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KEEPING OUR EGGS IN EARTH'S BASKET:
THE ANTI-NATALIST CASE AGAINST SPACE COLONISATION

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Abstract

The morality of space colonisation is yet to receive thorough examination from philosophers. I seek to address this deficit by making a case against colonising space. This case rests on a defence of anti-natalism through four arguments (an argument from Immanuel Kant's categorical imperative; David Benatar's axiological asymmetry argument; Benatar's argument from quality of life; and Benatar's misanthropic argument) and an accompanying stance in favour of (non-objectionable) extinction. I respond to challenges and objections against both positions and show that they fail. Because space colonisation, if successful, will likely extend humanity's lifespan, this makes it a morally indefensible activity, insofar as it entails suffering on the part of sentient beings. I consequently argue that space colonisation ought to be prohibited. I recommend that this prohibition take the form of various additions and changes to existing international space law.

Declaration

I hereby declare that this research report is my own unaided work. It is submitted to the University of the Witwatersrand, Johannesburg, for the degree of Master of Arts. It has not been submitted before for any other degree or examination anywhere.

Rehan Pieter Visser

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23rd day of July, 2018

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Contents:

Section A: Introduction 7

Section B: Space Colonisation 8

Section C: Anti-natalism 10

C1. Argument 1: The Categorical Imperative Argument 11

a) *Shiffrin's Argument: Procreation Violates Consent Rights* 11
b) *Weinberg's Objection: Nonexistent Beings Do Not Have Consent Rights* 12
c) *Argument from Kant's Categorical Imperative: Procreation Treats People as Mere Means* 14

C2. Argument 2: The Axiological Asymmetry Argument 16

a) *The Axiological Asymmetry: Benatar's Formulation and Justification* 16
b) *Formal Objections: Searching for Symmetry* 20
c) *Alternative Explanations of the Derivative Asymmetries: Why They Do Not Hold Water* 22
d) *Cause for Suicide?: Against Genethical Parity* 23
e) *Why the Axiological Asymmetry's Implications Are Not Implausible* 26

C3. Argument 3: The Quality-of-life Argument 28

a) *Life is Bad – Really Bad* 28
b) *Hedonistic Theories* 29
c) *Desire-fulfilment Theories* 31
d) *Objective List Theories* 35
e) *A Backup Argument from Risk* 38

C4. Argument 4: The Misanthropic Argument 44

a) *The Harms We Cause* 44
b) *Are Procreators Responsible for the Actions of Their Progeny?* 49

Section D: Human Extinction 50

a) *Living in Order to Die Off: Why There Is No Reason to Prevent Extinction* 50

b) *Ensuring Extinction through Planetary Confinement* 52

Section E: Policy Implications 55

a) *Current Treaties and Principles* 55

b) *Suggested Policy Framework, Revisions and Additions* 59

c) *Is a Planetary Confinement Policy Realistic?* 61

Section F: Conclusion 62

Bibliography 64

Section A: Introduction

It is noteworthy that whereas some expected technological advances, including the ability to clone humans and the spectre of artificial intelligence, have garnered intense philosophical scrutiny, the prospect of colonising space, much speculated about in popular culture, has received comparatively little attention from philosophers in general and ethicists in particular.[1] This is surprising given that the implications of colonising space are enormous. If successful, the endeavour to inhabit[2] space vessels and/or other celestial bodies in our solar system – and, plausibly, given sufficient time and technological advances, locations elsewhere in or even beyond the Milky Way[3] – would very likely transform life exponentially, particularly humanity as we know it, not to mention the future of the universe and any other life that may exist out there.

What I aim to contribute here is at least partly an attempt to initiate a discussion on an important topic that regrettably has been neglected for too long, namely, the morality of space colonisation. This discussion has particular significance given the urgency of the matter. Plans to start the process of space colonisation are already underway. The founder of aerospace company SpaceX, Elon Musk, has said that his company could launch its first spaceship for the 'Mars mission' as soon as 2022.[4] If everything goes according to Musk's plan, we should expect a self-sustaining population on Mars within the next century or so, perhaps even as early as 2074.[5] Although there are many who remain sceptical of these timelines, pointing out that we still lack much of the technology that is necessary to get to Mars, never mind live on it, many of these cynics neverthelesss think that it is only a matter of time before we develop these technologies.[6] It is therefore critical that we establish the moral status of space colonisation (i.e., whether it is morally impermissible, permissible or obligatory) – and quickly.

