possible, and continues in being so that the good life is possible", from which Jonas concludes that this "is also the object of the true statesman" (*ibid.*). Clearly, however, the fact that the state exists to make the good life possible does not entail that it is concerned with every aspect of citizens' lives. Backtracking somewhat, Jonas then claims that any political executive who leads public opinion rather than follows it upholds something of the statesman's ideal. But once again, such leadership is clearly not equivalent to total parental responsibility. Perhaps the most we can say is that in securing the body politic from outside threats, ensuring law and order, and providing access to education and the arts, the statesman has *some* – not total – responsibility citizens' lives.

The second quality was continuity. As with the above, this follows from the vulnerability of the body politic: "the insistent knowledge that the *res publica* too exists precariously" (104). For this reason it "cannot allow itself a vacation or pause, for the life of the object continues without intermission" (105). Here Jonas' comparison appears sound, as in neither case is the responsibility periodic. Regarding the final quality, however – the future of the object of responsibility – it is again questionable. The parent's responsibility for the infant is continuous only up to the point of maturity, and in accordance with this immanent *telos* must gradually relinquish its claim to totality, as Jonas himself

[85] Jonas' main example of the latter is Churchill (*IR*: 97), who was a "hero" to him (*M*: 173). A contemporary example might be the French President Emmanuel Macron – a one-time assistant to Paul Ricœur, and who wrote his Master's thesis on Machiavelli and Hegel – with his self-consciously 'Jupiterian' understanding of statesmanship.

points out (108). Responsibility for the body politic, by contrast, is unending – though, as I say, never total – and passed on from one government to the next (117).[86]

The final similarity Jonas draws is that in both cases the responsibility is also to the *future possibility of there being responsibility*. As we saw with the parent, their responsibility is directed toward the idea of Man as responsible agent embodied in the infant. Jonas argues that the statesman, too, in taking up a position of responsibility for the polity is duty-bound to ensure the continuation of statesmanship: i.e., those who are *politically* responsible. Echoing his earlier categorical imperative Jonas writes: "there follows a highly general, but by no means empty, *imperative* precisely for the statesman […] to do nothing that will prevent the further appearance of his like" (118). Here we are inclined to agree with Jonas, insofar as the finitude of the human condition requires any political leader to prepare, or at the very least not obstruct, others who will eventually take their place. To do otherwise would risk the future of the polity for which they are responsible.

If Jonas underestimates the extent to which the qualities of parental and political responsibility differ, he is at least honest about one significant difference: the self-chosen nature of the statesman's responsibility. Jonas notes that "nobody is formally bound to run for public office" and take up the mantle of responsibility for the community which pre-exists them (96). The infant, by contrast, having been brought into existence by the parent makes of them an irrevocable call of responsibility. Even so, Jonas goes on to blur the distinction by claiming that "he who feels the calling for [leadership] in himself seeks the call and demands it as his right" (96-97). Jonas' invocation of a political call echoes, surely deliberately, Heidegger's discussion of the "call of conscience" in *Being and Time* (2010a: 262). For Heidegger, the "call does not say anything, does not give any information about events of the world, has nothing to tell. […] 'Nothing' is called *to* the self which is summoned, but it is *summoned* to itself,

[86] Jonas notes that any description of a political community as youthful, mature, or decrepit is merely figurative, there being – contra Hegel and Marx – no *telos* to history (109-111). He argues that where there appears to have been such, as with Lenin's action in October 1917 supposedly fulfilling the prophecy of a proletarian revolution, this is only a *post hoc* judgement. The fact that Lenin acted when he did by itself *made* the theory correct, as the prediction, provided it holds enough appeal, "acquires causal power itself in order to help its truth to gain reality, thus with intent contributes to the coming true of its prognoses" (115).

that is, to its ownmost potentiality-of-being" (263). Precisely this purely formal understanding of conscience allowed Heidegger, Jonas claims, to align himself with the Nazis when he felt such a call, as in Heidegger's philosophy it is "not *for what* or *against what* one resolves oneself, but *that* one resolves oneself" (*HRR*: 201). In an excoriating passage Jonas says:

> Heidegger's being […] is an occurrence of unveiling, a fate-laden happening upon thought: so was the Führer and the call of German destiny under him: an unveiling of something indeed, a call of being all right, fate-laden in every sense: neither then nor now did Heidegger's thought provide a norm by which to decide how to answer such calls – linguistically or otherwise: no norm except depth, resolution, and the sheer force of being that issues the call. […] Heidegger's own answer is, to the shame of philosophy, on record and, I hope, not forgotten. (*PL*: 247)

According to Jonas' analysis of the political call of conscience, by contrast, "[t]he object of the responsibility is the *res publica*" and the good life of its citizens – *all* citizens – which it exists to promote (*IR*: 96).

We have seen, then, that Jonas was wrong when comparing parental and political responsibility to claim that "common traits make them blend into [...] the primordial phenomenon of responsibility" (98). The one arises in witnessing the vulnerable infant while the other – assuming it can be properly understood as a call – emanates from the collective of which one is a part. This distinction goes to the heart of their difference: responsibility for the infant rests on a fundamental asymmetry of power and vulnerability between the two parties (at least initially), whereas the statesman emerges from a group of equals to which they return in due course. It is thanks to this pre-existing equality that the statesman's responsibility lacks totality, and should instead be understood only as a temporary suspension of previous relations. As discussed above, however, Jonas does not fully acknowledge this and is happy to more or less draw an equivalence. He even goes on to argue that in the case of children both forms of responsibility coincide. Insofar as to rear a child is also to rear a citizen, the role played by education therein means that the state does both, and can even assume total responsibility for the infant in the case of parental neglect. This

might not be a problematic observation in itself, but what *is* questionable is that Jonas does not say what an inappropriate degree of state intervention in child-rearing would be. Considering the communist argument for abolishing the family altogether, he suggests that "this extreme case only magnifies what we assert about the responsibility of the statesmen in general and its affinity to that of parents" (103). There can be no doubt, therefore, that Jonas finds a paternalistic form of government at least palatable.

The combination of several factors – freedom understood only positively, tolerance of paternalism, and the endorsement of a parsimonious Marxist-Leninist command economy – leads Jonas' political theory to a distasteful conclusion. Considering again the advantages of the Soviet system to reign in Baconian productionism, he counts "total government power" amongst them – the only stipulations being that it must be "well-intentioned [and] well-informed" (146, 147). The reason given is that "decisions from the top, which can be made without prior assent from below, meet with no resistance (except perhaps passive) in the social body and […] are assured of implementation" (146). Such decisions could include, crucially, those of productive and consumptive austerity which run counter to the immediate self-interest of citizens, and would therefore "be difficult to get adopted in the democratic process" (*ibid.*). One example given, apparently without irony, is China's one-child policy: "a shining example of what a communist regime can accomplish" (152). In his defence, Jonas regards this power as advantageous *only* if we can trust an authoritarian government to take the right course of action (151). He acknowledges that failure to use such power wisely risks far worse outcomes than capitalism is capable of (145), but unfortunately does not recognise that such failure is, in fact, the overwhelming likelihood in an oppressive form of government, as John Stuart Mill long ago taught us.

If this were not concerning enough, Jonas asks how loyalty to such a government might be managed. As stated, the sorts of policies Jonas regards as necessary for the survival of human and non-human life on Earth are unlikely to be popular with the general public, at least without immediate evidence before our eyes of the consequences of our productionist form of life. And if by 'immediate evidence' we mean that the tides must begin to rise in London and New York before we are spurred on to tackle the ecological crisis, then it will of

course be far too late. Hence, for Jonas, the Soviet communist system once again appears advantageous, as “only a maximum of politically imposed social discipline can ensure the subordination of present advantages to the long-term exigencies of the future” (142). The sort of “social discipline” Jonas has in mind is not that of violent repression, but rather the ideological cultivation of a public “spirit of frugality” (147). The tools of propaganda employed in the Soviet Union could be used, Jonas argues in a Machiavellian vein, to inspire not productive utopianism but the very reverse: “enthusiasm for austerity” (148). And if the propagated truth of our ecological predicament fails to inspire such action, then he claims that government would be required to engage in a sort of political mythology, convincing citizens that the ascetic society *is* the good society. He speculates that “[p]erhaps this dangerous game of mass deception (Plato’s ‘noble lie’) is all that politics will eventually have to offer: to give effect to the principle of fear under the mask of the principle of hope” (149).

Jonas thereby arrives at eco-authoritarianism as the most plausible alternative to ruin. It cannot be stated forcefully enough that Jonas does not regard such governance as ordinarily desirable. On the contrary, when considering what constitutes the best state for human beings alone Jonas points to democratic government, civil liberties, nationalised industries, and a welfare state: i.e., post-war European social democracy (174-175). Unfortunately, since he is comfortable with the notion of paternalistic governance, and concerned above all with how to rein in productionism and thereby ensure that there *be* a good future for human beings, democracy appears in that light as an acceptable, if regrettable, sacrifice. Here Jonas betrays an uncomfortable affinity to Heidegger’s post-war political statements. After Heidegger had ceased actively promoting the Nazi cause – though he never *fully* renounced it intellectually – he remained openly sceptical about the value of democracy. In his infamous *Der Spiegel* interview, Heidegger says “[a] decisive question for me today is how a political system can be assigned to today’s technological age, and which political system would that be? I have no answer to this question. I am not convinced that it is democracy” (1990: 54). Several decades later, also in an interview with *Der Spiegel*, Jonas comes to a strikingly similar conclusion: “I too suspect that democracy in its present state, with its short-term orientation, is not a suitable form of government in the long

run. And why should it be?" (*CBE*: 25). So we have here a great irony: in spite of his fierce criticisms of Heidegger's politics and their lack of ethical foundation, the political theory Jonas arrives at is, at least in one respect, not so different from his teacher's later public position.

We have already identified the three philosophical oversights which leads Jonas politically and theoretically astray. Firstly, there is his understanding of organismic freedom as purely positive, and not also negative. Although there is no *necessary* link between this conception and authoritarianism, the path to the latter is certainly cleared if one thinks of freedom solely as the ability to act wilfully. The application of this notion of freedom to economics is acceptable, if severe, but its application to political life more broadly has unpalatable consequences, as we have seen. Secondly, there is his binary framing of political alternatives – capitalist democracy versus Soviet communism – as though the economic and political domains are inseparable either in practice or in principle.

The third and final reason Jonas errs is that he mistakenly compares responsibility for the infant to the statesman's responsibility for their citizens. In this Jonas in fact betrays the influence of Gnosticism, as becomes clear when we recall Voegelin's identification of how the Gnostic principle is at work in modern politics. The 'immanentisation of the eschaton' has two key facets: that there is a *telos* to history, discernible only by the few, and that this *telos* leads to a paradisaical end state. Although the goal of Jonas' politics is certainly not utopian, and to that extent clearly evades the ecologically ruinous Gnosticism of Bacon, in his analysis of statesmanship Jonas' does conform to the tendency. The proper statesman, according to Jonas, is not only an exemplary individual, but also one who *correctly recognises the truth and governs in accordance with it*. And should that truth elude the *polloi*, led astray by their material wants, the statesman is obliged to govern against their express interests in the name of their *true* interests. Indeed, Voegelin notes that this very aspect of Gnostic movements is what leads them so easily into totalitarianism (1952: 132). This is the spectre of Gnosticism Jonas failed to banish from his thinking, and that he cites the noble lie of Plato – who is surely second only to Descartes in philosophically exemplifying the Gnostic principle – is all-too apt.

VI. Rival Interpretations of Jonas' Politics

(α) Dinneen's Heuristic Reading

Can Jonas' political ecology be saved, and if so, how? As stated earlier, Nathan Dineen suggests one original – if not entirely convincing – way of doing so.[87] He stresses the role played by the heuristic of fear in Jonas' political thought, and argues that the subsequent analysis of authoritarianism can only be understood in light of it. He specifically points to a passage which precedes the discussion of Marxist-Leninism's advantages over capitalism, where Jonas says: "[a]ll this holds on the assumption made here that we live in an apocalyptic situation, that is, under the threat of a universal catastrophe if we let things take their present course" (*IR*: 140). For Dineen this reveals Jonas' true and much-misunderstood intention: that if we fail to prevent ecological collapse then tyranny will force itself upon us by necessity, and it is therefore our duty to *envision this possible outcome precisely to avert it.* Hence the invocation above of "*universal* catastrophe" – one which is both ecological *and social.* In this way Jonas can be understood not as endorsing authoritarianism, but in fact the very opposite: engaging in the kind of "well-informed thought experiment" that his heuristic demanded so as to alert us to the likely terrible outcome of our present course of action. In Dineen's words: "Jonas uses political dystopianism to counter the possibility of a political dystopia from coming into being" (2014: 18).

Dineen's interpretative twist finds textual support in a lecture (which he does not cite) where Jonas says the following:

> My dire prognosis that not only our material standard of living but also our democratic freedoms would fall victim to the growing pressure of a worldwide ecological crisis, until finally there would remain only some form of tyranny that would try to save the situation, has led to the accusation that I am defending dictatorship as a solution to our problems. I shall ignore what is a confusion between *warning* and *recommendation*. […] This is, I want to emphasize, a worst-case scenario, and it is the foremost task of responsibility at this particular moment in world history to prevent it from happening. (*MM*: 111-112, emphasis added)

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[87] This interpretation can also be found – albeit in an undeveloped form – in Kurasawa, who classifies Jonas as a "[l]eft dystopian" (2007: 113).

We could also point to a late interview in which Jonas suggests that “[i]n a lifeboat situation all rules cease to apply”, and *therefore* “we must prevent that lifeboat situation from coming about” (*IHJ*: 367). It appears, then, that Dineen is correct to say that Jonas’s discussion of tyranny is an application of his heuristic of fear to the domain of political theory. On this reading the true meaning of *The Imperative* only emerges when considered as a whole, with the key argument of the second chapter – that “the creatively imagined *malum*” can “instill in us the fear whose guidance we need” (*IR*: 27) – explaining why a terrible political future is envisioned in the fifth chapter.

The suspicion lingers, however, that Jonas’ explanation above – given at a conference organised by the social-democratic Friedrich-Ebert-Stiftung – may simply be an *ex post facto* excuse in response to the heavy criticism he received. The main reason for thinking so is the absence of evidence in *The Imperative* that Jonas’ advocacy of tyranny was not literal. The sole passage Dineen points to as evidence could easily be read as meaning that since we live in an “apocalyptic situation” *right now* the political recommendations are meant accordingly. Then there is Jonas’ admission that he does not “stand aghast at the thought” of using a noble lie to lead the population into austerity (149). This does not sound like part of an elaborate thought experiment, but very much sincere, which brings us to a fundamental problem with Dineen’s reading: it becomes unclear when we can take Jonas at face value and when we must assume he is speaking heuristically. The discussion of the statesman’s responsibility – which as we have shown is clearly paternalistic, paving the way for authoritarianism – is presented as following on principle from his theory of responsibility. At what point in this chain does Jonas’ argument cease to be serious? For all these reasons it seems more likely that Jonas’ arguments in *The Imperative* are literal.

Taking together various remarks, his post-*Imperative* position on the necessity of authoritarianism appears to be as follows: ecological collapse is one possible future but not yet a certainty, hence “at this moment fatalism is a deadly sin” (*FWT*: 54). For one thing, preliminary ecological shocks – the initial tremors before the earthquake – may well spur us on to act before it is too late. Harking back to the heuristic of fear, Jonas speculates that this might be enough to prevent the worst-case scenario of environmental turmoil leading to

an eco-dictatorship: "[w]hat I can imagine […] readily is an outbreak of dire events leading to compromise among economic, political, and social power groups who would then reach an arrangement that is relatively acceptable in terms of people and planet" (*CBE*: 25). In the event that we should fail to take such action, however, he is willing to make the "terrible concession" that "tyranny would still be better than total ruin" (*MM*: 111-112). It would in those circumstances alone be acceptable for a government to "employ such means, which we now abhor or at least deplore, in order to save their own existence" (*IHJ*: 366). Such a system is therefore now conceived of as a last resort, preferable only to an alternative of ecological collapse precipitating a new "stage of primitivism": the future McCarthy envisions of "mass poverty, mass death and mass murder, the loss of all treasures that spirit has produced" (*CBE*: 22).

A more welcome development is that Jonas is at this point no longer under any illusions as to the dangers of tyranny:

> We can design a plan in theory for a dictatorship of saviors of humanity. But what makes us think that a truly selfless elite will come to power, will remain selfless, and, what is more, will be appreciated for its selflessness? That idea totally exceeds my powers of imagination. It is a kind of utopianism that cannot be translated into reality. (25)

This is little comfort, however, as it means he later regarded the prospect of a benign eco-dictatorship as utopian, and yet could still countenance it. Jonas' final caveat is that if an eco-dictatorship should prove necessary, he hopes this will be a temporary measure only, holding freedom in trust until such a time as it might be allowed to flourish once more:

> We can make a terrible concession to the primacy of physical survival in the conviction that the *ontological capacity* for freedom, inseparable as it is from man's being, cannot really be extinguished, only temporarily banished from the public realm. […] Given this faith, we have reason to hope that, as long as there are *human beings* who survive, the image of God will continue to exist along with them and will wait in concealment for its new hour. (*MM*: 112)

With this remark – bleak partly *because* of its collapse into eschatology – Jonas' final word on authoritarianism fails to satisfy. Indeed, it very much conforms to Voegelin's observation that Gnostic political movements, in arguing for a truth revealed only to the few, necessarily "repress the truth of the soul" (1952: 165).

(β) Wolin's Vitalist Reading

If, as I suggest, Jonas initially regarded authoritarianism as our best chance of survival, does it follow that his underlying theoretical framework – the ethic of responsibility, heuristic of fear, and precautionary principle – is also objectionable, his thought having revealed its true face? Richard Wolin argues as much in his book *Heidegger's Children* (2015: 101-133), an interpretation we shall briefly consider as an alternative to Dinneen's. Wolin provocatively argues that Jonas' ethical, political, and metaphysical commitments place him in the tradition of *Lebensphilosophie*: the life-oriented school of German thought whose representatives include Nietzsche, Oswald Spengler, Ludwig Klages, Ernst Jünger, and – at least in some respects – Heidegger. One immediately notes a political commonality amongst these thinkers in their proximity to fascism, either through intellectual association, appropriation, or, as in Heidegger's case, active participation. The explanation for this is a shared hostility to the modern epoch. According to the *Lebensphilosophen*, modernity's rejection of life, quality, and *Seele* in favour of materialism, equality, and *Geist* has led to the demise of Western humanity. The charge levelled by Wolin is that Jonas' analysis – that the scientific revolution has led to nihilism and technological threats to the existence and essence of humanity – amounts to more or less the same.