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[1] One exception can be found in Nick Bostrom, 'Astronomical Waste: The Opportunity Cost of Delayed Technological Development', *Utilitas* 15(3), 2003: 308-314. Bostrom makes a utilitarian argument that the opportunity cost of delaying space colonisation is sky-high, since we fail to realise potential future goods in the form of beings living worthwhile lives.
[2] This notion is important, as space colonisation must be understood as a separate endeavour to that of space *exploration*. By the former I refer to the permanent human occupation anywhere beyond Earth's atmosphere (past the Kármán line).
[3] For an interesting discussion on this possibility, see Olle Häggström, 'Space Colonization and the Fermi Paradox', in *Here Be Dragons: Science, Technology and the Future of Humanity*, Oxford: Oxford University Press, 2016, pp. 203-225.
[4] Nicky Woolf, 'SpaceX founder Elon Musk plans to get humans to Mars in six years', *The Guardian*, 27 September, 2016, URL: https://www.theguardian.com/technology/2016/sep/27/elon-musk-spacex-mars-colony [online] (accessed 28 September, 2016).
[5] Tim Urban, 'SpaceX's Big Fucking Rocket – The Full Story', *Waitbutwhy*, 28 September, 2016, URL: https://waitbutwhy.com/2016/09/spacexs-big-fking-rocket-the-full-story.html [online] (accessed 28 September, 2016).
[6] Andrew Coates, 'Elon Musk releases details of plan to colonise Mars – here's what a planetary expert thinks', *The Conversation*, 21 June, 2017, URL: https://theconversation.com/elon-musk-releases-details-of-plan-to-colonise-mars-heres-what-a-planetary-expert-thinks-79733 [online] (accessed 23 June, 2017).

In addressing this question I shall take a roundabout approach. A definitive moral case against space colonisation will be made by fleshing out four anti-natalist arguments. The reasons underpinning the view that procreation is wrong also point to the goodness of human extinction. I shall defend anti-natalism and the view that human extinction is good from various objections.[7] The moral wrongness of colonising space is insinuated by these views, but I shall go a step further (or at least take a step on a different track) and argue that it ought to be legally prohibited. Having done so, I shall briefly discuss various policy revisions that should be implemented to prevent the colonising of space. For those familiar with the philosophical literature on anti-natalism there will be little that is original in my defence of that position. My intention, however, is not simply to defend anti-natalism but also to show its significance for debates on the morality of space colonisation. This is important for two reasons. First, as I said, there has been almost no discussion on the morality of colonising space, in academic circles or in the broader public sphere. Second, the ramifications of conscious creatures permanently leaving Earth are vast. Given the wrongness of prolonging humanity's lifespan, space colonisation represents a grave danger, as it has the potential to extend our species' existence beyond the stage where the sun will engulf Earth. Insofar as this species extension would cause suffering and poor lives, it promises to be calamitous. We must prevent such an atrocious disaster from occurring.

Section B: Space Colonisation

On 27 September, 2016, the maverick billionaire Elon Musk publically outlined his plan for human beings to become a multi-planetary species before the end of the century. Many questions about this project remain unanswered – questions about the necessary but as yet undeveloped technology, the enormous economic burden, and the timeframes that Musk rather optimistically charts. Many people who have pondered the plan to colonise Mars do think it is likely to be technologically viable soon – within the next few hundred years at most. Yet not many, it seems, have wondered what the reasons are for turning (a select group of) our species into a space-faring civilisation, and whether those reasons are any good. Even if we develop the requisite technological capacities, overcome the assortment of biological hurdles,[8] and are able to finance such a massive project, is it worth doing? What is the point of colonising space?

[7] My focus here will be on human extinction, although similar arguments can be made which apply to the extinction of all sentient beings (and in fact *all* life, seeing as even unicellular organisms might evolve into sentient beings again).

[8] For an overview of these hurdles, see Scott Solomon, 'The Martians Are Coming – And They're Human', *Nautilus Magazine*, 27 October, 2016, URL: http://nautil.us/issue/41/selection/the-martians-are-comingand-theyre-human [online] (accessed 11 January, 2018).

Proponents of space colonisation are everywhere to be found. They include scientific luminaries as diverse as Stephen Hawking, Freeman Dyson and Buzz Aldrin, science fiction writers such as Larry Niven, and affluent entrepreneurs like Musk, Jeff Bezos and Richard Branson. Intriguingly, many of them claim to support space colonisation for the same reason: to prevent human extinction. Both Hawking and Musk have called space colonisation 'life insurance' for the species.[9,10] Or as Niven once put it, "The dinosaurs became extinct because they didn't have a space programme." Sir Arthur C. Clarke, who once recounted that quote, added that it would "serve us right if we fail to learn from their example".[11] Predictably, the wrongness or undesirability of human extinction is nearly always taken for granted. As an example, Michael Huang calls extinction "the worst possible future", which is why "it is natural, logical, and right for human civilization to colonize space".[12] In this essay I shall argue that this view is profoundly mistaken. In fact, the reverse is true: given the harms that attend existence, extinction is the *best* possible future.

My arguments mean that I am one of the few detractors of space colonisation. Questions have been raised about profligacy – a single mission to Mars is estimated to cost approximately half a trillion US dollars[13] – and feasibility.[14] Nobody, however, as far as I am aware, has adopted anti-natalist arguments in support of an anti-space colonisation position. This strikes me as odd, since I take the moral status of colonising space to rest at bottom on the question of whether extinction ultimately would be good or bad.[15] (This question in turn depends on the same considerations for and against procreation.) If extinction is bad, then we should take steps to prevent it from happening. If 'successful', space colonisation would delay extinction, and thus should be promoted, or at least allowed. If on the other hand extinction is *good*, perhaps because the arguments for anti-natalism are right, then we ought not to take steps that will prevent it from happening. Hence, space colonisation should not be pursued. Contra what most people think, the second horn of the dilemma is correct.

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[9] Andrew Griffin, 'Stephen Hawking: space travel will save mankind and we should colonise other planets', *The Independent*, 20 February, 2015, URL: http://www.independent.co.uk/news/science/stephen-hawking-space-travel-will-save-mankind-and-we-should-colonise-other-planets-10058811.html [online] (accessed 4 January, 2018).

[10] Urban, 'SpaceX's Big Fucking Rocket'.

[11] Sir Arthur C. Clarke, 'Keynote Address: UNISPACE III Space Generation Forum', 19 July, 1999, URL: http://www.un.org/events/unispace3/pressrel/sgforum/sgf4.htm [online] (accessed 4 January, 2018).

[12] This is because Huang, like many others, sees space colonisation as a resolution to the Fermi Paradox – the puzzle as to why there is a lack of evidence of extraterrestrial life given the high probability of its existence. Michael Huang, 'The other side of the Fermi paradox', *The Space Review*, 19 February, 2007, URL: http://www.thespacereview.com/article/810/1 [online] (accessed 15 January, 2018). Unsurprisingly, he offers no justification for the claim that extinction is bad.

[13] Mary Roach, *Packing for Mars: The Curious Science of Life in the Void*, Bloomington, IN: W.W. Norton & Co., 2011, p. 272.

[14] Coates, 'Elon Musk releases details of plan to colonise Mars'.

[15] The alternative, where extinction is morally neutral, would mean it has no bearing on the morality of colonising space.

In addition to the impact that space colonisation would have on future generations of *Homo sapiens*, there is also the risk it would pose to other sentient beings that possibly exist in the universe. Our track record with other (sentient) animals on our own planet is horrific. There is no reason to think this would not continue were we to encounter other sentient life forms – unless they got to us first. This is just to say that interstellar space travel represents a risk for future human beings, or whatever we have evolved into by that point. But the point is that all other questions relevant to the morality of space colonisation – whether it would be a scientific achievement that inspires millions of people to take up careers in the STEM fields; whether it would be fiscally responsible; whether it would be fun and exciting, or filled with glory – are secondary. That is to say, they only need to be addressed after we have answered the fundamental question of whether extinction is good or not. In the next section I provide the case for anti-natalism which, if true, suggests extinction would be a good thing.