In support of this claim Wolin cites Jonas' ethical foundations, which as we saw involve a recognition of the intrinsic value of non-human life, in turn accounting for our responsibility towards it for its own sake. For Wolin, a "risk entailed by Jonas's insistence on life as an absolute value is that our conception of the human good is devalued. Instead of setting our sights high and aiming at a notion of the good […] Jonas's metaphysical vitalism tends to privilege 'mere life' or survival" (121). According to Wolin, this "quasi-Darwinian" (124) tendency explains Jonas' acquiescence to authoritarianism, preserving life even at the cost of the *good* life. The underlying motivation is a "resolutely antimodern

epistemological orientation" (125) and "a disconsolate, Spenglerian sensibility" (129). As final proof Wolin points to an interview in which Jonas rhetorically asks:

> Was modernity perhaps a mistake that needs to be corrected? Are we on the right path with this combination of scientific/technological progress and increased individual freedom? Has the modern age put us in certain respects on the wrong track, which must not be pursued further? (*CBE*: 26)

Jonas offers no answer to these questions, but a critic might be able to divine one from his heuristic of fear. If we apply the latter to the trajectory of technological civilisation as a whole, then presumably the entire modern epoch, which eventually gave rise to the ecological crisis, was indeed an error which ought to have been avoided.

However, the charge of anti-modernism only holds if one ignores key moments in Jonas' thinking. Yes, he bases his politics on his ethics, and his ethics emerge from his philosophy of life. But one can only arrive at Wolin's conclusion by overlooking the all-important idea of Man as a moral being, which tells us both *why* and *how* humanity must continue to be: the overriding importance of this duty is precisely why his ethics remains humanistic. Then there is Jonas' heuristic of fear which does not, in fact, entail that modernity was an error. The heuristic requires that we extrapolate "from *presently recognizable* trends in the technologic-industrial process". This means that action to avert the ecological crisis should have been taken from roughly the 1960s, and our great sin is in failing to do so *from that point on*. It goes without saying that Jonas does not believe early modern Europeans should have envisaged, and acted to prevent, the ecological destruction which would eventually follow from the scientific revolution, since it was not at that time conceivable as an empirically-informed prediction. It is true that Jonas suggested we not "be too modern" (*SE*: 20), but this was precisely a matter of rejecting "certain developments which are ominous, which are dangerous, or which are undesirable", not that "modernity as such was somehow a mistake" (*OR*: 3).

Finally there is the charge of a reactionary politics. It certainly cannot be denied that Jonas's theory of the state leads to an authoritarian conclusion, and

to that extent I share Wolin's distaste. But it is not the case, as Wolin claims, that social democracy "fails to make an impression" on Jonas (2015: 126) – quite the opposite. And we must also note that Jonas' political thought owes nothing to a social-Darwinian hierarchy of the fittest, a theory of 'natural characterology', or indeed any comparison with the natural world of the sort favoured by the *Lebensphilosophen*. On the contrary, he discusses at length the overwhelming *dissimilarities* between non-human life and the strictly symbolic and open-ended constitution of human society (*OF* II: 22-41). Therefore Jonas' theory of the state, however objectionable, does not truly resemble that of a *Lebensphilosoph* like Spengler.

VII. The Civic Republican Alternative

One might ask: how is Dinneen right to say that Jonas' ethic of responsibility, heuristic of fear, and precautionary principle are of genuine and ongoing value, at the same time as Wolin is right that Jonas' theory of the state is authoritarian, given that the latter is meant to follow from the former? The answer is that both are wrong to think that Jonas' theory of the state follows from his ethic of responsibility and philosophy of life. In truth, this is also an error Jonas himself makes, misapplying notions from the ethical and metaphysical spheres to that of politics.

Firstly there is the account of freedom Jonas uses to characterise life, which is solely positive. Already inaccurate as a description of the freedom open to organismic being, when carried over to the domain of human political activity it also offers no basis to resist authoritarianism. Secondly, as discussed above, Jonas' account of the statesman's responsibility as akin to that of a parent for their child all too easily collapses into paternalism. Jonas' argument for paternalism, contrary to what he apparently believed, is actually at odds with his theory of responsibility. For the parent's responsibility for the infant "is to see that responsibility itself is not stifled, whether from its source within or from constraints without" (*IR*: 107). The latter is precisely what Jonas does when arguing that freedom be banished from the public realm, as the ability to collectively deliberate and shape our existence is the political dimension of moral responsibility. Not for nothing did Kant argue that a Kingdom of Ends followed from our free will and human dignity.

Taking a cue from Kant I shall now attempt to develop an alternative political model from Jonas' categorical imperative: one which recognises the value of republican freedom from domination. Not only does this move fully capture the freedom of living beings, it also follows, I suggest, from the responsibility engendered between equals discussed in the previous chapter. Thus it upholds, rather than contradicts, Jonas' theory of responsibility by extending it to the *res publica*. Moreover, a civic republican interpretation can even find textual support in his post-*Imperative* work. As Jonas retreated from viewing authoritarianism as our best hope for survival, he began to sketch out something like an ecological republicanism as the ideal political embodiment of responsibility. When we synthesise his various suggestions and asides we shall see that it offers a sadly incomplete alternative to his earlier theory of the state, and a way of redeeming Jonas as a political theorist.

(α) Freedom as Non-Domination

We mentioned at the start of this chapter that Jonas understood the political realm to be a manifestation of humanity's existential freedom: one which did not by itself recommend any politically substantive form of freedom. In search of such a theory, however, we might draw on his discussion of the Athenian city-state. In line with his philosophy of life, Jonas characterises the freedom afforded by the *polis* as still, in one sense, *needful*, since "man imposes on himself by the ordering of his life through the act of forming civilisations" the *obligation* to partake in political action (*PF*: 264). More specifically, "to be a citizen of the Greek *polis* means to be a lawgiver and to be a lawgiver means to institute orders that bind others as well as oneself": therefore "this is a freedom which acknowledges voluntary restrictions" (263). Of course, in ancient Athens the status of citizen was restricted to propertied, slave-owning men. The slave, by contrast, is unfree since "deprived of making use of [his] will through the overpowering condition of a social order in which the sanctions imposed on his opposing the will of his master are overwhelming" (257). Both the full freedom of the Greek citizen and the captivity of the slave are therefore to be understood as relational, a "power-condition" which is "embodied in a legal order" devised by citizens (*ibid*.).

This depiction of freedom and its opposite is neither purely positive nor strictly negative, but is instead closer to the republican variety: freedom understood as non-domination. According to Philip Pettit, republican freedom "is negative to the extent that it requires the absence of domination by others" and "positive to the extent that, at least in one respect, it needs something more than the absence of interference; it requires *security* against […] interference on an arbitrary basis" (1997: 51, emphasis added). What provides this security? It is, Pettit says, the legal order that citizens form through deliberation. In both respects Jonas' presentation of the *polis* broadly aligns with this definition of freedom: the slave is unfree not because they are interfered with *per se*, but because they are dominated – interfered with totally and arbitrarily – whereas the citizen's freedom from domination is secured by the legal order they participate in constituting. The negative aspect is the absence of domination, and the positive the active constitution of the legal order which secures that non-domination. It goes without saying that the restriction of citizenship to propertied males is reprehensible, but this classical feature is by no means inherent to the civic republican tradition. On the contrary, in 17th and 18th century Europe and North America the republican ideal was gradually extended, before being superseded by Benthamite liberalism. Liberalism, the poor relation of republicanism and which remains the dominant political ideology of the West, holds freedom to be largely negative. To be truly free, however, requires that responsible agents partake in what Arendt, retrieving the ideal of the *polis* from antiquity, saw as the highest dimension of the human condition: the discursive constitution of our collective life in political action (1958: 7-9).

Jonas was initially highly sceptical of the possibility of recovering the Greek *polis* or Roman *res publica* for our times. Speaking of the nostalgia for antiquity characterising the work of three fellow émigrés – Arendt, Voegelin, and Leo Strauss – he says:

> To be sure, the memory of those times […] is […] essential for our not getting lost in the necessities and compulsions and pushes of our modern age, which certainly has the danger of estranging us entirely from these eternal origins. But to hark back to them as a still available option is an anachronism, an escapism. (*OR*: 3)

Nevertheless, Jonas later drew on the republican ideal of citizenship as a way to cultivate new ecologically appropriate virtues. Speaking shortly before the end of his life, Jonas says:

> This is the one thing that keeps alive in me a modest hope […]: that the sustained reflexion on the human good, on what is a worthy life for man, individually and collectively, and what we owe to it, may (with the help of some hard lessons) generate an internal tribunal of common conscience and good taste, to which even the noncaring must pay some obeisance, because too blatant a transgression of its norms would incur the censure or revulsion of one's fellow citizens. (*CR*: 217)

We have here the familiar invocation of 'hard lessons', presumably of the ecological variety and generating knowledge in accordance with the heuristic of fear. But we also have a reference to citizens' *collective* cultivation of the good, which he elsewhere suggests might then be "raised by the power of custom to a social norm" (*TME*: 75).[88] Drawing on other late remarks I will attempt to develop this line of thought.

Responsibility can morally underpin both freedom from domination and the cultivation of ecological virtues which facilitate it. However, this would not be responsibility of the private kind – the parent-child paradigm – which proved so problematic when transposed to the public sphere domain. Instead we would point to a different sort of responsibility, discussed in the previous chapter: responsibility amongst equals. This form of responsibility, that of the community for each individual, follows from the limitations, vulnerabilities, and dependencies constitutive of the human condition, interpreted through our moral tradition. If our social and symbolic existence is the ontological ground of the *polis*, it is the "nonautarky of man", as Jonas puts it, which makes the political realm *necessary* (*IR*: 98). And our moral tradition, in recognition of this fact, instils in us a *public* responsibility to care for one another precisely because each of us belongs to the wider group which has greater power than any one member. This is, for example, the moral foundation of collective care for those living in hardship (economic or otherwise). The subjective aspect of this responsibility is known to us from the all-too-frequent encounter – at least on

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[88] The 1983 essay in which he argues this – 'Auf der Schwelle der Zukunft' – is in my opinion the turning point in Jonas' political thinking.

the streets of British cities – with homelessness and destitution. The call of responsibility is made of us less as an *individual* – since few of us can alone fully relieve others from poverty – but is rather made of us as a *member of the community*, because before us is a vulnerable good within our collective power to protect.

As stated, this alternative form of responsibility might underpin the republican kind of freedom described above. In order to be positively free citizenship involves participating in the establishment of the legal order, but to do so on an equal basis requires freedom from domination. As indicated, one example which ought to be guaranteed is support for vulnerable citizens: both freeing them *from* the domination of destitution and freeing them *to* participate in public life. More fundamental, however, are obligations to safeguard the existence and integrity of the *polis* itself, for without this, of course, it cannot afford freedom to each member. In antiquity such safeguards included personal and property rights, *provocatio* (in the Roman Republic, at least), military service, and a range of other institutions to protect citizens and the *polis* from internal disorder and external threats. Whichever of these we deemed necessary to preserve, contemporary republicanism would now also have to consider the ecological *sustainability* of the *polis*, since its bare existence is imperilled through our own technological and economic activity. In other words, our responsibility to ensure the survival of the *polis* for the sake of each member means collectively imposing limits on economic development and activity. We have here a public manifestation of responsibility for the idea of Man, but a call made to all of us as citizens, rather than just the paternalistic statesman.

(β) The Institutions of Freedom

Jonas makes three suggestions regarding institutions which might cultivate and formalise the norms which could guarantee such sustainability.[89] The first is education. In *The Imperative* Jonas had characterised education as the space where private and public responsibility coincided, insofar as both parent and state are responsible for the child's future (102-103). The republican alternative I have been developing would here agree, but only by first

[89] Jonas also suggests that we might witness the arrival of a "bizarre new religion" demanding "the utmost in asceticism" – a suggestion reminiscent of Heidegger's claim that only a god can save us now – but dismisses this option out of hand: "there's no point in speculating about such things" (*CBE*: 23-24).

incorporating its different understanding of *public* responsibility. On the paternalistic model of governance Jonas advocated, education, to the degree that it is a public responsibility, would presumably be an imposition of statesmen. According to the republican alternative, however, education would be guided by the responsibility of equals, thereby aiming to *develop equal citizens* who may partake in the collective life of the *polis*. As to the content of such an education, Jonas gives us a clue:

> Through education, through the way we bring up our youngsters and inculcate a style of life, we can have an influence on the forming of our consumption habits and make a certain frugality, a greater modesty, part of the social climate – or, [to] put it the other way, impose some penalty of shame, a social blemish[,] on excessive and vulgar hedonism [and] consumerism. (*CR*: 217)

This appears to refer to education's capacity to cultivate virtue and vice, one that it already exercises, but now with the end of upholding our new ecological responsibilities. I will briefly attempt to justify this claim.

As we saw in Chapter Three, the virtues are character traits which, along with material and other circumstantial factors, contribute to flourishing (*eudaimonia*). An uncontroversial list of virtues – to those belonging to the Western tradition – would include courage, honesty, benevolence, and wisdom. The vices play an opposing role, diminishing *eudaimonia* through either an excess or deficiency of a particular trait: the virtue of courage, for instance, occupies the ideal middle ground between recklessness and cowardice. Now, the cultivation of virtue is not a merely private concern. According to Aristotle, politics aims at citizens' common good: either that which is good for all, or a good which can only be achieved by the collective (freedom from domination, we might note, fulfils both definitions). More specifically, public education – as well as private – in part concerns morality. In addition to teaching rules of conduct, moral education aims to cultivate virtue and discourage vice, drawing on a moral tradition for its content. Jonas' hope is that collective and sustained reflection on our new responsibilities might determine new ecological virtues and vices, which would then be incorporated into education. The core virtues he identifies are "caution", "frugality", and "modesty" (*TME*: 67) – all ancient,

forgotten, and now in need of revival – to which we might add respect for life. The vices he points to are vulgar hedonism and consumerism, which, preventing us from carrying out our duties, would accordingly be a source of shame (69). Through this derivation of newly appropriate virtues and vices, citizens would better carry out their responsibilities: thus Jonas' ethics once again demonstrates its Kantianism.

The second institution we could point to is law, deriving moral justification from the norms just mentioned. Here Jonas explicitly takes inspiration from antiquity:

> [F]reedom can exist only if it limits itself. The unlimited freedom of the individual destroys itself because it is incompatible with the freedoms of the many […]. In ancient Rome, for example, there were laws limiting private ostentation. Elected censors had the right to investigate whether displays of luxury were excessive. […] This was a major infringement of personal freedom, but it was done specifically in the name of a self-governing citizenry. (*CBE*: 25-26)

Building on our discussion so far, we may say that although limitations on personal consumption clearly violate negative freedom from interference, they are nevertheless compatible with republican freedom from domination. If the citizenship endorsed legislation to limit consumption, for example, this would be justified by increasing the ecological sustainability of the *polis*, and conforming to the aforementioned virtues which help safeguard the existence and essence of humanity. One might object that there is a danger here in that *any* public intrusion in the sphere of the individual could then be justified in the name of the *polis* and the idea of Man. This is a real worry, to be sure, reminiscent of an objection often levelled at Rousseau's republicanism: if the general will is sovereign, then the individual may succumb to a tyranny of the majority. As Pettit argues, government would be at risk of becoming "a law unto itself" and the individual "vulnerable both in relation to the state and in relation to our fellow citizens" (2012: 24-25). This problem is not inherent to republicanism, however. The Anglo-American tradition – Locke, Harrington, Madison, and Jefferson – stressed the kinds of institutional safeguards which protect individuals and

ensure contestability of legislation, thereby mitigating an otherwise legitimate concern.

The final suggestion which may be extracted from Jonas' later work pertains to international law and governance. Tackling the ecological crisis is predominantly the responsibility of industrialised nations, and so co-ordination of this effort will have to be – at least to some extent – an international effort. In *The Imperative* Jonas had envisioned a global government as best able to rise to this challenge, but given that the alternative I am developing takes inspiration from the *polis* or *res publica* – i.e., the city-state, or at most the nation-state – it appears to be incompatible with operating on such a scale. It is true that the Roman Republic, even before its transition into the Empire, stretched across the Mediterranean, and was therefore not geographically confined in the same way as the Athenian city-state. But this was, of course, achieved militarily, and therefore at odds with the central republican principle of freedom from domination.

Jonas suggests, therefore, that the solution must be the political creation of a "peaceably united humanity" (*TME*: 71). This would have to be achieved through international law and treaties binding individual polities: "it is clear to me that bodies must be established which address these [global] issues and enjoy a sort of international authority which governments and corporations cannot easily escape. […] This would be a step on the road to a real *cosmopolis*" (*FWT*: 118). Through such a system – a United Nations with real authority, perhaps – the *polis* would be situated within a *cosmopolis*, and politics could thereby legislate on the global workings of technological civilisation. Jonas hopes that on such a basis the ecological crisis might be averted, without authoritarianism becoming a necessity. To be sure, this goal may well be utopian. Jonas does not offer much detail as to how it might be achieved, and indeed, "a mysterious evolution of mankind toward peace and world order" is included by Voegelin in his list of Gnostic utopias (1952: 172). Jonas concedes as much, but with the mere possibility of an internationalist solution to the threat of ecological ruin is "more hopeful than at the point when, fifteen years ago, I published my book *Das Prinzip Verantwortung*" (*FWT*: 119). On an uncharacteristically optimistic note, then, I conclude my attempt at devising an alternative political theory from Jonas' work.

VIII. Responsible Freedom

Jonas' political philosophy is quite clearly the most objectionable component of his philosophical system. This is demonstrated not only by the criticisms levelled at his theory in *The Imperative*, but also by the fact that my attempt to find an alternative, in civic republicanism, could only draw on suggestive remarks and asides. I hope, however, that I have been fairer to Jonas' intentions than more vehement critics such as Wolin, while not making excuses for his obviously paternalistic and authoritarian arguments, in the manner of Dineen. Moreover, Jonas' contributions as a political theorist are not without merit. His rejection of the liberal assumption of neutrality between competing conceptions of the good, though controversial, is defensible given that the moral content he suggests is responsibility for the idea of Man and life on Earth: duties to which no-one could reasonably object. Then there was his heuristic of fear and associated precautionary principle, the latter of which has even been taken up, in weaker forms, by the United Nations and European Union.