Section C: Anti-natalism

The feeling that human extinction is bad is indubitably predicated on the belief that human existence is good or valuable. This belief is one that is often deeply held, and provides resistance (sometimes to the point of revulsion) to anti-natalist doctrine. This is unfortunate. As a result, discussions about the morality of procreation often tend to be coloured by people's instinctive prejudices in favour of existence. Still, the idea that procreation is wrong – anti-natalism in a nutshell – is not really all that anomalous. Many people of differing backgrounds think that 'overpopulation' is a serious concern. They believe that people should have *fewer* children. In 1979, the Chinese government, worried about population growth, (in)famously implemented a 'one child' policy. Although this is not an example of anti-natalism *per se*, as it was motivated by a belief that there is an optimal number or range of people that, say, the world's resources can cater for, and thus still favours some procreation, it is not wholly out of step with anti-natalism, which in effect claims that the best number of people is zero.

The First Noble Truth of Buddhism is that existence is *dukkha* (suffering). Siddhārtha Gautama believed that if people realised the harm they caused in procreating they would cease doing so.[16] The blind Islamic Golden Age poet and philosopher, Abul 'Ala Al-Ma'arri, thought that people should not beget children.[17] Certain groups throughout history, including the Marcionites, the Encratites, the Manichaeans, the Bogomils and the Cathars, all believed that procreation is wrong. In addition,

[16] Hari Singh Gour, *The Spirit of Buddhism*, Whitefish, MT: Kessinger Publishing, 2005, p. 286-288.
[17] 'Al-Ma'arri', *Encyclopaedia Britannica*, date unknown, URL: https://www.britannica.com/biography/al-Maarri [online] (accessed 11 January, 2018).

there are also numerous philosophers who have formulated arguments against procreation in the past century or so, including Peter Wessel Zappfe, Emil Cioran, Hermann Vetter, Julio Cabrera and, perhaps most notably in recent times, David Benatar. The Voluntary Human Extinction Movement (VHEMT) is a collective founded in the late twentieth century with the motto "May we live long and die out".[18] In September, 2017, the first edition of *The Antinatalism Magazine* was released. There is a clear historical precedent as well as a growing popular awareness of anti-natalist ideas and positions.

In this essay I shall present and defend four anti-natalist arguments: (1) an argument from Immanuel Kant's categorical imperative; (2) Benatar's axiological asymmetry argument; (3) Benatar's quality-of-life argument, with a backup argument from risk; and (4) Benatar's misanthropic argument. The first three arguments independently show that one is always harmed by being created; the last argument establishes that we mostly do more harm than good. In light of these arguments we can ascertain the veracity of anti-natalism, which is (necessarily) supplemented by a pro-extinction stance.

Argument 1: The Categorical Imperative Argument

Shiffrin's Argument: Procreation Violates Consent Rights

Seana Shiffrin argues "that procreation violates the consent rights of the child that results".[19] By being created, children are forced into a situation where they will have "to assume moral agency, to face various demanding and sometimes wrenching moral questions, and to discharge taxing moral duties".[20] Their lives will be accompanied – nay, characterised – by significant amounts of loss, pain, stress, distress, suffering, injury, illness and various other negative things, including the fear (if they live long enough) and the harm of death.[21] These burdens are foisted upon them by their creators *without their consent*. This violates the moral principle which holds that the imposition of or exposure to substantial non-comparative[22] harm, or risks of serious harm, is not permitted unless an individual