Finally there was Jonas' nascent republicanism. This embodiment of the imperative of responsibility derives its appeal, in part, from the flaws of his prior attempt, in particular the three key errors made in his argumentative chain: firstly, the description of freedom as purely positive; secondly, Jonas' framing of the choice between political systems as simply capitalist democracy or communist dictatorship; and finally, the analogy he drew between political responsibility and the parent's responsibility for the child. Correcting the first mistake is simple enough, as it merely requires a demonstration of the fact that freedom is, from human beings all the way down the tree of life, both positive *and* negative. The second error is also easy enough to rectify, as the economic and political spheres can be logically distinguished: we are then able to accept that an alternative to Baconian economic productionism is indeed necessary, while rejecting the Marxist-Leninist form Jonas considers. The third mistake is corrected by noting that political responsibility follows not from the private, 'vertical' relation of parent and child, but rather the public, 'horizontal' relation between equal adults. Taking all three corrections together shows us how ecological goals might be achieved without recourse to authoritarianism: namely, through the tradition of civic republicanism. The republican alternative, as I have sought to appropriate it, is able to justify productive and consumptive

constraints through the political domain, without sacrificing freedom or simply reducing it to its positive form. As such, the *polis* or *res publica* becomes the ideal of a politics of responsibility, ensuring the continued existence of humanity through the legal order and the cultivation of new ecological virtues. Once more, then, a solution to the failures of modernity can take inspiration from Aristotle.

It might be argued that this alternative recasts Jonas as one of those thinkers he mocked for nostalgically harking back to antiquity: Arendt, Voegelin, and Strauss. But in a sense Jonas' political philosophy as presented in *The Imperative* already conforms to this type. The only the difference is that whereas Arendt, say, sought to revive the highest aspects of classical political theory, Jonas draws on the most dangerous. I have in mind the dictatorial powers which the Roman Republic would temporarily grant to a chosen magistrate in times of crisis. The Senate would suspend democracy for six months or until the danger to the Republic, either internal or external, had been dealt with. Jonas' call for a suspension of democracy to confront the ecological crisis – a suspension which he later specified should last only as long as is necessary – is curiously reminiscent of this constitutional practice. By contrast, my attempt to develop an ecological republicanism from other aspects of his thought neatly aligns with the normal conditions of the Roman Republic: a clearly preferable source of inspiration. Moreover, it also conforms to a principle which Jonas himself advocated: "to keep watch over the humaneness of the measures by means of which we are trying to avert catastrophe. For these measures could be such that the whole thing we are trying to save goes to the devil" (*CBE*: 29).

Chapter Six: Bioethics and the 'Idea of Man'

I. Responsibility for Human Dignity

Of the novel ethical problems posed by technological civilisation, we have so far discussed those relating to the environment, and analysed Jonas' theory of responsibility accordingly. Establishing the norms which might prevent ecological catastrophe was, after all, the central task that he ascribed to moral and political philosophy (*MM*: 51), and this of course motivated *The Imperative of Responsibility*. But Jonas' ethics has a second practical dimension, pertaining to biotechnology and the life sciences. The importance of bioethics to his thought, and its connection to his wider philosophical system, is clear from the reference in *The Imperative* to an envisioned "applied" counterpart dealing with such issues (*IR*: 21). Jonas' subsequent volume, *Technik, Medizin und Ethik*, explicitly fulfils that promise (*TME*: 9), collecting the majority of his essays on bioethical issues. In this chapter we shall see how these writings relate to his theory of responsibility, by allowing us to think through the novel problems posed by developments in biotechnology and the life sciences. In particular, we shall see that Jonas was an early and perceptive critic of what has since become known as transhumanism: the drive to alter the human condition itself through biotechnology. As such, his thinking once again demonstrates its contemporary relevance.

According to Albert Jonsen, "Jonas was the first philosopher of eminence to arrive on the medical ethics scene", but his influence was limited thanks to a style which "was, perhaps, too ontological and conservative for the typical American ethicist" (1998: 77).[90] If accurate, this is less a reflection of Jonas' significance than of the lamentable state of Anglophone bioethics. What is true is that Jonas' arguments draw on his wider ethical and metaphysical thought, which no doubt limits their appeal in a discipline oriented toward instrumental solutions. And again, it is true that on occasion the force of Jonas' rhetoric – as distinct from the substance of his arguments – can be dogmatic. He claims, however, that both features are part of an attempt to counterbalance the

[90] One might note that Jonas' arguments have influenced the American 'bioconservative' school of thought, most notably through the work of Francis Fukuyama (2002) and Leon Kass. Indeed, Kass co-dedicated *Life, Liberty, and the Defense of Dignity* to Jonas for his "moral passion and philosophical courage" (2002: 299). Furthermore, his bioethical thought received some degree of public recognition via testimonies given to the US Senate.

reckless pursuit of progress, crudely understood, of which Anglo-Saxon bioethicists are so prone (*IR*: 203). In truth, a nuanced approach is more appropriate given the central context in which bioethical issues arise: healthcare. Healthcare has an inherent normative thrust – curing disease – marking it out from *technē* as such (*IR*: 4). In this context, the ethicist cannot often prescribe "a simple 'yes' or 'no' […]; instead, we find an area of fluid boundaries, subtle value judgments, and controversial decisions" (*MM*: 50).

At this point, one might ask exactly *why* bioethics may make prescriptions for scientific and technological research – the arts and humanities, by contrast, are subject to no such public sanctions. The difference, of course, is that the latter belong exclusively to the domain of speech and ideas, whereas the former also belong to the realm of action. As we saw in the very first chapter, modern natural science is distinguished from its pre-modern forebear by emphasising experimentation, from which theory subsequently follows. As such, modern science – both natural and social – is inseparably tied to practical action. While freedom of *expression* is conceivably an absolute right, there is no equivalent right to freedom of *action*: we regulate action where there is the risk of wrongdoing or harm to others (*SB*: 255-8). This includes, least controversially, material and personal harms captured by a hedonic calculus. Jonas' central concern, however, is that even *with* a utilitarian sanction, the will to medically assist can come into "conflict with human dignity" (*ibid.*). We shall see that this worry motivates his reflections on experimentation on human beings, medical issues at the threshold of life and death, and genetic engineering. Even if moral philosophy, in response to such cases, "has nothing to offer except compromises between conflicting principles" (*ibid.*), it remains a responsibility to think through such developments and ensure that the highest good is not sacrificed in the name of amelioration.

How, then, are such issues to be adjudicated? From where do we derive our notion of human dignity, and how is it meaningfully substantiated? Postponing the former, procedural question for now, Jonas provides an answer to the latter with his heuristic of fear and ethic of responsibility. We recall from previous chapters that the ultimate object of our responsibility was the idea of Man as a moral being, requiring, by necessity, the presence of human life as its bearer. This was enough to account for a responsibility to ensure the existence

of future generations, but it does not tell us a great deal about *how* human life ought to be, only that it must have the formal capacity for morality. This functioned as an ethical absolute in Jonas' new categorical imperative ('Act so that the effects of your action are compatible with the permanence of *genuine* human life'), hence those developments which threaten the existence of humanity as a moral being can be ruled out *simpliciter*. In the realm of the life sciences these are few, however. Certainly, one can envisage a stunted, stupefied form of human life biotechnologically stripped of its capacity to act morally (such beings might even be seen as useful to states in certain military contexts). In destroying the human essence, a crime even in a single instance, this would obviously fall foul of Jonas' categorical imperative, but the vast majority of bioethical issues are not so easy to evaluate according to his imperative.

The threats to the idea of Man which typically follow from biotechnology and the life sciences are more ambivalent, requiring the kind of deliberation mentioned above. It is in this connection that Jonas' heuristic of fear has another role to play. We recall from the previous chapter that the heuristic's function was to help us avert courses of action in which the existence and essence of human life was threatened. As stated, in the cases of humanity's bare existence or its capacity for morality the nature of the threat is fairly clear. But for those instances where the human essence might be compromised or violated, the fear *itself* helps us to identify and better understand precisely what is at stake: "we need the threat to the image of man – and rather specific kinds of threat – to assure ourselves of his true image by the very recoil from these threats" (*IR*: 26-27, emphasis removed). Now, this might sound circular, presupposing that which is subsequently discovered: as though we imagine a threat to the idea of Man, but only through our fearful response to that threat do we discover the idea of Man. However, whilst Jonas admits that his argument has an air of paradox about it, it is not, I think, circular in the sense just given. What I take Jonas to mean is the following: the *demands* made of us by human dignity – which follows, we recall, from our status as moral beings – only reveal themselves when we perceive a violation of that dignity. It is in *this* sense that we discover the 'full' idea of Man, and hence come to "*know the thing at stake only when we know that it is at stake*" (27).

A little more has to be said in justification of this claim. Human dignity, a dimension of the idea of Man, functions in this oblique way because dignity in general is not the kind of thing which can be comprehensively described independently of circumstances.[91] It is not an object, but a status, denoting both the moral significance of a being *and* the particular ways in which I can and cannot treat it. While the former is rationally demonstrable – as we saw in Chapter Three – the latter can only be discovered contextually. And the question of context is here paramount: historically, the stable temporal and spatial reach of our actions broadly aligned with our time-honoured norms governing inter-personal relations. But since emerging technologies and novel scientific practices provide us with unprecedented ways of relating to fellow living beings, we now have to draw on observation, and imagination guided by fear, to discover which of these violate dignity.

A brief thought experiment will suffice to show how this works as a general method. We recall that there are two different categories of dignity, the personal and non-personal. Personal dignity belongs to humans alone by virtue of our moral being, whereas non-personal dignity is accorded by having ends and is therefore possessed by all life. Now, although non-personal dignity is formally discovered in identifying a being as immanently teleological, I can only come to know what this morally entails when it is violated, either in reality or the imagination. If I perceive an organism which is prevented from behaving in the way proper to it – keeping a bird caged, say – the perception of the fact is given inseparably with that of its violated dignity: this bird before me is not being treated in the way it *ought* to be. Even if the bird in question does not demonstrate any physical or emotional discomfort – perhaps the cage is all it has ever known, meaning it does not long to fly – the sense of violation prevails. Indeed, in one sense the violation is greater still if the bird does not mind that it cannot behave and fly: we would then have established total domination over its *telos*.

[91] Confusion can also arise when ‘human dignity’ is invoked, as it is often unclear whether the appeal being made is to personal dignity alone or to both personal and non-personal dignity at once – i.e., to the kind of dignity which belongs *exclusively* to humans, or to the kind*s* of dignity which humans possess. For the sake of clarity I will use ‘human dignity’ in the former sense, to mean the dignity possessed exclusively by humans.

One cannot conclude from this, however, that one may never violate a being's non-personal dignity. After all, we must do so in order to live, both in the consumption of other living beings and in self-defence against human and non-human threats. If these acts remain wrong, as appears to be the case, then wrongdoing is a tragic necessity of life. As Jonas says, following Schweitzer, "we make ourselves guilty by insisting on being here" (*OS*: 24, emphasis removed). The challenge for practical reason is to minimise such guilt by carefully distinguishing between the unnecessary and the regrettably necessary violations of non-personal dignity, taking care to avoid the former. Making such judgements tends to be an imprecise art, as we can only do so by weighing duties against consequences and virtues: potentially conflicting moral registers. However, courtesy of Jonas' new categorical imperative, and the unequivocal responsibility it entails for the essence of humanity, we may draw some stronger conclusions regarding *human* dignity. It belongs, we recall, to humanity as a moral being, and so wherever this sort of dignity is at stake we risk a violation of the idea of Man. The distinction between personal and non-personal dignity, and the requirements of each, is therefore functionally equivalent to Kant's distinction between perfect and imperfect duties. Jonas' method may lack the precision of a utilitarian calculus, but it will nevertheless be shown to be superior in accommodating, rather than overlooking, that which transcends mere utility.

This brings us back to the unanswered procedural question of how bioethics should be conducted and feed into legislation. Jonas' suggestions here notably contrast with his earlier application of the heuristic of fear. Unlike the ecological crisis, which is a matter of quantifiable threats to the existence of humanity, threats to human dignity are qualitative, and less permitting of expertise. While one can be an expert in climate science, it is not clear how one could be an expert in perceiving violations of human dignity.[92] This is also true of those bioethical cases which are concerned with the weighing of integrity and non-personal dignity against other considerations – virtue, utility, justice, and so on. While the bioethicist's training might allow them to avoid errors of reasoning, there is no objectively correct balance to be struck. For this reason, combined with the fact that scientific and biotechnological progress is always optional, Jonas suggests that bioethics should be conducted in a publicly participatory

[92] Or rather, all of us, provided we are morally competent to a normal degree, are experts in perceiving violations of human dignity – but in that case 'expertise' becomes meaningless.

fashion. At present, when public opinion is taken into account during policy-making and legislation it is only informally. Jonas instead suggests that bioethical decisions ought to be made by bodies “constituted by laymen from all walks of life”, since they concern the “extra-scientific sphere and wider society” (*TME*: 79). The advantage of such an approach is that it may better avoid “the danger of subjective arbitrariness”, present whenever we deal with qualitative properties which “only become apparent in personal perception” (86). The following reflections, then, are not a claim to bioethical expertise, but an attempt to articulate concerns underpinned by our moral tradition and which might be of decisive importance.

II. Human Beings as Means

We shall start with the broad question of experimental medical research on human beings, and the possibility of violating human dignity that it entails. Indeed, one of the central reasons for the development of bioethics as a discipline was responding to very real violations of this kind, not only in totalitarian states (such as Josef Mengele’s Auschwitz experiments), but also in liberal democracies. The Tuskegee Syphilis Experiment run by the United States Public Health Service from 1932-1972 is a notorious example of the latter. 600 impoverished African-American participants were enrolled in the study to observe the effects of untreated syphilis: 399 of the participants already had the disease, while the remainder acted as healthy controls. However, none of the infected actually knew they had syphilis: they were told only that they were under observation for ‘bad blood’, and even after penicillin became an established treatment for the disease in the mid-1940s, none were cured. As a result, dozens of participants died, forty sexual partners contracted syphilis, and nineteen children were born with its congenital form.

The Tuskegee Experiment is a stark example of the kinds of wrongdoing we are concerned with here. Clearly, one can make a strong utilitarian case against the great physical harm done to the participants and their dependents, and the great psychological harm of subsequently discovering that from a certain point in time the former was entirely preventable. This hugely outweighs, one could argue, the utility of any discoveries forthcoming from the experiment. Although we would not want to object to this claim, an argument could be

hypothetically made in defence of Tuskegee-style experiments, on the grounds that the interests of a few individuals are outweighed by society's interest in developing a cure for the disease. The only problem with the experiment, our fictional interlocutor might argue, was that the participants were not given access to the cure when it was discovered. They could even suggest that a great number of such experiments carried out in a limited period of time, might, by increasing the chances of discovering cures, maximise utility in the long run through the countless future lives saved.

No contemporary bioethicist, to my knowledge, has made this case, although in the discipline's infancy such questionable appeals to the 'greater good' were not unheard of. It is in that context that Jonas wrote his seminal essay 'Philosophical Reflections on Experimenting with Human Subjects' (*PE*: 107-133). We shall draw on it in examining the above hypothetical argument so as to develop our understanding of the violations of dignity which can be done in experimental situations.

To begin with, our fictional defendant of Tuskegee-style experimentation relies on a number of dubious empirical assumptions: firstly, that cures will actually be discovered, and, secondly, that this will occur in a sufficiently short length of time. Let us grant both for argument's sake – although we certainly have no reason to believe the latter – since we do not want a strictly scientific claim to be the crux of our objection. This brings us to the next assumption, namely that collective happiness would be greater if citizens knew they, or their loved ones, could be used in this way. However unappealing the prospect, this is disconcertingly plausible. The hypothetical argument assumes that the collective utility of *all* subsequent generations benefitting from the cures would outweigh the harm done to the few used in experimentation now, and it very well might. Although future people may well *regret* the use of coerced subjects in medical experimentation, if it resulted in cures they may still prefer, on balance, that it occurred. One suspects that this is, in fact, a widespread attitude toward the dubiously-acquired medical advances we enjoy today. We could of course maintain in response that the fear, misery, and suffering of the coerced would be greater than the happiness of the cured it allowed for. But in doing so we lose sight of the full ethical picture: a hedonic calculation of this sort fails to comprehensively account for our resistance to the argument. The latter can only

be captured in a different ethical vocabulary, principally that of human dignity. In developing this claim we shall identify the limits that human dignity places on what can be done to individuals in experimental research, and how this overrides any utilitarian justification for the latter.

To begin with we might posit that a sacrifice made for medical research be exactly that: a *sacrifice*, something which, as Jonas says, “must be absolutely free” (111). In the bioethical literature this is typically characterised as giving one’s informed consent to be used in research. Clearly, in the Tuskegee Experiments the lack of informed consent from the participants – leading to the unknowing infection of sexual partners and subsequent children – is one cause for our repugnance. But even informed consent, if left unsubstantiated, is insufficient (*SB*: 260-1). For example, if the ill and impoverished participants of the Tuskegee Experiment had given their informed consent in exchange for some sort of financial compensation, we might regard this as taking advantage of the vulnerable. In order to avoid such exploitation in the recruitment of research participants, thereby ensuring that informed consent is truly free, we require some robust criteria. Jonas suggests that we prioritise, and progressively work down from, those volunteers who simultaneously a) least need remuneration, b) have the best understanding of the experiment and the risks involved, and c) most believe in, or identify with, the purpose of the research (*PE*: 123). Not only does this totally reverse the “availability and expendability” logic of the Tuskegee researchers, it also makes the researchers *themselves* the most suitable candidates for participation (124). Impractical though this may be, “with all its counter-utility and seeming ‘wastefulness’, we feel a rightness about it” (125).

For what reason do we insist that truly free informed consent be a non-negotiable “minimum requirement” (121), and why do we prefer Jonas’ strong criteria for selection over the weaker ones usually adopted? The answer, as indicated above, is the *human dignity* preserved on behalf of those participating in the experiment. Truly free informed consent is a minimum requirement not just because it implies less harm to feed into a hedonic calculus (although this is clearly part of its importance). It also matters because *making the decision* to partake for the sake of the research upholds our status as moral agents, true to the beings that we are. In a Kantian vernacular, we might say that by

consenting in this way the participant remains an end while also being treated as a means; without doing so they are instrumentalised and their human dignity violated. Making this very point, Jonas claims that "[o]nly genuine authenticity of volunteering can possibly redeem the condition of 'thinghood' to which the subject submits" in an experimental situation (109). We have here, then, an example of how the demands of human dignity emerge from a concrete situation: in an experiment our dignity is violated if we are treated as a thing rather than a person, revealing the ethical necessity of truly free informed consent, and rendering Tuskegee-style experiments impermissible in principle.

There is an ambivalence in Jonas' argument, however, which we must address. On the one hand, he claims – and we have argued that this is correct – that a robust definition of informed consent is necessary to avoid a violation of human dignity in the experimental situation. On the other hand, when drawing up his criteria for how to ensure truly free informed consent, Jonas suggests that they are ideals, not absolutes: "a descending order of permissibility leads to greater abundance and ease of supply, whose use should become proportionately more hesitant as the exculpating criteria are relaxed" (123). We have here a concession to pragmatism on the grounds that strictly observing his criteria would suffice "neither in numbers nor in variety of material" for statistically meaningful experiments (122). Could they be relaxed without treating participants merely as means, and if so, how? We can imagine a degree to which two of the three criteria could be loosened: we might allow for someone who did not grasp the finer points of the research project in which they participated, as long as they fully understood its potential risks, or someone who identified with the purpose of the research only because they felt that it was worthwhile. Much more troubling would be relaxing the criterion of recruiting those who least need material remuneration, which was included to prevent exploitation of the socio-economically vulnerable. So even if we do not accept a wholesale weakening of Jonas' criteria, we can, then, allow *some* degree of pragmatism, and demand that informed consent entail a belief in the purpose of the research, comprehensive understanding of its risks, and a lack of socio-economic vulnerability.[93]

[93] Needless to say, testing these would be difficult in practice – but this is no fundamental objection to their rightness.

Here we have shown a crucial way in which human dignity imposes constraints on what can be done to individuals in the context of research. However, even proceeding in this way implies that the burden of proof lies on the side of the individual, and that the societal demands made of us in this domain are legitimate unless shown to be otherwise. But why should we assume this to be so? For it would only hold if the medical-scientific enterprise bestowed researchers with overwhelmingly strong grounds to make demands of individuals, and it is not obvious that it does. So why not think the opposite: that science shoulders the burden of proof? Certainly, we have acknowledged that healthcare is a generic good, but it does not follow that we have *obligations* to contribute to its progress. Should we refuse to volunteer, such that no novel research took place, society would not collapse. On the contrary:

> If cancer, heart disease, and other organic noncontagious ills, especially those tending to strike the old more than the young, continue to exact their toll at the normal rate of incidence (including the toll of private anguish and misery), society can go on flourishing in every way. (117)

There is, to reiterate, no obligation to contribute to medical research for *society's* sake: it will be just fine. What might provoke a self-sacrifice – either of possessions, such as time and money, or perhaps even a part of one's bodily self – is the vulnerability of *individuals* suffering from the diseases. Even this, however, is not obviously binding. There may exist an absolute duty to help others if it is within one's power to do so and the risks are not prohibitively great. But the link between participation in medical research and saving lives is not straightforward: the former only potentially increases the chances of the latter, and to a highly variable degree. So although participation might be commendable – an imperfect duty, as Kant would say – it would not seem to amount to an obligation.

What of the principle of reciprocity? Might we be indebted to those who have already participated in medical research? This claim could be understood in two ways: either as an indebtedness to those who have *historically* helped medical science to progress to its present state, from which I benefit in many respects, or as a reciprocity to my contemporaries who make a sacrifice *now* for the sake of improving medical science in the future. The first is a broader claim

insofar as it encompasses a greater timespan, but also more concrete in that it appeals only to those from whom I actually benefit. The second claim is historically narrower, but normatively broader in that it suggests our indebtedness is not only to those from whom we *actually* benefit, but simply those who make a sacrifice for the sake of medical progress *per se*. Both, I would suggest, have some appeal, the latter perhaps more so than the former. The first claim draws strength from the fact that we do, indeed, benefit from a great number of individuals who have gone before us and made sacrifices.[94] However, the very fact that they are our predecessors means that beneficence can only be unilateral: while they have benefitted us, we cannot benefit them, and so the principle of reciprocity cannot be logically upheld. Indeed, this reflects the specific goodness of their legacy.

The second claim does not suffer from this problem, since the participants in question are my contemporaries. Now, they might contribute to a study which is irrelevant to my needs, or, if not, the results might yet be useless. But we shall assume for the sake of argument that some contemporaries of mine have contributed something to medical science from which I will benefit. Can we be said to have reciprocal duties to these participants? I would again argue that we cannot. As discussed, a true sacrifice, made either in the past or present, must be voluntary: it is from this that it derives its goodness, above and beyond the utilitarian aspect. And of course, this very fact entails that *I cannot be expected to do the same should I not wish to*. If it *were* conceived of as an obligation, then it would no longer be truly reciprocal since the acts would be qualitatively different. All that a historical or contemporary sacrifice *can* do is give us a reason to be grateful to previous volunteers, and so provide us with an additional motive to freely make such a sacrifice ourselves. This is stronger in the case of contemporaries, by virtue of their example being closer at hand and more readily identifiable with, and, as discussed, the fact that their being alive means that I may be able to truly reciprocate. But even in the case of predecessors, to whom I cannot reciprocate, the memory of their sacrifice may still motivate me despite the historical distance. Neither is insubstantial, but nor, to repeat, do they not establish a perfect duty: the strictly voluntary nature of

[94] I am here setting aside the fact that that plenty of medical advances and scientific discoveries made in previous historical epochs were with involuntary participants, which, as immoral, cannot justify the same now.

their sacrifice means that if I am to make a reciprocal sacrifice for medical science, it must be qualitatively the same. For this reason, as Jonas says, “precedence must not be used as a social pressure” to extract consent where it is not genuinely forthcoming (120).

However, there are limits to the line of argument developed, as Jonas himself acknowledges. Our rejection of duties to society rested on the observation that it will continue to exist without my contribution to the progress of medical science. But there are, at least hypothetically, circumstances where this will not be the case. Can we then be said to have duties to society? And what role does human dignity then play? Perhaps an analogy can be drawn with military emergencies. Jonas suggests that in wartime, “society itself supersedes the nice balance of the social contract with an almost absolute precedence of public necessities over individual rights […] a near-totalitarian, quasi-communist state of affairs is *temporarily* permitted to prevail” (115). This claim is too broad if meant for just any conflict, since not all wars imperil society. But we would be willing to concede that intrusions into the private realm, such as the requisition of private property, and even military conscription, are permissible if necessary for the very survival of a just nation-state. Note the requirement that the nation-state must itself be *just*: conscription is not a moral right we would be willing to extend to tyrannical regimes (although they would probably be the most likely to make a claim to the *legal* right), since the military defeat of such a government – North Korea, for instance – might actually benefit citizens and protect human dignity. The crucial point, therefore, is that it is not the needs of society *per se* which justifies conscription, but a morally commendable *form* of society.

If it is acceptable to place (adult) lives at risk in such an emergency, and on a compulsory basis, might there be a parallel with using individuals in compulsory medical research if it were necessary to combat a deadly pandemic? There are similarities, to be sure. Both cases are for good ends: a just war and averting societal collapse. Both might ultimately be to no avail: the war might not be won, the pandemic not averted. And again, in both cases human beings are used as means: the soldier is trained and ordered to kill, the research participant submitted to experimentation. Are they then alike, the one as permissible as the other? There might yet remain a subtle but significant difference which prevents us from concluding in the affirmative. Although the

soldier must carry out their orders under pain of being court-martialled, refusal is always a possibility. Thus they retain a degree, however slight, of agency and consequently virtue in *how* they act. And when the soldier does carry out their orders they can remain an end whilst being treated as a means: the soldier can be brave or fearful, cunning or dim-witted, they can excel or be merely adequate. The conscripted experimental subject, by contrast, can be none of these things – or rather, while they might be otherwise virtuous people, they cannot be virtuous *qua* experimental subject. The research participant has no scope for agency and excellence because they are reduced to a mere *thing*, a source of data, while even in conscription the soldier retains a modicum of personhood and with it, human dignity, in their having some choice between actions and conduct. Although this distinction is very slight, it may allow us to differentiate between forms of conscription.

III. The Threshold of Life and Death

We will turn now to issues involving the ending of human life which advances in medical science have made a matter of public debate. Though we cannot hope to cover the topic in its entirety, Jonas wrote insightfully on the ethics of euthanasia, particularly in its ‘passive’ form: i.e., the withholding or withdrawing of medicine, rather than the active ending of a life. We will then look briefly at the issues of abortion and infanticide, largely with reference to Jonas’ theory of responsibility. Here we have instances of actively taking human life: what, if anything, makes them qualitatively different from active euthanasia? And if we find abortion to be permissible, at least in some circumstances, does anything make *that* different from infanticide? Our first topic, however, is the ethical significance of how we demarcate death for the purposes of acquiring organs.

(α) Organ Harvesting

In 1968 the Harvard Medical School published a report arguing that irreversible coma should become the medical definition of death. Jonas wrote an ethical critique in response – ‘Against the Stream’ (*PE*: 134-142) – which, as Marcus Düwell notes (2013: 213-214), remains of philosophical significance for what it tells us about the conceptions of humanity presupposed in bioethical debates. This broader point emerges from Jonas’ more immediate argument, which is against the motivation of the report’s authors. For the purpose of the

proposed redefinition of death as irreversible coma was not strictly scientific – i.e., the best-informed theory available – but rather *instrumental*: to maximise the number of organs available for transplantation.

Now, there is a clear utilitarian rationale for such a redefinition, which ought to be given its due: people regularly die for want of available organs, organs which will never again be consciously valued by their original possessor if he or she is in an irreversible coma. Both of these statements are true, and have persuasive force. And yet we feel uneasy when presented with this as a case for redefining death. The reason is the aforementioned instrumentalism: the report is not concerned with whether the irreversibly comatose patient really *is* dead, but whether we should declare them dead so as to allow us to freely make use of them. It is the former issue alone which concerns medicine, whereas the latter, in Jonas' words, conforms to "the ruling pragmatism of our time which will let no ancient fear and trembling interfere with the relentless expanding of the realm of sheer thinghood and unrestricted utility" (*PE*: 142). Insofar as the motivation is to reduce the patient to a mere means, violating human dignity, we are inclined to agree.

In response, one might argue that this only begs the medical question of whether an irreversible coma is an appropriate definition of death. For one could say that, yes, the motivation behind the report is deplorable, but this does not prove that the proposed definition of death is itself wrong. If it turned out to be correct, then the report would not be reducing human beings, in the fullest sense, to repositories of useful tissues, but rather *dead* human beings to such things. And although this might still trouble us, it would not do so to a comparable degree. In formulating a reply to this line of argument, Jonas' philosophical biology and anthropology become relevant once again. The idea that a human being is dead once the higher functions of the brain are irreversibly lost betrays, he says, "a curious remnant of the old soul-body dualism. Its new apparition is the dualism of brain and body" (140-141). The notion implies that once certain faculties – those which are peculiarly human, to be sure – are irretrievably lost, the *human being* is dead, or as good as. But why draw this very Gnostic equivalence, when, as we saw in the Chapter Two, human beings are both mind *and* body, the latter referring to not only the brain but rather the organism as a whole? As Jonas says, "identity is the identity of

the whole organism […]. How else could a man love a woman and not merely her brains? How else could we lose ourselves in the aspect of a face? Be touched by the delicacy of a frame? It is this person's, and no one else's" (141).

Now, this argument is beset by a problem of its own, namely the ambiguity concerning when the organism as a whole is dead. Part of the discomfort with declaring an individual to be dead on the basis of irreversible coma – or even brain stem death, the current medical definition in the UK – is that they might still be circulating blood and breathing, even spontaneously so (i.e., without medical assistance). A breathing, moving, metabolising being cannot be dead, even if permanently unconscious: it is not by accident that in Ancient Greek *pneuma* named both 'soul' and 'breath'. However, if we follow the claim that an individual can only be dead once they have ceased to breathe and circulate blood, we are faced with the problem that hair and nails will continue to grow for a period. Here is evidence, however small, of the very metabolic activity by which Jonas characterised life. Ought we then say that an individual is only dead once even these processes have ceased? It seems that consistency would demand it – yet Jonas argues that this stringent definition is not, in fact, required by his theory. Rather, even if some *localised* metabolic activity continues after respiration, circulation, and sensation have irrevocably ceased, with these latter cessations the organism understood *as an integrated whole* has died: "the effect of their functioning, though performed by subsystems, extends through the total system and insures the functional preservation of its other parts" (137). His definition, then, ultimately relies on the organism as a teleologically-organised being. We could note that, after all, the body as a whole will decay – surely evidence of death – while hair and nails continue to grow, but as long as the respiratory and circulatory systems are intact it will not.

Though this definition is imprecise, it is more satisfactory than those which rely on brain stem death or irreversible coma as their criterion. On the basis of a non-reductive theory of the organism, we can account for the intuition that breath, a beating heart, and sensation are evidence of life, and that prior to their irreversible cessation an individual cannot be declared dead. If this lacks the clarity of a brain-oriented definition of death, then this may simply be truer to the phenomenon. As Jonas says, paraphrasing Aristotle:

> Giving intrinsic vagueness its due is not being vague. […] Reality of certain kinds – of which the life-death spectrum is perhaps one – may be imprecise in itself, or the knowledge obtainable of it may be. To acknowledge such a state of affairs is more adequate to it than a precise definition, which does violence to it. (136)

To return, then, to the issue with which we began: what does this tell us about the permissibility of acquiring organs and other tissues from human beings? Certainly, it does not provide us with a *categorical* prohibition, for the following reason. If only human dignity represents an inviolable principle, but an organism permanently lacks the capacity for morality which denotes such dignity, then it would not enjoy its protection. And if organ harvesting from the living is an action prohibited by human dignity, then a human being either in an irreversible coma, or whose brain stem has died, would not possess the specific dignity violated by such an act.

Even if not categorically prohibited, we may still account the for intuited wrongness of the act, however. Firstly, we could point to the utilitarian consideration of any distress and horror which might be caused by seeing loved ones put to death, and the fear of a state which executed its citizens, even if for organs which might save others' lives. Whether the former concerns would hedonically outweigh the latter is not obvious, but it is only right that we consider the emotional harms which such a policy could entail. A second objection follows from the fact that the being in question *is alive*, which is sufficient, even in the condition discussed, to be wronged. They may no longer be a person in a Kantian sense, but the organismic person is nonetheless still there. On this basis they possess integrity and non-personal dignity – the dignity of ends – both of which would be violated by killing for the harvesting of organs. However, the ultimate reason for our objection to live organ harvesting, though admittedly problematic, is the following. It is the knowledge that this living being *was* a person in the Kantian sense, even if they are no more. There remains in the living body an echo or trace of the full person that was there, and although they do not possess human dignity *now*, the mere fact that they *did* (or are presumed to have done) colours our perception of said body. However 'irrational' it may be, the brain-dead individual is always still a 'he' or a 'she', not yet an 'it'. To put them to death solely to make use of their tissues is to

instrumentalise a being historically connected to personhood, and although this might not provide us with a rational categorical objection, it provides an emotionally compelling one.

This argument suffers, as indicated, from an obvious weakness. It is rooted only in what the non-conscious human being *was*, rather than what it *is*. A critic might then ask whether one could extend this sentiment to anything that bears the trace of the human being that was: a dead body, a skeleton, ashes, even medical waste? The suggestion is perhaps not as absurd as it seems at first. We *do* treat the deceased with a degree of respect, after all: closing their eyes to appear at peace, cleaning the body, and of course holding a funeral to pay our respects. Presumably this treatment is, to a great extent, a religious legacy, but it is nevertheless a core part of our moral tradition. Even though a dead body cannot be harmed, it makes some sense to say that it can be *wronged*, by, for example, manipulating the limbs like a puppet (as medical students are reportedly wont to). Our disapproval is not just because we suppose that friends and relatives of the deceased would be upset if they knew their loved one's body were being treated in this way. Nor is it because we do not want *our* dead bodies to be so treated. It is at least partly because the dead body was once living and a person, in the Kantian sense, an echo of which survives in their flesh, even – albeit to a far lesser extent – in their bones. At some point during decomposition the body may no longer be recognisable as such, and the percieved trace of the person gradually vanishes in accordance with this process. But even then, if what remains is *known* to have previously been a person, it makes certain demands upon me which other inanimate objects do not. Such is the case with cremation: ashes are not burnt matter to be swept aside, but *someone's* ashes.[95] Scattered in a particular place, it is henceforth experienced differently. This argument – such as it is – is not meant to imply that a dead body makes any strong ethical demands of us, only that it makes sense to say that it presents *some*, which weaken the further removed from the living being we eidetically move.

Back to the issue at hand. The free harvesting of the dead's tissues strikes us as problematic, and, once more, the utilitarian concern – that friends

[95] Note that this appears to hold only for remains of the whole organism: dust, hair, and nail clippings from the living are swept aside without thought. An amputated limb is a curious intermediary case, which might retain a degree of significance for the amputee.

and relatives would disapprove of their loved ones being utilised in this way – does not fully account for our reluctance. (Indeed, such a policy would likely find ample justification on utilitarian grounds.) Something deeper is at stake, which the preceding reflections illuminate. Although the dead have no integrity or non-personal dignity to be violated – unlike the permanently non-conscious – we feel that their echo of human dignity still prohibits us from harvesting their organs without prior consent. *To do so would wrong the dead in light of what they were*. Note the stipulation of consent: just as we argued that using humans in experimental research was permissible only if they gave fully-informed consent, the same principle holds here. The importance of consent, we recall, is that it ensures that the person remains an end even while becoming as means, thereby preserving human dignity. Now, of course the dead person no longer *has* human dignity, only a trace of it, and less even than the permanently non-conscious. For this reason, the harvesting of their organs without prior consent is not comparable to doing so to the permanently non-conscious, let alone the fully Kantian person. But it makes some sense, even if 'only' emotionally, of why we oppose doing so.