[18] *The Voluntary Human Extinction Movement*, URL: http://vhemt.org [online] (accessed 11 January, 2017).
[19] Seana V. Shiffrin, 'Wrongful Life, Procreative Responsibility, and the Significance of Harm', *Legal Theory* 5(2), 1999: 137.
[20] *Ibid.*
[21] *Ibid.* I shall say more about these negative experiential aspects of life in the discussion of the quality-of-life argument.
[22] The fact that I need to preface 'harm' with the qualifier 'non-comparative' is very strange. A traditional notion of harm is something which leaves one 'worse off'. But this is clearly incorrect. I can provide a personal anecdote to illustrate the problem. Once when playing cricket I missed the ball while fielding and was struck forcefully in my left eye. This led to swelling, bruising and – inexplicably – an improvement in my vision (of my left eye only). Here is a situation where I was evidently harmed, and yet I was not made worse off; in fact, I was made *better* off. The fact that I was indeed harmed is supported by the intuitive idea that we would not allow people to punch those with poor vision (without their consent) in the hope that this would improve their vision. This is because doing so is *harmful*, even if it results in improved vision. To the objection that I am only 'better off' all things considered, but am worse off in light of my injuries, by *virtue* of the

has consented. Procreation, which causes children harm and exposes them to (risks of) substantial harm, is therefore morally impermissible.[23]

One important exception to the consent principle that Shiffrin discusses at length is the imposition of (substantial) harm in order to avert even greater harm. For example, it is permissible to violate the consent principle by breaking an unconscious person's arm when they are trapped inside a burning vehicle in order to prevent them from being burnt alive (the 'rescue case'). Consent, in effect, has been presumed. However, the 'rescue case', writes Shiffrin, is not analogous to the procreative case. That is because we may not assume hypothetical consent when bestowing what Shiffrin calls a 'pure benefit'[24] onto someone. For example, we may not break someone's arm without their consent so as to secure a financial reward for them (the 'reward case'). This means that even on the assumption that human existence is some kind of intrinsically good thing (which I shall argue it is not), or at least comes with many benefits, we cannot assume the hypothetical consent of a nonexistent being to being created as giving us grounds for creating them. Shiffrin lists four factors that make the notion of hypothetical consent problematic in procreative cases: (1) no one is harmed if no one is created; (2) the act of procreation means new people are exposed to harms and potentially severe harms; (3) a new person can only 'escape' existence (much later) by death (i.e., suicide), which is a high cost to bear; and (4) the hypothetical consent is not based on the resulting individual's attitude towards risk.[25] By creating a person we cause them harm and expose them to potentially severe harms. Even if being created benefits a person overall, the harms attending procreation disqualify one from securing those benefits for a new person *by way of* creating them. So, procreation is wrong.

Weinberg's Objection: Nonexistent Beings Do Not Have Consent Rights

One potential problem with this argument that critics[26] have identified is that it relies on the notion of rights. In the 'reward case' above, it is easy to see what has gone wrong: we have violated the consent rights of the individual. That is why breaking their arm in order to secure a financial reward

fact that I received a blow to the head, I say that this is cherry-picking the consequences. There is no reason why only one direct outcome – my injuries – should be regarded while another – my improved vision – should be disregarded. One can be harmed even if one is made better off overall, and it is not at all strange to say that one has been harmed even if one has benefited all things considered. For this reason I employ a non-comparative notion of harm.

[23] *Ibid.* This follows even though, bizarrely, Shiffrin does not explicitly affirm this conclusion.

[24] By 'pure benefits' she means "benefits that are only goods and which are not also removals or preventions of harms". *Ibid.*, 124.

[25] *Ibid.*, 133.

[26] Here I shall focus on Rivka Weinberg's discussion of the issue, but David Wasserman makes similar points. See David Wasserman, 'Against Anti-Natalism', in *Debating Procreation: Is It Wrong to Reproduce?*, David Benatar and David Wasserman, Oxford: Oxford University Press, 2015, pp. 168-171.

for them is wrong. But, as Rivka Weinberg notes, (young) children do not have consent rights. This is because they are incompetent and not fully autonomous. Parents or other guardians are therefore allowed, maybe even sometimes required, to impose (risks of) harm on their children for the sake of pure benefits.[27] (Sending children to school, with its myriad sources of potential harm, is probably a paradigmatic example.) Likewise, nonexistent beings are not competent, autonomous agents – they are not agents at all – and so, because they are incapable of consent, the notion of consent rights does not apply to them. Thus, the lack of consent argument against procreation fails.