(β) Dying with Dignity?

The above discussion began with the question of when a person can be medically declared dead, with a view to establishing the permissibility of harvesting their organs. The proposal of the Harvard Medical School essentially amounted to non-consensual active euthanasia – killing patients who cannot assent to it – and this for an instrumental purpose.[96] Such a prospect amounted, we argued, to a violation of integrity, non-personal dignity, and the lingering echo of their human dignity. And yet human dignity is often invoked as a justification *for* euthanasia. This is generally with regards to two different types: consensual active euthanasia (when someone willing but unable to end their life is assisted in doing so), and non-consensual passive euthanasia (when

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[96] The difference between 'active' and 'passive' euthanasia aligns, to some extent, with the difference between killing and letting die – except that passive euthanasia involves, as we shall see, the removal of life support systems or cessation of treatment. This is clearly an act, one which brings about death, and one might ask what distinguishes this from, say, letting go of someone hanging over a precipice (a removal of life support in a very literal sense). The answer is that the latter brings about death through causes *external* to the body. By contrast, the removal of medical life support brings about death through causes which are *internal* to the body, and which were only temporarily arrested through active intervention. This also explains the logical difference between removing medical life support systems, and a dying from an illness caused by others' actions (cancer from passive smoking, for example).

someone permanently incapable of consenting to death has life support mechanisms removed). The former is fraught with practical problems, some possibly compelling enough to rule out its legalisation.[97] And yet, it is more obviously justified *in principle* through the criterion of human dignity: if, as we have argued, only consent can make instrumentalisation by others permissible, then it at least appears plausible that the same might be true of consensual active euthanasia. There may, of course, be valid reasons why it is objectionable on a case-by-case basis – duties to dependents, and the like – but not, it seems, an objection on the basis of human dignity.

What of non-consensual passive euthanasia? Once again setting aside practical concerns, is it consistent with the demands of human dignity to withdraw life support from those who are permanently incapable of consenting to it? Jonas argues that it is. Such a patient would have to be alive solely by virtue of medical intervention, and permanently incapable of regaining consciousness. The consent criterion might yet be fulfilled if the patient had previously expressed, in an advance notice, that under such circumstances they would want life support to be removed. But let us assume the patient has not done so. In that case, Jonas says that "[r]eason, sanctity, and humanity" suggest that "the patient *ought* to be allowed to die; stoppage of the sustaining treatment should be mandatory, not just permitted" (*RD*: 35). The reason for this very strong claim is that "something like a 'right to die' can […] be construed on behalf and in defense of the past dignity of the person that the patient once was, and the memory of which is tainted by the degradation of such a 'survival'" (*ibid.*). This appears to be the very same appeal to the 'echo' of human dignity I invoked above as a reason for not harvesting the organs of the permanently non-conscious and the dead. And yet Jonas seemingly invokes the principle to argue that the permanently non-conscious should be allowed to die as a matter of course. Is there then an inconsistency here?

Perhaps something subtler is in fact at play, involving the alignment or misalignment of the echo of human dignity with non-personal dignity and

[97] For instance, the epistemological difficulty of establishing, beyond reasonable doubt, the consent of someone who is unable to end their own life. In many cases, after all, those who are physically incapable of committing suicide will likely be physically incapable of the less demanding act of giving consent (clearly this does not hold for those paralysed below the neck). And if they are only motivationally incapable of committing suicide, then one might worry that they do not *really* want to die.

integrity. The issue could be whether the entire organism – mind *and* body – has ceased to live spontaneously, or whether only one half has done so. To allow the permanently non-conscious patient to die through withdrawal of life support is to "let the poor shadow of what was once a person die, as the body is ready to do, and end the degradation of its forced lingering" (*ibid.*). The intuition relied upon here is that a life artificially perpetuated at only the most basic level is not one that befits their trace of human dignity: the entire person has ceased to live of its own accord, and thus permanently lacks non-personal dignity *and* human dignity. In such a situation, their echo of human dignity might well be better respected by withdrawing treatment and allowing death to take its course (we stop short, however, of concurring with Jonas' claim that it is obligatory). By contrast, when the body is alive of its own accord, still possessing non-personal dignity and integrity, then the trace of human dignity demands that we not actively end their life: one half of the psycho-physical personhood lives of its own accord. Likewise, if the person remains conscious, but survives only through life support, their human dignity of course demands the artificial perpetuation of their organismic ends. Here we have an example of the subtlety of the demands of dignity, as befits the complex questions at hand.

(γ) Abortion, Taboo, and Infanticide

Probably the most hotly-debated bioethical issue since the discipline's inception has been the permissibility of abortion. Persuasive deontological arguments can be marshalled on either side: those who oppose abortion can appeal to a human right to life (Lee and George, 2005), whilst defenders can make a case for a woman's right to bodily autonomy (Thomson, 1971), at least up to a certain point in the pregnancy. Of the other central ethical systems, virtue ethics might be seen to justify abortion under certain character-relevant circumstances (Hursthouse, 1991), whilst consequentialism is generally taken to justify it provided that the foetus is still incapable of feeling pain, or on other accounts, an adequate mental representation of that pain (Singer, 1993: 135-174).[98]

[98] A notable exception is Don Marquis (1989), who argues that abortion is immoral for the same reason as killing an adult human: namely, that it deprives them of a future and the value it likely contains.

Jonas' remarks on abortion are, to my knowledge, surprisingly scant: restricted to a digression in a discussion of negative eugenics (*PE*: 151-153).[99] There Jonas claims in a footnote that abortion "is always a violation of the most fundamental of all rights, the right to live" (148). This remark is later qualified, however, when he states that "our moral sense is willing to consider [abortion permissible] at sufficiently early stages" (152). On what grounds is this exception made? Jonas does not appear persuaded by "maternal disinclination", and – presumably because of the aforementioned context – only really discusses "the anticipation of grave deformity, genetic or accidental" (*ibid.*). This is, he says, "the most defensible if not outright compelling ground" for an abortion (*ibid.*), based not on the rights of the mother, but rather the expected condition of the child. Jonas does not fully justify the claim, but mentions that one might be motivated either by "mercy" or the "prevention of the totally subhuman" if "[h]opeless idiocy" were anticipated (*ibid.*). The reason, perhaps, is that a condition of severe mental debilitation would not accord with the idea of Man as a moral being (assuming it precludes the possibility of moral agency). And yet he also mentions severe *physical* deformity as sufficient for an abortion on these grounds, citing the infamous thalidomide cases. This runs contrary to my interpretation, since there is no necessary reason why this would contradict human dignity.

If these asides do not amount to a particularly insightful analysis of the rights and wrongs of abortion, they are nevertheless sufficient to develop our interpretation of Jonas' bioethics. We argued above, on the grounds of human dignity, that although letting die is permissible if the patient is permanently non-conscious, we are precluded from actively ending their life. We now need to clarify what the morally relevant difference is between the latter and an abortion. We said that a permanently non-conscious patient no longer has human dignity, by virtue of their condition, but nevertheless had a non-personal dignity and an integrity which could be violated. A foetus, too, has integrity and non-personal dignity, and lacks human dignity. The only difference appears to be connected to their relative developmental stages: the permanently non-conscious patient

[99] This may be because, as Lawrence Vogel (2008: 313) notes, Jonas' bioconservatism does not extend to *social* conservatism in the manner of his pupil, Leon Kass. According to Vogel, Kass seeks to protect human dignity understood explicitly according to the Judeo-Christianity, whereas Jonas seeks to protect human dignity in a largely secularised, Kantian sense. Like Vogel, I regard Jonas' position as both philosophically advantageous and politically preferable.

still has an echo of human dignity following from the kind of being that they *were*. A foetus, however, lacks this, having never been a Kantian person. A normal human embryo, however, does possess *potential* Kantian personhood, and with it *potential* human dignity. Recognition of this fact belies any attempt to rhetorically construe an embryo as 'just a cluster of cells': because it is not just that, but also teleologically-oriented toward personhood.

Now, if there is a clear logical difference between the foreshadowing of human dignity and its echo, it is far from clear whether this entails a moral difference: we are here dealing with subtle distinctions between admittedly vague concepts. The trace of human dignity perceived in the permanently non-conscious patient arguably gains force from the life lived, and any good deeds done – in short, the legacy of the Kantian personhood – written into their face and body. By contrast, the foreshadowing of human dignity in the embryo has no such accompanying record to be discerned in their physical being, but rather an open future which contains the possibility for goodness. (It is for the same reason, of course, that prior consent is also an impossibility.) If the active arresting of the foreshadowing through an abortion strikes us as wrong, it might, we feel, be permissible provided certain circumstances hold and strong reasons are given in the form of virtues and consequences. These may well include mercy when a severe debilitation is predicted, overwhelming the embryo's foreshadow of human dignity. We are conscious, however, that the difference between an echo of human dignity and its foreshadow might be too slight to bear such divergent conclusions, in which case we may have simply reached the limits of human dignity as a bioethical concept, and have to yield to alternative ethical explanations.

One might also object to the above account by asking what the moral difference is between an embryo which possesses the foreshadowing of human dignity, and an infant which possesses the same. If one cannot be given, and we are willing to permit abortion at least in some circumstances, then it should follow that infanticide is also permissible under those very same circumstances. This is precisely the argument infamously made by Michael Tooley (1972), Peter Singer (1993), and, more recently, Alberto Giubilini and Francesca Minerva (2013). Singer, for one, sought to justify infanticide on utilitarian grounds in cases of great and incurable suffering (1993: 184), a position Jonas

regards as to some extent understandable but ultimately unacceptable (*NCA*: 48-50). Jonas' reasoning largely appeals to the potentiality for human dignity, but our analysis of the very same concept has ascribed it to both the foetus *and* the infant. Therefore, if there is a moral difference between abortion and infanticide it must be located elsewhere. To this end I turn to the notion of taboo, understood here not as a mere norm, but rather a fundamental prohibition shared by a moral community, the perceived transgression of which is generally accompanied by a feeling of disgust or horror. Taboo thus defined features only peripherally in Jonas' thought. However, it can be fleshed out with reference to the 'wisdom of repugnance' advocated by Leon Kass, his one-time pupil.[100] In making this argument I depart from Jonas' thinking in quite a significant way, but do so in accordance with the different metaethical conclusions reached in Chapter Three.

In Chapter Four we saw how the encounter with a helpless infant makes of us a call of incontrovertible responsibility. Explanations from evolutionary psychology and neuroscience to explain why this is seem vulgar and reductive; even the attempt to capture such a primal ethical intuition in strictly rational terms seems inappropriate. This is yet more vividly so when we consider the responsibility's diametric opposite, the taboo of infanticide.[101] Reason appears incapable of accommodating such a taboo: here an emotional force is present which we find we can neither dispell nor rationally account for. Kass has taken this point yet further by arguing that we should not even *try* to rationally account for taboos. He claims that the prohibitions on incest, murder, paedophilia, bestiality, cannibalism, and infanticide "are too important to be imperilled by reason's poor power to give them convincing defence. [...] [L]ike the axioms of geometry, they might be at once incapable of proof and yet not in need of proof"

[100] This phrase refers to Kass' article of that name (1997), and does not appear in the subsequent book (2002).

[101] One might ask whether infanticide and responsibility really are mutually exclusive: after all, not committing infanticide might only mean refraining from harm, rather than actively taking responsibility. However, we are able to straightforwardly meet this objection by noting that to reject the infant's call of care *is* to condemn it to death: this is the ethical importance of the infant's utmost vulnerability. As Jonas says: "power of the object of responsibility [i.e., the infant] is here not only that of commission but also that of omission, which alone would be lethal" (*IR*: 134). Just as we cannot kill the newborn we cannot leave it to fend for itself because, by virtue of its sheer helplessness, the latter is tantamount to the former. Although Jonas does not use the word 'taboo', he touches on a similar sentiment when claiming that "a child's dying of hunger, that is, permitting its starving to death, is a sin against the first and most fundamental of all responsibilities which man can incur" (*ibid.*). On my interpretation this 'sin' extends to infanticide in any form.

(2002: 236). Whether or not the mathematical comparison is legitimate, the broader claim stands: if taboos cannot be rationally accommodated, then we have reached the limits of *rationality* in ethical judgement, not the limits of *ethical judgement itself*.

Now, in 'After-Birth Abortion: Why Should the Baby Live?', Giubilini and Minerva argue the following:

> If criteria such as the costs (social, psychological, economic) for the potential parents are good enough reasons for having an abortion even when the fetus is healthy, if the moral status of the newborn is the same as that of the infant and if neither has any moral value by virtue of being a potential person, then the same reasons which justify abortion should also justify the killing of the potential person when it is at the stage of a newborn. (2013: 263)

The authors' case evidently rests on a set of highly contestable premises and might well be refuted on that basis. However, this would be to miss the crucial point, which is that no argument for infanticide, however logical, is relevant for one who perceives a newborn's call to take care of it. For the responsible agent the crime of infanticide does not fully permit rational interrogation, devoid of ethical colouring; we cannot have a mental representation of the *fact* of infanticide separate from the *ought-not-to* since the imperative of responsibility *belongs to the proper perception of the newborn*. Hence, as Kass pointed out, arguments either way necessarily fail to account for the taboo's force. What is missing is a full appraisal of the newborn, which is not, as Minerva and Giubilini claim, incapable of "attributing any value to their own existence" (*ibid.*). On the contrary, like all life the newborn actively seeks its continued existence in whatever way it can: in this case, crying out for food, warmth, and (human) comfort. To perceive the infant in this struggle for life is to perceive its fundamental vulnerability and interpersonal entreaty. Emmanuel Lévinas – another student of Heidegger's – writes that to be confronted by the face of the other is to be subject to a "moral summons" of "the first word: 'you shall not commit murder'" (1969: 196, 199). Nowhere is this clearer than in the presence of the newborn, radiating both innocence and humanity's promise.

We will consider some problems with the account just given. Firstly, we should note that our claim about the limits of rationality is not applicable beyond the most fundamental taboos. When considering mundane cases of wrongdoing – petty theft, for example – we find that the emotional aspect of our judgement is responsive to rational reflection on motives, consequences, and so on, either in defence or condemnation. We cannot, then, argue that emotion should always take priority over reason, which may well be just as dogmatic a stance as Giubilini and Minerva's limitless rationalism. Kass' work is a case in point. He claims that "some of yesterday's abhorrences are today calmly accepted – not always for the better" (2002: 150). This may be true, but Kass cannot explain why some changes in public mores are degenerative and others not, because his theory rules out, in principle, any distinction between types of revulsion. What matters most for Kass is simply *that* something is objectionable according to the Judeo-Christian tradition, meaning that he cannot draw a logical distinction between disapproval of pre-marital sex and revulsion at incest or paedophilia. This is a legitimate worry – but a dividing line, however rough, can be discerned in our most fundamental taboos which lie beyond, and not within, the domain of rational reflection.

In response it could be noted that the very fact that Giubilini and Minerva (and, before them, Tooley and Singer) were able to rationally argue for infanticide must mean that reason *is* able to separate the 'is' of infanticide from the 'ought-not-to'. But it is of course possible to fail to recognise – and even contravene – the imperative by failing to properly bear witness to the infant, wilfully or otherwise. Such is the case with Singer, who claims that an infant does not morally count if it lacks a conception of itself as a temporally-persisting subject, or Minerva and Giubilini, who use "after-birth abortion" to name infanticide. Both abstract from the experience of the infant in its visceral struggle for life. Once that step is taken and the child-as-child has been destroyed in the imagination, infanticide may be advocated with chilling ease precisely because its object is misconceived. On this basis I will bite the bullet and insist that individuals who rationally argue about taboos such as incest, paedophilia, or infanticide are in a key sense morally blind. Even if they decided on strictly rational grounds that such activities were wrong, this still neglects the essential emotive and 'perceptive' aspect which accounts for the taboo's moral force. The

fact that it is disproportionately bioethicists who fail to acknowledge this is merely a tragic indictment of that profession as it is generally practiced.

IV. The Biotechnological Revolution

The final bioethical issue which we shall consider at length blurs the boundaries of medicine and engineering: biotechnology. True to the technological character of modern science, knowledge of the structure of genetic material (genomics), obtained practically, invited its manipulation as a matter of course, firstly in the form of genetic engineering and more recently in synthetic biology.[102] These, in turn, have led almost automatically to commercial applications, principally in agriculture and healthcare. I say '*almost* automatically', a qualification which serves as a reminder of the important difference between Jonas' substantivist philosophy of technology and Heidegger's technological determinism. Jonas was sceptical that the lure of human enhancement would be resisted once the Pandora's box of biotechnology had been opened (*EBA*: 503-504), but this was a speculative aside rather than a necessary consequence of his theory. By contrast, it followed from Heidegger's fatalistic history of being that "[i]n all areas of his existence, man will be encircled ever more tightly by the forces of technology", including "an attack […] upon the life and nature of man" through biotechnology (1966: 51-52). Crucially, "no group of men, no commission of prominent statesmen, scientists, and technicians, no conference of leaders of commerce and industry, can brake or direct the progress of history" (52).

Heidegger was right insofar as the character of modern technology *logically* leads to biotechnology. We saw in the first chapter that the thrust of modern technology is largely Baconian: relieving humanity's estate through the mastery of nature. For Bacon, we recall, this encompassed everything from 'the meanest mechanical practice' to making 'perfect creatures', and even 'immortality (if it were possible)'. In doing so he saw, correctly, that the mastery of nature by *Homo faber* applies no less to *human* nature than to the non-human environment: in Cartesian terms, both are understood as bare matter (*res extensa*) to be manipulated by the *res cogitans*. And with this expulsion of teleology from the natural world modern humanity lost any credible basis for standards by which to judge our treatment of it. Jonas, however, holds out hope

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[102] Genetic engineering is now often referred to as 'genome editing', but to my mind this reflects only a dubious effort at rebranding rather than any substantial change in the science.

that if an ethic of responsibility can rectify this deficiency it might subsequently guide action, and not only on the individual level but the collective as well.

There are reasons for siding with Jonas' assessment over Heidegger's. The commercial and clinical deployment of biotechnology is a case in point. Although the United States has enthusiastically pursued agricultural biotechnology, the European Union has, on precautionary grounds, only gradually and carefully permitted the cultivation of certain genetically engineered crops. More drastically, following the successful cloning of Dolly the sheep in 1996, public debate as to the permissibility of the practice led to a ban on cloning human beings in dozens of countries. If, therefore, ethics can exert *some* countervailing influence over the biotechnological tide – which we must be careful not to overstate – it is all the more vital that we clarify the nature and force of our concerns. Once again, Jonas proved an early and perceptive critic, and the essays collected in *Technik, Medizin und Ethik* have much to teach us about the permissibility of this branch of technology, even if we occasionally branch out from his arguments. Jonas' reflections fall into two broad categories: the genetic engineering of non-human life – consideration of which involves balancing non-personal dignity against virtue and utility – and that of human beings, which threatens to violate the human condition, human dignity, and therefore the idea of Man. We shall look at each in turn.

(α) Plants, Animals, and Non-Personal Dignity

As stated, the relevant ethical concerns regarding genetic engineering of non-human life are the violation of non-personal dignity and integrity, as well as utility, justice, virtue, and vice. On utilitarian grounds a case for the genetic engineering of plant life seems easy to make: since plants are non-conscious, they have no interests of their own to be taken into account. What matters, for the utilitarian, is that any manipulations serve the interests and desires of human and (at least some) animal life. However difficult this is to achieve in practice, the principle is straightforward enough.

With genetic engineering of animal life, however, the picture is necessarily more complicated. Although an engineered animal cannot *know* that they exist in particular form due to human intervention, we can still easily imagine manipulations which made the life of an animal less pleasurable than it

would otherwise have been. Consider, for example, cows which had been engineered to produce more milk, with the side effect that their engorged udders made movement difficult or lying down uncomfortable. Here the diminished utility of the engineered beings would likely outweigh any increase in our utility from the greater supply of milk (not to mention that we might be outraged by the animals' condition). However, if we imagine a manipulation which made the animals' lives no less pleasurable *and* better served our interests, then the utilitarian would likely condone it.[103] For a similar example to the above, we could imagine cows genetically engineered to lack horns: such cows would no longer accidentally gore each other when panicked, or alternatively have to undergo the removal of them with a saw (as I can from personal experience confirm happens), and we would still be able to obtain their milk as usual.

Even on utilitarian grounds, however, this is far from the whole story. Utilitarianism can account for ecological consequences insofar as they have indirect hedonic implications. We mentioned, in the previous chapter, that opponents of agricultural genetic engineering often claim that a proliferation of engineered crops or livestock could be damaging for biodiversity and the global food supply. If this assessment is correct, the eventual harms would outweigh any immediate benefits accrued through the technology, and utilitarianism would provide no justification for it. Of course, we are considering only *possible* consequences, the relative *likelihoods* of which are not clear. To deal with this problem, as we again saw in the previous chapter, one might look to the precautionary principle, which is usually consequentialist in orientation. Although Jonas argued that the object necessitating precaution is our duty to ensure the continued existence and essence of humanity, a utilitarian could instead advance the principle for the sake of maximising utility, human or otherwise.[104] In that case – to paraphrase the version of the principle in the UN World Charter for Nature – advocates of genetic engineering would shoulder the burden of proof, having to demonstrate that it did not pose risks which

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[103] Of course, as Singer argues the *optimum* outcome for a utilitarian who recognised non-human utility would be the abolition of farming livestock altogether.

[104] Jonas argued that the precautionary principle be adopted for the regulation of genetic engineering, but, as I say, on more than utilitarian grounds: "we are entering an area where we should tread only with great caution; a quite new kind of responsibility rests here not only on the users but already on the biological inventors" (*EBA*: 495).

outweighed the benefits, and if it presented risks which are not fully understood then the deployment of that technology would not be allowed to go ahead. Once we incorporate this principle into our account, the utilitarian case for genetic engineering is at least qualified. A crop which risked giving rise to monocultures, say, would be proscribed, whilst one which demonstrated in rigorous examination that it did not pose such threats would be permitted.

A deeper objection, however, can be made with recourse to the integrity and non-personal dignity grounded in an organism's *telos*. Although such grounds lack the clarity of a hedonic calculus, through them we are nevertheless able to account for our intuition that a *wrong* can be done in genetic engineering even when there is no *harm*. We gave an example earlier of the violation of a bird's non-personal dignity through being permanently caged, and noted that the violation would be yet worse if the bird experienced no physical or mental distress with its situation. In such an eventuality, the bird would not only fail to achieve its teleologically-grounded good – flying, hunting, nesting – but be subjectively content with doing so. Evidently, then, our concern here is not to do with utility, but with the failure of the bird to live the kind of life appropriate to it courtesy of our actions. Turning back to genetic engineering, we can draw an analogy between the caged bird and the hornless cow. The cow, too, would presumably be perfectly content in its hornless state, and would not be at risk of being accidentally gored by others. As such, it might actually be *happier* than it would otherwise have been. And yet, as with the contentedly caged bird, it would not be living in the way proper to it, but rather a way *we* wanted. To be sure, the force of our intuitive objection is here less strong than to the caged bird which cannot live at all according to its *telos*: the cow simply lacks horns which, in domestication, are functionally useless, an evolutionary legacy only really suited to their ancestors. But, looked at from another angle, the violation of non-personal dignity is in fact more pervasive than that of the bird. In making heritable modifications to the cow's genome – and assuming these have phenotypic consequences – the very *telos* of the cow, and those cows following from it, is altered such that it is not even the being that it would

have been. In this way, non-personal dignity is violated at both the genotypic and phenotypic level.[105]

One might respond by saying that this is no different in principle to traditional breeding, a practice to which most people have no objections.[106] In breeding the *telos* of the organism changes through human intervention and could very well lead to a hornless cow eidetically indistinguishable from the genetically modified one. How then can we find the latter generally permissible but not the former? The (admittedly slight) difference, according to Jonas, is that breeding is less a technology that produces its object than “a mixture of art and luck” (*EBA*: 492). He continues:

> [B]reeding operates via the phenotypes and relies on the intrinsic whims of the germ substance as they happen to manifest themselves in this or that somatic property. The natural variability of reproduction is used to obtain the desired characteristics from the original genotype by selection of the phenotypes over the generations, that is, to increase these characteristics by summation of the small, spontaneous deviations in the preferred direction. […] Man, in other words, is manipulating what the existing range of species makes available to him with the distribution of its mutant store and further mutations. (492-493)

The upshot, for our purposes, is that human intervention here acts as a guide rather than an author: the breeder might produce a hornless cow, but then they might not. The *telos* of the organism is still, at root, autopoietic, and it is this that the breeder responds to. As such, non-personal dignity is still respected insofar as organismic creativity is relied upon, unlike genetic engineering which seeks to eliminate it.

The non-personal dignity objection only applies, however, to those beings which have an immanent *telos* as the ground of their integrity and non-personal dignity. By contrast, with the development of synthetic biology –

[105] As stated, this only holds if the genetic modification actually leads to changes in the phenotype. These do not, however, have to be the exact changes that were intended, simply changes *per se*.

[106] For the sake of argumentative flow, I here set aside any objections to breeding which results in malformed animals – where ‘malformed’ is understood to mean a difficulty in exercising basic capacities, either mental or physical (such as reproduction in the cases of certain breeds of dog). These objections might well be persuasive, but the consequentialist grounding makes the issue separate to the one at hand.

creating organisms from rudimentary proteins and DNA samples – the *telos* of an organism can now fundamentally be a human construction. Although the individual *parts* remain biological and immanently teleological, the organismic arrangement *as a whole* is artefactual. This ontological ambiguity poses an ethical dilemma for our analysis. On the one hand, in accordance with our analysis in Chapter Three, since a synthetic organism is alive it must be morally considerable. On the other hand, its *telos* is transcendent in origin, much like a machine. Does this entail a non-personal dignity, which we might be able to violate? It seems not. A typical organism has a pre-existing *telos* which we violate in genetic modification of it. By contrast, it is hard to see how we could comparably violate non-personal dignity by assembling biological parts into a synthetic whole, since it is the whole which is teleological. Of course, if a synthetic organism had the capacity to feel pain, or had human dignity through a capacity for morality, then we would still have clear moral guidelines as to how we should treat it. But, unlike natural organisms which lack those capacities – such as plants and fungi – in the synthetic case we are *also* unable to appeal to non-personal dignity (or its correlate, biological integrity). As such, the question of how we should morally conceive of and subsequently treat a synthetic organism is profoundly problematic.

Jonas does offer us an alternative, however, by appealing to the moral register of virtue and vice. As a good product of the German gymnasia he cites Goethe, whose telling of *Faust* contains a scene where Wagner argues for the artificial creation of human beings. Wagner there tells Mephistopheles that “in the future we shall laugh at chance” (498). For Jonas this is a characteristic motivation of the biotechnological enterprise: unlike even in breeding, which *relies* on chance, biotechnology aims to produce life to order. Why is this a vice, detrimental to living well? Because it risks blinding us to the value of chance, which “surprises us with what is new and has never been” (499). The desire to make life function with machine-like regularity, as in synthetic biology, obscures this value and consequently may well diminish our lives.

Now, the obvious counterargument is that although openness to chance, novelty, and surprise *can* be conducive to a good life, sometimes circumstances demand that we diminish the scope for these as far as is possible. Most obviously, Jonas’ precautionary ethics states that “[n]ever must the existence or

the essence of man as a whole be made a stake in the hazards of action" (*IR*: 37). In other words, the value of humanity requires that we *never* allow its existence or essence to become a matter of chance. Other domains will be less absolutist, but still lean toward the elimination of chance. Take gambling with one's savings: few would argue that openness to the possibility of going bankrupt is conducive to living well. The issue, clearly, is whether synthetic biology represents an appropriate restriction of chance, or whether it unduly diminishes the scope for openness to the world's novelty.

Here we might turn to Michael Sandel's *The Case Against Perfection*, which refines this line of argument. Sandel connects the value of chance to an appreciation of 'giftedness' and its importance for living our lives well. Of course, what emerges by chance is not always perceptible as a gift – misfortunes and diseases cannot be generally viewed as such, except in rare circumstances where the sufferer is led to value life anew. But when chance does deliver something perceptible as a gift, appreciation of it has a particular significance which is conducive to living a well-rounded life. What is that significance? Sandel suggests that it is the constraining of the "drive to mastery" characteristic of technological civilisation (2007: 27). More specifically, he claims that perceiving *life* as a gift has this consequence:

> To acknowledge the giftedness of life is to recognize that our talents and powers are not wholly our doing, nor even fully ours, despite the efforts we expend to develop and exercise them. It is also to recognize that not everything in the world is open to any use we may desire or devise. An appreciation of the giftedness of life constrains the Promethean project and conduces to a certain humility. (*Ibid.*)

Now, Sandel appears to be specifically referring to human life, and the human condition, as gifts to be appreciated as such rather than biotechnologically mastered – a topic we shall return to shortly. But there seems to be no reason why non-human life and even some non-living nature cannot also be appreciated as gifts. With the former the locus of its giftedness is perhaps that it has intrinsic value. Non-living nature lacks this, but still has what we earlier called extrinsic value. For what is it that we appreciate in a river or mountain beyond their utility? It is their beauty or sublimity, and the fact that beings with

such qualities are not created by us but given over to us.[107] They are perceptible as *gifts*: literally, if sent by God, or figuratively, if simply disclosed in our world.

Despite its religious overtones, Sandel's argument is not one in support of quietism or asceticism. On the contrary, not unlike violations of non-personal dignity – which are necessary for survival – receptivity to the giftedness of life does not preclude killing and other destructive acts. As we stated at the outset of the chapter, bioethics is a matter of balancing competing moral registers and, human dignity aside, none has overriding authority. Recognising the giftedness of life entails only an underlying attitude which might, as Sandel suggests, place limits on the Baconian thrust of modern technology. Crucially, where non-personal dignity could not explain our intuitive objections to synthetic biology, the value of receptivity to the giftedness of life can. The obvious reason why is that, as we noted above, synthetic organisms are artefactual. That is to say: their *telos* is not within but rather from without. Here we have perhaps the paramount example of the "drive to mastery" which Sandel claims undermines receptivity to the giftedness of life (27). In synthetic biology life is reduced to functionality which serves our interests, diminishing its perceptibility as a gift by becoming a product instead. Even compared to agriculture and animal husbandry – which are themselves far from ideal – this is not a practice conducive to the good life, or good society.

(β) The Future of the Human Condition

The other side of the biotechnological revolution, and the last topic to be addressed in the present chapter, is transhumanism: the desire to 'enhance' human beings through biotechnology. Enhancement is advocated in various forms, depending on the faculty or capacity in question. Future humans might be *physically* enhanced, becoming fitter and stronger, or *cognitively* enhanced, with greater creative abilities and powers of recall; they might be *morally* enhanced, becoming more empathetic and just, or even enhanced in *lifespan*, immortality being, according to John Harris, the "Holy Grail of enhancement" (2007: 59). This desire is not new: enhancement broadly understood has long featured in artistic, religious, and mythological texts, and, as we pointed out

[107] This sort of appreciation of nature accords with the notion of "*Naturgeness*", which Ott (2016) traces from German Romanticism to environmentalism of the present day.

above, Bacon himself saw immortality as a proper end of modern science and technology. What *is* new is the development of genomics and biotechnology, which have the potential to realise Bacon's dream by making transhumanism a plausible scientific prospect. Greater immediacy calls for greater scrutiny, and in this regard Jonas proved a perceptive critical voice. His concerns fall largely into two strands: those pertaining to the *ends* of enhancement and those pertaining to the biotechnological *methods* proposed.

In critiquing human enhancement, or transhumanism – terms I shall use interchangeably – we resume our refinement of the idea of Man. Our method was to identify the demands of human dignity through concrete violations of it, real or imagined. Experimental situations and organ harvesting showed us that our dignity prohibits the instrumentalisation of human beings, chiming with the Kantian maxim to never treat others as mere means, but always also as ends. But another concern is relevant here: the value of the human condition. Human enhancement threatens both our *freedom*, as it manifests in our unique degree of existential openness, and also our *finitude*, of which we are self-conscious. To be simultaneously constituted by both is the peculiarity of the human condition, the value of which is thereby revealed to us anew. The human condition does not carry the moral weight of personal, human dignity which belongs to us as moral beings. But we may instead appeal to our organismic non-personal dignity to explain its normative significance. As before, the latter does not represent an inviolable boundary, and so wherever transhumanism threatens only *this*, and not also human dignity, we cannot categorically object to it. We may, however, follow Jonas in doubting the wisdom of upsetting the delicate polarity of freedom and finitude which characterises the human condition.

We shall look firstly at the key method discussed, namely, genetic engineering. Jonas offers an "existential critique" of genetic engineering, by which he means a reflection on what it would be like to be an engineered human being, in order to reveal problems which would be raised by the practice (*PE*: 165, emphasis removed). Although transhumanists often couch their arguments in terms of greater freedom – which means for them, freedom *from* biological finitude – Jonas' method leads him to the conclusion that genetic engineering could in fact *compromise* our freedom. He makes two observations:

firstly, that genetic engineering would undermine our existential freedom, and secondly, that it would corrupt the relation between those who performed it and those who underwent it. These concerns pertain not to the physical consequences of manipulating the genome, but instead to the *significance* of such an intervention.

The first change Jonas points to is that the process of self-becoming is disrupted by the knowledge of having been manipulated in order to be a particular way. Regardless of whether that manipulation works as intended, *the intention itself* changes the person's self-understanding as they second-guess the authenticity of their physical or psychological being. As Jonas says, "it does not matter one jot whether the [engineered] genotype is really, by its own force, a person's fate: it is *made* his fate" (163). Knowing that one is intended to be a particular way is to be bound to this intent, whether in conformity to it or rebellion against it. What is lost, in other words, is the spontaneity of becoming by instead measuring oneself against a pre-established design:

> [T]he sexually produced genotype is a novum in itself, unknown to all to begin with and still to reveal itself to owners and fellow men alike. Ignorance is here the precondition of freedom: the new throw of the dice has to discover itself in the guideless efforts of living its life for the first and only time, i.e., to *become* itself in meeting a world as unprepared for the newcomer as [he] is for himself. (161)

To reiterate, this is not a political or metaphysical conception of freedom: it is the existential freedom to become oneself, which would be compromised by the genomically ingrained idea regardless of whether it had direct phenotypic consequences.

Jonas' existential objection arguably has three limitations. Firstly, it would appear to apply only to those who do not believe in a creator deity: for if one already holds that life is created in a particular way, one would presumably not then experience any additional loss of existential freedom in having been genetically engineered. Secondly, many people who *do* believe they were created in a particular way by God or the gods seem not to find this belief alienating, but rather a source of comfort. Perhaps, then, knowledge of being genetically engineered would come to be perceived in the same welcome light.

To take the latter point first, one suspects that the believer's comfort is more to do with the specific *author* of creation than being created *per se*. It is, in other words, the fact that we are thought to be created by a supernatural being, providing a transcendent reason for everything being as it is. Knowing that one is engineered by one's predecessors would be categorically different, since lacking the transcendent status denoting infallibility. We can also reject the first possible objection. Being genetically engineered would still, I suggest, be experienced as a loss of existential freedom by those who already believe in a creator deity. Precisely *because* the religious assume a transcendent creator the intent behind creation is unknown: one discovers God's (supposed) intent in its actual unfolding. As such, the religious do not experience one's self-becoming against a known prior intention, as would likely be the case in genetic engineering.

The third problem with the existential objection, following from the responses just given, is that it would only hold in the case of persons who actually knew they were engineered. This much is true. The transhumanist might then suggest that, if possible, we enhance foetuses or infants: after all, if we never informed them it would thereby preserve their existential freedom through ignorance. This brings us to the second of Jonas' objections to genetic engineering: that it would corrupt the relation between the generations by becoming one of manipulator and manipulated. It creates, as he puts it, an entirely one-sided control "of present men over future men, who are the defenceless objects of antecedent choices by the planners of today. […] [P]ower is here entirely unilateral and of the few, with no recourse to countervailing power open to its patients" (147). Here the concern is not to do with self-understanding, but one's objective relation to others in terms of power. In being manipulated in a particular way – again, even if not deterministically – the enhanced become the object of someone else's design. The worry is that this one-sided power relation once more undercuts freedom, although this time not of the existential sort. Rather, this state of affairs threatens our republican freedom of non-domination by others.

Now, the proponent of human enhancement could argue that we regularly engage in a practice which conforms to this type of power-relation, one which we not only tolerate but actively champion: education. In both education

and cognitive or moral enhancement one person seeks to shape the character and values of another, so if the former practice is permitted presumably the other should be also. For example, Ingmar Persson and Julian Savulescu argue that "[t]here is no reason to assume that moral bioenhancement to which children are exposed without their consent would restrict their freedom and responsibility more than the traditional moral education to which they are also exposed without their consent" (2012: 113). To challenge this equivalence I turn to Jürgen Habermas, who in *The Future of Human Nature* explicitly built on Jonas' insights.

Habermas notes that education and genetic engineering in fact embody fundamentally different principles: the former operates according to the discursive principles of communicative rationality, and the latter according to the technical principles of instrumental rationality. What this means is as follows. Education, relying as it does on sensible communication, presupposes the *mutual capacity for reason*. Even if the pupil does not at the time fully understand the reasons behind educational content, as a rational being in development they are in principle able to – and in time hopefully will – comprehend those reasons. When they do, they are then free to accept or reject those reasons. This shared ground allows for a fundamental equality between agents despite the asymmetry inherent in the practice of education. As Habermas says, "expectations underlying the parents' efforts at character building are essentially 'contestable' […] the adolescents in principle still have the opportunity to respond to and retroactively break away from it" (2003: 62). Indeed, one might go so far as to say that developing the ability to question what one has learned – to think for oneself – *is* an objective of education. However, this is not required for the present point. Even in instances where learning to think for oneself is not an objective of the educator, the nature of education itself means the content can nearly always be subsequently contested, as Habermas' own schooling in Nazi Germany starkly demonstrates.

By contrast, genetic engineering lacks the mutual ground of reason which allows for equality between participants. Instead, as a technical procedure carried out on the child as an object, the manipulation makes retrospective disagreement impossible:

> With genetic enhancement, there is no communicative scope for the projected child to be addressed as a second person and to be involved in a communication process. […] It does not permit the adolescent looking back on the prenatal intervention to engage in a *revisionary* learning process. *Being at odds with* the genetically fixed intention of a third person is hopeless. (*Ibid.*)

The difference in principle, therefore, is that the power-relation of genetic engineering is not only unilateral but also incontestable: the child is bound to an intent from which they cannot be released. There is, as Habermas says, no scope for autonomous contestation. By contrast, education, courtesy of its basis in rational communication, possesses an inherent reflexivity and thereby presupposes freedom as non-domination. Here Persson and Savulescu disagree. They claim “common sense and science” tell us that “it is surely evident that when small children are taught language, religion, basic moral rules, or whatever, this education is just as effective, irresistible, and irrevocable as biomedical intervention is likely to be” (2015: 52). But as Habermas’ theory shows, education as fundamental as religion, moral rules, or metaphysical beliefs can typically be questioned.[108] The reason, in short, is that critical reflection breaks the “quasi-natural” status of educative content: even if it is subsequently accepted, one’s relation to the content is altered through contestation (Habermas, 1988: 168).

A point of conflict needs to be resolved here, however. Although we *nearly* always possess the possibility of questioning educational content – thereby preserving freedom – we do not *always* do so. As discussed above with regards to taboo, morality occasionally lies beyond the reach of reason, delimiting what can be critically questioned. Tooley, Minerva, and Guibilini rationally argued for even the greatest of crimes, it is true, but only by conceptually evading the true object of their argument: the vulnerable newborn.

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[108] The most plausible generic exception is language, which holds a unique status due to its hermeneutic centrality: as Gadamer has shown (2004: 384-404), it is the foremost ground on which understanding occurs, allowing subsequent learning to take place. The first language learned, one’s mother tongue, is incomparable even with additional languages which are learned on the basis of the first. Even so, in grammar language possesses an internal logic which allows its usage to be refined or mastered, including in opposition to the way one was taught, thus preserving the fundamental symmetry of a shared rational ground. One might also note that a first language can be supplanted by a second through exclusive use of the latter, even though the second is initially learned through the first.

To properly perceive the newborn is to perceive a taboo on infanticide which resists rational reflection, and is therefore an exception to Habermas' claims about moral education. Our relation to taboos is rather that we are delivered over to them and subject to their authority (which is precisely what concerns Habermas about Gadamer's presentation of tradition – perhaps unfairly, as my argument here goes much further than Gadamer's albeit within a much smaller remit). However, there is still a critical difference between being subject to the authority of taboos and the power-relation inherent in genetic engineering, which is as follows. In the former we are subject to an impersonal, or rather transpersonal authority, which is not, and cannot, be embodied in a single individual. Rather, the authority of taboo stands above persons and *speaks through all of us insofar as we belong to the same tradition*. As such, we are not unfree in the republican sense because there is a shared ground which cannot privilege one person over another. In the case of genetic engineering, by contrast, two or more individuals are necessarily in a dominating power-relation.

Genetic engineering, as a unilateral and incontestable intervention, therefore remains qualitatively distinct. But how are our concerns about existential and republican freedom connected to dignity? Clearly, in altering the organismic *telos* of the person genetic engineering always represents a violation of non-personal dignity. But in particular cases it would violate human dignity also. Were genetic engineering to be carried out eugenically – i.e., to improve the species or national stock – we would be treated as mere means to the ends of the group. This alone provides us with strong grounds to reject a state-sponsored programme of genetic engineering, regardless of whether the effects were heritable or not: the absence of consent, which alone can excuse such instrumentalisation, would make it categorically impermissible. Less clear are the implications for human dignity in the event that genetic engineering is carried out for the sake of an individual's well-being, as parentally-chosen genetic engineering would presumably be. (Obviously, if it were not, and were instead for the sake of others' interests, such as the parent's social status, then it would be as impermissible as a state-sponsored eugenics programme.) We assume for the sake of argument that such well-meaning genetic engineering would entail a commonly-accepted idea of what that good entails, which the individual is highly likely to retrospectively accept as such. In that case the

prospective children would simultaneously be treated as an end, with their likely interests motivating the intervention, in spite of the curtailments of their existential and republican freedom.

This leaves us, it appears, with a human dignity-based objection to eugenic genetic engineering, but not when performed for the sake of the engineered person's well-being. And yet, we can still draw on the violation of non-personal dignity to account for our discomfort. In seeking to mould an individual through genetic engineering, even if for their benefit, we risk curtailing existential freedom and republican freedom in unprecedented ways. This would hold most obviously for any decision made by one person for another, as in the parent-child engineering scenario, but could hold even in the case of somatic genetic engineering carried out on oneself. Even though the individual would almost certainly be treating themselves as an end – we assume they are uncoerced in volunteering for the procedure – they are still inescapably bound to their prior intention.

Michael Hauskeller has extended the republican freedom objection to account for just this concern. He claims that the relation corrupted in such genetic engineering would not be between self and other, but between one's past and present. The intention would belong to the past self and bind the present self, thus exerting a unilateral and incontestable control from which the latter cannot escape:

> The event would be similar to the case where someone voluntarily signed a contract that made them a slave for the rest of their lives. Although they would have freely chosen to be a slave, once a slave they would no longer have the choice not to be one, and it is not an uncommon intuition that *therefore* it is wrong (and should not be permitted) to make such a choice. (2017: 374)

The worry is not so much that one might regret the decision to have undergone genetic engineering, but that the individual is beholden to that decision whether they regretted it or not. In this way, even genetic engineering of oneself would parallel the threat to freedom as non-domination. Although this does not provide us with a categorical objection based on human dignity, it goes some way to accounting for our lingering disapproval.

(γ) Transhumanism and L'Homme Machine

Having extensively discussed his objections to its preeminent method, we shall now turn to Jonas' objections to the *ends* of transhumanism, namely, the enhancement of human capacities and faculties beyond their given range. As stated, these capacities could be mental or physical, including even our moral psychology or lifespan. Rather than analyse each possible enhancement in detail, I shall question the wisdom of enhancement as such. Should humanity be improved upon by taking evolution in hand and becoming post-humans?

> Whether we have the right to do it, whether we are qualified for that creative role, is the most serious question that can be posed to man finding himself suddenly in the possession of such fateful powers. Who will be the image-makers, by what standards, and on the basis of what knowledge? […] These and similar questions, which demand an answer before we embark on a journey into the unknown, show most vividly how far our powers to act are pushing us beyond the terms of all former ethics. (*IR*: 21)

The fear of eugenics lingers in the background here – not unreasonably, given that Jonas saw the utopian hopes of early-twentieth century eugenicists quickly devolve into the Nazi nightmare. Today, however, few transhumanists advocate a eugenics programme, which we have argued is always a violation of human dignity.[109] Enhancement, they say, will be *liberal*: a matter of personal autonomy and reproductive rights. This we have already shown to be dubious – though not categorically impermissible – by examining its envisioned method. Let us continue our critique, this time on the basis of the envisioned outcome of enhanced human beings.

The first problem one encounters in developing a critique of non-eugenic enhancement is that improvement of human beings seems to also be an end of healthcare: we treat, cure, restore, and otherwise try to ameliorate a variety of conditions, both physical and psychological. Drawing a qualitative, and not merely quantitative, distinction between healthcare and enhancement is in fact far more difficult than one might assume. I stated above that enhancement

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[109] A notable exception was the compulsory moral enhancement initially proposed by Julian Savulescu and Ingmar Persson (2008: 174), which they subsequently dropped in favour of a voluntary programme.

entails the extension of capacities and faculties 'beyond their given range', but this notion, based on our understanding of the human condition, already permits some historical and cultural definition. After all (the transhumanist will object), we have for centuries enhanced lifespans and physical capacities through modern medicine: 'the given range' of human capacities is different for a contemporary European, an African farmer, and a mediaeval serf. If healthcare is a laudable practice, as we take it to be, and the consequences for our health and lifespan good, as we assume them to be, then enhancement may simply be the logical next step. But perhaps there is a misunderstanding here of the nature of healthcare which, properly understood, points toward a difference between it and enhancement. Jonas' explorations of the organismic basis of health, when combined with Hans-Georg Gadamer's hermeneutic investigations into the topic, allow us to account for this difference.

The difference between healthcare and biotechnological enhancement is perhaps obscured by the fact that both would be, according to the Western canon, forms of *technē*. But there remains an essential difference between healthcare and all other *technai*, for in it nothing is produced. To be sure, its *goal* is health, but health is not a *thing* like an artwork or a tool, the creation of which are defined by their novelty. As Jonas says: "healing is not the production [*Herstellung*] of a thing, but the restoration [*Wiederherstellung*] of a state, and the state itself, although art is applied to it, is not artificial" (*TME*: 146). Since health is not produced by artifice, it follows that it is instead "defined by nature" (147). More specifically, health is defined by the immanent *telos* of the organism: "functional integrity alone is its object" (149). Jonas' philosophical biology and anthropology here allow us to draw out, to a significant degree, the difference between healthcare and other forms of *technē*. In healthcare we follow the *telos* of the organism, assisting it where possible in its orientation toward wholeness. Thus we set broken bones, stem the flow of blood from wounds, undergo psychiatric therapy, take medicines, and employ prosthetics, transplants, and life support machines to allow our bodies to restore or maintain integral functioning for as long as we are alive. By contrast, enhancement uses the *telos* of the organism as a starting point, as a basis from which to create something new. Our capacities and faculties are not construed as definitive of

our being and the locus of medical attention, but rather limitations to be overcome.

Jonas' account of the difference between healthcare and other forms of *technē* is undermined, however, by the fact that the former already *does* go beyond our teleologically-defined capacities. This he even acknowledges (150). The classic example is an immunity to disease through vaccination, which arguably represents a novel capacity rather than the restoration of a prior state. Is the transhumanist then correct to say that enhancement is simply a logical extension of healthcare? Here Gadamer's complementary insights in *The Enigma of Health* take us one step further. Like Jonas, he holds that healthcare is generically different from other forms of *technē* through its orientation toward the *telos* of the organism (1996: 32-33). But this, he says, is a legacy of our pre-modern – more specifically, Greek – medical heritage. It is today intertwined with a competing tradition which has its origin in the modern scientific revolution. We recall from the very first chapter that Jonas identified 1543 as a symbolic turning point in Western history, as Copernicus' *On the Revolutions of the Celestial Orbs* was posthumously published at the same time as Vesalius' *On the Fabric of the Human Body*. This represented "the two sides of the scientific revolution as it eventually took shape: the macrocosmic and the microcosmic" (*PE*: 52). Jonas did not, however, fully sketch out the *theoretical* implications of this event for healthcare (although he was of course well aware of its practical consequences in science, medicine, and biotechnology). Gadamer fills in this gap, noting that modern medicine takes on the character of modern technology: "it understands itself precisely as a kind of knowledge that is guided by the idea of transforming nature into a human world, indeed almost of eliminating the natural dimension by means of rationally controlled projective 'construction'" (1996: 39). The consequence of this understanding of human beings – just as in modern science's understanding of *non*-human beings – is that "this knowledge allows us to calculate and control natural processes to such an extent that it finally becomes capable of *replacing* the natural by the artificial" (*ibid.*).

The intertwining of these two conceptions of healthcare, the ancient and the modern, rooted as they are in different understandings of nature, give contemporary healthcare its ambiguous character. It "can never be understood

entirely as a technology", but instead "represents a peculiar kind of practical science for which modern thought no longer possesses an adequate concept" (*ibid.*). This has profound implications for our present concerns. While much medical practice is still consistent with the ancient conception of healthcare – even if it does not explicitly understand itself that way – enhancement can be understood as the logical extension of healthcare *in the modern sense alone*. In trying to overcome rather than aim at the *telos* of the organism, it belongs purely to medicine's modern 'productive' dimension, along with vaccinated immunities, non-reconstructive cosmetic surgery, subdermal implants, and so on. If this tells us what the logical difference is between healthcare and enhancement, it still leaves us with the normative question of whether the latter is any less commendable than the former (assuming, of course, that we have already ruled out any form of enhancement which violates human dignity). Here there is no simple answer based on the different principles underlying ancient and modern medicine. To be sure, in working with the *telos* of the organism, ancient medicine respects our non-personal dignity, whereas a practice which can *only* be understood according to the logic of modern medicine violates it. This is, however, insufficient reason to reject the latter: after all, vaccinated immunities also exclusively belong to the modern 'productive' understanding of healthcare, and we are certainly unwilling to condemn these.

Why, then, are we specifically troubled by the transhumanist vision? The answer, imprecise though it may be, is that enhancement disregards our organismic *telos* and non-personal dignity *as such*. The transhumanist isolates one aspect of the human condition – our cognitive freedom – and declares the rest superfluous, to be cast aside like obsolescent technology. True to its Baconian heritage, transhumanism is thereby the final manifestation of modernity's Gnostic tendency: it conceives of our 'real' selves as a thinking substance to be liberated from nature's corporeal prison. This is, indeed, the logical extreme of modern science, presupposing an entirely mathematically calculable, rather than teleological, conception of the organism which can be remade at will. But while we are thankful for (most of) the advances which the modern conception of healthcare has delivered – particularly when these are guided by the Greek conception – alone it is based on a deficient understanding of the human being. Our real selves are, in truth, embodied, vulnerable, and

dependent, all facets of the human condition. As Gadamer shows, the Greeks understood this well, reflected in their experience of health as a state of equilibrium, and disease as a disruption of it (36). By contrast, having erroneously abandoned the Greek conception of healthcare entirely, the transhumanist experiences *their very organismic being as a disease*. Every limitation is perceived as an imperfection, every vulnerability a cause for what Günther Anders once called modern humanity's "Promethean shame" before our perfect machines (1956: 23).

Perhaps the most egregious example of this, and the aspect of enhancement which Jonas wrote about most extensively, is the desire for immortality. Jonas does not doubt the value of immortality understood in the Classical sense: that which is made possible by our public life in the *polis*. On the contrary, he devoted the concluding essay of *The Phenomenon of Life* to that very topic, celebrating "the meteoric flash of deed and daring […] immortalized by worldly fame" (*PL*: 271). Immortality understood in this sense is congruent with the finitude characterising the human condition: "not what lasts longest in our experience, but what lasts shortest and is intrinsically most adverse to lastingness, may turn out to be that which binds the mortal to the immortal" (*ibid.*). Humans, unlike other species, have a profound understanding of their condition, and act against this shared backdrop regardless of geographic, cultural, or social circumstances: we know we are born rather than made, that we will one day die, and that every life – human or otherwise – shares this givenness. But the duration of time between the twin poles of natality and mortality represents a horizon of freedom, within which we are capable of deeds which can far outlast our mortal remains and grant us immortality (*MM*: 96).

Transhumanists argue for immortality in a very different sense: as the permanent extension of the individual's life. Just like our machines, which can endure indefinitely, the transhumanist seeks to become an eternally enduring corporeal being or a mind uploaded to an inorganic body. It is, therefore, fundamentally at odds with the human condition. Advocates of *this* form of immortality tend to follow a simple utilitarian logic: if a long, healthy life is a good by virtue of the opportunities and experiences it can offer, it stands to reason that an indefinite continuation of this state must be even better. Nick Bostrom

makes this very argument, claiming that infinite happiness can be found by biotechnologically eradicating death: “[a]ny death prior to the heat death of the universe is premature if your life is good. Oh, it is not well to live in a self-combusting paper-hut! Keep the flames at bay and be prepared with liquid nitrogen, while you construct yourself a better habitation” (2008: 4). Bostrom may, in fact, dissuade us from seeking immortality, as the prospect of listening to such excruciating prose for all eternity strikes us as a living hell. Nevertheless, the basic transhumanist justification for immortality is that our pleasurable experiences would remain qualitatively the same (or even improve if we are cognitively enhanced), yet increase quantitatively. But this overlooks the value of natality and mortality for human existence and a meaningful life, which reveal themselves to us anew when we contemplate their abolition.

We can take firstly the fact that we are born, and ask what significance our natality, that “perennial spring”, has for us (*IR*: 19). Jonas suspects that “if we abolish death, we must abolish procreation as well, for the latter is life’s answer to the former” (*ibid.*). This is not just an ecological concern, to do with the mere fact of insufficient resources and living space on an already overcrowded planet (*MM*: 96). Although a pertinent objection, the transhumanist can always invoke a utopian solution in response: that if we have mastered death we would surely be able to solve such logistical issues, probably by uploading ourselves to cyberspace. Jonas’ worry is also that the desire to procreate – beyond the sexual impulse – is motivated, in part, by a concern for immortality in the Classical sense: to leave a mark on the world through one’s descendants. The realisation of transhumanist immortality may well diminish the desire for Classical immortality through procreation, and thereby result in a drastic reduction of births.

Now, the transhumanist may well see no problem with this, and argue that if human lives continue permanently then it does not matter whether it is old or new. But Jonas reminds us that it *does* matter, in terms of the constitution of society and the effects it would have on our culture: “we would have a world of old age with no youth, and of known individuals with no surprises” (*IR*: 19). He continues:

> [Natality] grants us the eternally renewed promise of the freshness, immediacy, and eagerness of youth, together with the supply of otherness as such. There is no substitute for this in the greater accumulation of prolonged experience: it can never recapture the unique privilege of seeing the world for the first time and with new eyes; never relive the wonder which, according to Plato, is the beginning of philosophy. (*Ibid.*)

Conversely, were a wellspring of youth *and* immortal beings to exist concurrently, the result could be an ever-greater estrangement of the old from the young, the former "stranded in a world we no longer understand" (*MM*: 98). Neither is desirable or wise.

At the opposite end of our temporal existence is the pole of mortality, the fact that we will die. What would the eradication of this mean for us? In addition to the considerable consequences which biological immortality would doubtless have for society, Jonas' existential perspective shines a light on the effects it could have for our self-understanding. In a Heideggerian vein, and in line with the *memento mori* tradition, Jonas argues that knowledge of our eventual deaths plays a fundamental role in giving meaning and weight to our lives (*IR*: 19). The reason is that our finitude is in fact a presupposition to our making meaningful decisions – and, as existentialism taught us, our choices inform who we are. To be sure, I cannot choose to have been an ancient Briton or a contemporary Amazonian, but to the extent that our lives are undetermined we have before us a range of possibilities: if I am lucky I can choose where to live, which job to take, who to pursue romantically, whether to have children, and so on. On a more everyday level I can make choices ranging from how I treat others to which hobbies to pursue. I might choose to spend my time learning to play the piano rather than to speak Russian, or get a black belt in karate. The fact that this choice is delimited by the duration of my lifespan is precisely what gives my decision weight, because I have chosen to allocate the cherished time I have thus.[110] If I am immortal, however, I could eventually do anything and everything. Rather than this being liberating, as the transhumanists naïvely suppose, it could in fact sap actions of their meaning: if I cannot die, an infinity

[110] A polymath is of course capable of mastery in multiple domains, but this is remarkable only because they do so within the constraints of the human condition.

of options are open to me and thus no longer have the weight I presently experience in them *as choices*. What was gained quantitatively would be diminished qualitatively, and the abolition of mortality would simply amount to a form of existential denigration. In this context, the wisdom of Psalm 90 shines through: "[p]erhaps a nonnegotiable limit to our expected time is necessary for each of us as the incentive to number our days and make them count" (*ibid.*).

Taken together, the foregoing critique of genetic engineering as a means and human enhancement as an end gives us ample reasons to reject the transhumanist project. If the goal is as dubious as I suggest, and genetic engineering fraught with risks to freedom, then we would be wise to rule it out in principle. However, the threats to existential and republican freedom are less compelling when divorced from the frivolous and arbitrary purpose of enhancement. That is to say: although the freedom-based concerns apply *simpliciter*, they derive additional persuasive force from being considered in tandem with enhancement as the purpose of the intervention. But if genetic engineering were undertaken not to enhance, but rather to cure or prevent diseases, then the intervention might perhaps be perceived by the engineered as a tolerable restriction on freedom.[111] This 'therapeutic' kind of genetic engineering might be less an enhancement in the sense that we have discussed – motivated by a desire to transcend the human condition – and perhaps closer to a 'modest' enhancement such as acquiring an immunity through vaccination. Although vaccinations still conform to the logic of enhancement, their preventative rationale represents a less severe break with the human condition. It is possible, at least, that therapeutic enhancement would be seen in the same light.

If, therefore, a form of genetic engineering could partially evade the above concerns, it would be the therapeutic sort. As Jonas says, it is certainly less objectionable in terms of its goal (*EBA*: 503), and the utilitarian promise might be sufficient to override our lingering principled concerns about freedom. But there remain worries to do with possible consequences which could yet lead to a staying of our hand. Complexity and unpredictability appear to define the genotype and its relation to the phenotype. As such, even therapeutic genetic

[111] On this I suspect intuitions will diverge: some may find the threats to freedom compelling, whilst others might feel that these are overridden by the impulse to cure and prevent diseases.

engineering with the most precise tools would risk errors which cannot be undone – the defective human being can hardly be scrapped like a faulty machine – or which do not become apparent until long after standard practice had been established. This would be utterly unforgivable if such mistakes were committed to the germ-line and thus hereditary, transmitted through the generations. It would, perhaps, be less foolish if only made at the somatic and therefore nonheritable level, under conditions of informed consent. At this point I can only appeal, rather weakly, to a slippery slope argument. What might well begin as an understandable attempt to cure and restore at the somatic level could open Pandora's box, "leaving behind the conservative spirit of genetic repairs and embarking on the path of creative arrogance. […] It would probably be wiser to resist even the charitable temptation for once, in this instance" (503-504). Once more we find ourselves in agreement with Jonas.

V. A Richer Bioethics

Where does this leave our idea of Man, the ultimate object of responsibility? In considering various threats to human dignity, what did we discover about the fullness of our image? Human dignity categorically rules out the instrumentalisation of human life without prior consent (which alone could redeem it) in medical research. For the same reason, it also prohibits genetic engineering for eugenic purposes. Moving from this solid ground, we argued – with major caveats – that the echo or trace of human dignity discernible in the permanently non-conscious patient prohibited the harvesting of their organs. Similarly, but less compellingly, the weaker echo of human dignity possessed by the recently deceased generally prohibits us from making free use of their tissues without prior consent. However, extending this notion to abortion poses a particular problem, in that an embryo has no trace of human dignity, but instead a foreshadowing of it. Nevertheless, we argued that the foreshadowing gave us a reason to not instrumentalise embryonic human life as a matter of routine. The idea of Man is essentially, therefore, equivalent to personal human dignity insofar as it entails that we never treat others only as means, but also always as ends. This logic extended, in part, to the permanently comatose and brain dead, the truly deceased, and those yet to be born. Even if the latter application of the concept did not amount to a 'rational' case, it made emotional sense.

We also, however, made a supplementary case on the grounds of non-personal dignity for abiding by the human condition. This was not, to repeat, a categorical argument, but one which had intuitive appeal. Thus we could account for our objections to genetic engineering of non-human life, and it emerged most forcefully with regards to our final topic, human enhancement. Assuming it was for non-eugenic purposes, we found persuasive reasons to object to genetic engineering which perverted the relations between the generations or even one's past and future selves (relations which are, or should be, characterised by republican freedom), and our existential freedom to discover oneself. We also argued that our finitude, so constitutive of the human condition, gave us good reason to protect natality and mortality against their abolition by transhumanists. The idea of Man and the human condition, however vague, therefore represent two significant guides for action in the bioethical domain, guides which will likely become only more necessary in the coming decades.

Conclusion: Humanity, the Shepherd of Beings

I. Criticisms of Jonas' Philosophical System

How successful is Jonas' project? We recall that he sought to tackle three profound crises – nihilism, ecological ruin, and the biotechnological revolution – which all have their roots in the anti-Aristotelian turn taken in the modern period, philosophically represented by Bacon and Descartes. Jonas' foremost means for overcoming this development were existential phenomenology and practical reason, leading to a recovery of a neo-Aristotelian philosophy of nature and a broadly Kantian ethic. Taking stock of his attempt, Jonas' philosophy of life, critique of technology, and his imperative of responsibility for the 'idea of Man' are enduring and significant achievements. Not only do these lead to a sound environmental ethic, but all three also feed into his rich bioethical reflections, which offer a much-needed corrective to the dominant approach to that discipline in the English-speaking world. To this extent Jonas' philosophical project achieves its aims.

(α) Baconianism and Crypto-Christianity

The weakest aspects of his system, by contrast, are undoubtedly its metaethical foundations and the political philosophy advanced in *The Imperative*. Before turning to these, however, I would like to consider two criticisms of his philosophy made by other commentators. Firstly there is the claim made by Stephan Kampowski (2013: 112-113) and Gerald McKenny that Jonas' philosophical system fails to truly escape the influence of Baconianism. In Jonas' ethic of responsibility, and the political philosophy built on it, McKenny identifies a Baconian will-to-mastery: "the responsible subject, […] defined by its care for what has come under the guilt of its power, is still essentially a modern subject who must gain control over technology" (1997: 74). This is problematic since "it determines Jonas' conception of politics. Political theory for him reduces to the question of which system, Marxism or capitalism, is more likely to gain control over the dynamics of technology" (*ibid*). In place of this, McKenny suggests that "the task is not to gain control over technology but to be guided by a process of moral formation that is capable of both resisting its diffuse power and assimilating it into a moral project" (74-75). According to McKenny, then, Jonas only counters Baconianism with Baconianism in a

different guise, when he ought instead to have explained how the technological drive might in some cases be resisted and in others co-opted to good ends.

McKenny is not wrong to say that Jonas seeks, through a politics guided by responsibility, a power over the technological power over nature. I have tried to show how positive freedom is insufficient for a comprehensive account of freedom, as living beings can also be negatively free, and to the extent that this one-sided focus leads Jonas to formulate his authoritarian theory of the state in *The Imperative* I agree that it is also politically problematic. These concerns aside, however, I do not think that McKenny's claim really amounts to a criticism. On the contrary, democratic political control of technological development is precisely what the present moment demands. Perhaps this does entail a conception of the modern subject exerting control over its world, but that is not a problem for Jonas since he never claimed to escape instrumental rationality in each and every instance. His critique of Baconianism – and modernity in general – was always restricted to *specific* domains: namely, a reductive conception of humanity and non-human nature and the fact that our desire to master these has led us to the brink of biotechnological revolution and ecological catastrophe. He never claims that the solution would not involve *self*-mastery, and nor should he, since morality often demands exactly that.[112]

The second criticism, made by Gilbert Hottois in particular, is that Jonas' philosophy of responsibility ultimately relies on Judeo-Christian foundations rather than comprising a fully secular ethics. Hottois rightly observes that "a careful reading of *The Imperative of Responsibility* shows that […] religious stylistic overtones are not uncommon" (1993: 14), which is most obviously the case in Jonas' use of the *imago Dei* as a synonym for the idea of Man. More damningly, Hottois criticises Jonas for holding that "nature – here meaning living species – is sacred and inviolable, which is to say that it must not be manipulated by humans, who would be 'playing God' in doing so" (1996: 136). Let us begin with the second charge. Jonas does hold life to be of intrinsic value and the bearer of a non-personal kind of dignity, but he certainly does not

[112] Furthermore, contrary to McKenny's objection, Jonas does occasionally recommend that we try to bring emerging technologies in line with moral objectives. He thought, for example, that the development of nuclear fusion was easily the lesser of two evils when faced with rocketing carbon emissions from fossil fuels (*IR*: 190-191). Jonas does not consider renewable energy, which today is the most promising solution. The rest of the section cited, however, is an astonishingly – and depressingly – accurate forecast of our current energy predicament.

regard it as sacred and inviolable. As discussed at length in the previous chapter, the non-personal dignity of living beings gives us a reason to consider their good in any relevant moral situation, but this will not necessarily be a reason which overrides other concerns. Here there is no fear of playing God with a sacrosanct nature, but rather a legitimate concern with doing unnecessary or excessive harm to non-human life. It is in this sense that Jonas is an heir of Schweitzer, whose teaching of reverence for life did not categorically preclude taking non-human life for our own ends. The fact that we *must* do so, at least for sustenance and in self-defense, simply means that a degree of guilt is the moral price of our continued existence.

Hottois' broader charge – that Jonas' nominally secular philosophy draws on Judeo-Christian notions – is undoubtedly correct to the extent that Jonas is influenced by religious sensibilities, both rhetorically and intellectually: a charge no one who has read his work could deny. But it is another point entirely to claim that this actually matters for the sake of evaluating his arguments, which stand or fall on their own merit. Irrespective of religious sanction one can offer, as I have suggested Jonas does, a convincing account of the intrinsic value, dignity, and integrity of human and non-human life which provides adequate grounds for their being objects of moral responsibility. The fact that his arguments so closely track the Judeo-Christian tradition is not a problem for Jonas, or at least not for the interpretation I have offered of him. This is because ethics *by its very nature* belongs to tradition (in the grand sense) and cannot be coherently abstracted from this context. In our case this is the Greco-Roman-Judeo-Christian West, and therefore it is no surprise that Jonas' ethics are so obviously indebted to this history. What matters philosophically is that the ideas are well-argued for, and, as I say, for the most part they are.

(β) Jonas' Metaethics and Politics

My chief criticisms of Jonas concern his attempted proof of moral objectivism and his politics. The latter, as I have shown, contains key argumentative errors which lead to his acquiescence to authoritarianism. Perhaps most egregiously, in *The Imperative* Jonas seeks to justify paternalistic statesmanship with reference to responsibility for the infant. But political responsibility aligns not with this total and private form of the phenomenon, but

rather the public responsibility each moral agent has for one another by virtue of belonging to a group with power over the individual. Here Jonas perhaps would have benefitted from recalling that Kant's categorical imperative had not only a moral, but also a political formulation. Regardless, he began to replace his earlier authoritarian theory of the state with an intriguing environmental republicanism (albeit too late to fully develop the theory). This alternative, as I have sought to show, aligns with an account of public responsibility and represents a credible political ethic. For this reason Jonas is perhaps not to be judged too harshly as a political theorist.

As indicated, my foremost criticism of Jonas' philosophical system is his attempt to provide an objective foundation to his ethical theory. It is admirable, no doubt, but necessarily falls short. The is-ought gap may well be dogmatically held as unquestionable by some contemporary philosophers, and advanced simplistically by others, but it endures because Hume's insight ultimately holds true. As our reading of MacIntyre in Chapter Three showed, the attempts made by various modern philosophers to find an objective foundation for morality were doomed to fail because of a category error: morality does not have its foundations in reason, nor in a universal human 'moral sense', but rather sentiment and custom. In his failure to account for objective goodness Jonas' name can therefore be added to a very long list of thinkers stretching back to Plato who have sought the same in vain. More pertinently, it means that Jonas does not succeed in his grand ambition of overcoming modern nihilism, and nor, therefore, is his philosophical project a complete success.

Nevertheless, even if we can only accept Jonas' most fundamental metaethical claim – that the existence of value is objectively valuable – on *intuitive* grounds this does not, I think, fatally undermine his project. After all, given our moral heritage the rational demonstration of intrinsic value in all life makes of us a strong appeal *as* something objectively valuable. It can always be denied, of course, but it is persuasive according to the tradition which constitutes our moral understanding (and many others besides). Moreover, given this same heritage and the understanding it entails of the kinds of beings that we are – embodied, social, born of other mortals – responsibility for the vulnerable newborn *does* strike us as an incontrovertible instance of the phenomenon. Once more, it can still be questioned, but this time only by

contravening our most fundamental beliefs about what we owe to whom: those who really doubt that we have a duty of care for the infant stand outside of the realm of legitimate disagreement. We are not, then, left with moral subjectivism but rather moral relativism – more specifically, a deep historical-cultural and 'form of life' relativism. This provides an adequate metaethical basis for an ethic of responsibility, albeit one which falls short of Jonas' lofty ambitions.

II. Finitude and Transcendence

Jonas' philosophy does not, then, fully escape the finitude which Heidegger's existentialism had prescribed as our lot; there are, alas, no timeless moral norms to be found. However, Jonas' philosophy of life and philosophical anthropology nevertheless provide us with the resources to transcend the limits of Heidegger's thinking. Heidegger had taken us to be thrown into being with only our projected meanings and the possibility of an authentic grasping of our being-toward-death. Jonas, by contrast, stresses that human existence is not only shared, to a great extent, by non-human life, but also that what we do *not* share with other living beings is itself the final achievement of a tendency in Being. That is to say: human existence, as an embodied psycho-physical unity, shares the same existential structures as other lifeforms (sociality, spatiality, temporality, and so on). But these structures vary in richness throughout the domain of life: a variation which presents itself as an ascent toward greater world-openness. This, we follow Jonas in supposing, is the result of a tendency in Being toward life and freedom. Hence the development of a symbolic existence, reaching a unique prominence and intensity in human life, and ultimately giving rise to morality, is itself the *nisus* of Being at work. Even though the *content* of morality belongs to our historicity, our moral being itself is therefore the result of something greater than any one form of life.

The value of our moral being was then revealed in the case of responsibility for the newborn. This instance of responsibility is not only the most fundamental ethical injunction prescribed by our moral tradition, but also closely follows from our organismic being. But this is not the only reason for its exceptional status. The incontrovertible nature of the phenomenon also indicates the supreme value of its true object: humanity as a moral being. For in each instance of responsibility we are not only committed to this child before us

right *now*, but this child in its becoming a moral agent. Only with the realisation of the latter does our responsibility cease to be of the vertical kind, and become instead the horizontal kind that I have argued underpins a republican politics. Responsibility is therefore future-oriented, pointing toward the moral being which humanity alone can fulfil. This was no mere species-relative good, but rather – as the outcome of its *nisus* – a good of Being itself. The 'idea of Man', as Jonas called the capacity for morality, is thus the transcendent facet of each case of responsibility for the newborn.

Finally, we were able to account for the worth of non-human life and the human condition without resorting to Aristotelian species essences. Each individual organism, in being oriented toward its continued existence, has a good-of-its own. Such goods have become for us a matter of responsibility now that their existence is imperilled by global technological civilisation. And these subjective goods coalesce around what we called 'modes of being' or 'forms of life', the most important of which – for our analysis, at least – is the human condition. Our natality, mortality, the life self-consciously lived between these extremes, and the connection between our symbolic existence and certain physiological traits – the opposable thumb, upright posture, and increase in brain size – allow us to sketch out what it is to be human. The human condition does not possess the normative significance of the idea of Man, responsibility for which was unequivocal, but it nevertheless has a value for us which is newly revealed in the possibility of its biotechnological transformation.

What is the connection between transcendence and our responsibilities – not just for the idea of Man, but also for the human condition and non-human life? It is that humanity is not the shepherd of being, as Heidegger had it, but rather that being which is uniquely capable of moral responsibility: the shepherd of *beings*. In this task of guardianship, which now encompasses life on Earth and the future of humanity, lies our transcendence.

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