Benatar suggests (but does not endorse) a potential line of reply for the anti-natalist. The idea here is that the consent right *does* exist, but that it is a special kind of right, one "that only has a bearer in the breach" thereof.[28] On this view, we could simply say that one has violated a right if one performs an action – procreation – which causes someone to exist who is thereby wrongfully harmed. Benatar admits that this would be "an unusual kind of right", but points out that "coming into existence is an unusual case".[29] Although I do not endorse this reply here, I should like to point out that it is not as strange as it might seem at first glance. This is because one might think that the underlying moral principle Shiffrin is articulating applies to children and, analogously, to nonexistent beings, too. This is easier to see with an example. An infant cannot consent, say, to having their arm broken for financial gain; but we still may not do it. Why not? Because (this is the proposed moral principle) we may not harm someone for the sake of a pure benefit without their consent, *regardless of whether they have consent rights or not*. Thus, the broader point is that where consent is *unavailable*, inflicting harm for the securing of pure benefits is immoral. In other words, the moral principle applies not only to cases where there are consent rights, but also to cases where the consent requirement is inapplicable. This would then include children, other sentient beings (it is wrong to torture a pig) and nonexistent 'human' beings. As I say, however, I do not defend that response, as I believe it is *ad hoc* (may we pick flowers without their consent?) and open to the challenge that we sometimes must inflict harms on non-autonomous agents like young children for the sake of securing greater benefits for them.[30] In any case, there is a deeper and more fundamental reason, tied in with consent but not reliant on it, which engenders the wrongness of procreation.

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[27] Rivka Weinberg, *The Risk of a Lifetime: How, When, and Why Procreation May Be Permissible*, Oxford: Oxford University Press, 2015, p. 138.
[28] David Benatar, *Better Never to Have Been: The Harm of Coming into Existence*, Oxford: Oxford University Press, 2006, p. 53.
[29] *Ibid.* In a footnote Benatar alludes to the possibility of reframing this special kind of right in the language of duties.
[30] Weinberg makes precisely this point. *The Risk of a Lifetime*, p. 138. Of course, figuring out which (risks of) harms may be inflicted for the sake of which benefits is a hugely complicated and highly contentious issue.

Argument from Kant's Categorical Imperative: Procreation Treats People as Mere Means

The more fundamental problem with procreation is not that it violates an individual's consent rights but that it treats the resulting person as a mere means and not as an end in themselves. Benatar notes that it is "strange" to cite a future child's interests as a reason for creating them.[31] In fact, as Karim Akerma points out, it is not just strange; it is impossible, "ontologically speaking, to procreate for the sake of the person who will exist".[32] This is because the resulting person does not (yet) exist, and so we cannot act in a way that benefits them. Curiously, some pro-natalists who object to cases of 'saviour siblings' – where, say, parents conceive a child in the hope that they will save their elder leukaemic sibling by donating their bone marrow – do so on the grounds that the creation of the saviour sibling is purely instrumental. That is, it treats the resulting child as a mere means and not as an end in themselves. Yet while this is true, these pro-natalists fail to realise that the same objection applies to *all other* cases of procreation – precisely because one can never be created for one's own sake.[33] Indeed, as Benatar is quick to remark, it

> seems strange to think that it is acceptable to have a child for no reason at all, but wrong to have a child in order to save somebody's life. If the latter is a case of unjustifiably treating one person as a means to the ends of others, then this must apply even more forcefully to all other cases of having children.[34]

I use the term 'person' to denote an individual human being, as I take Benatar to also be doing here. It has been suggested to me that a relational account of personhood, which deems persons to be contingent achievements within a specific social context, may present a problem for this argument.[35] Presumably, the idea is that an infant is not yet a person (in the relevant sense), and so we need not worry if they are treated merely as a means. We need not, however, concern ourselves only with relational accounts of personhood. Why is it wrong to treat non-autonomous agents, which infants are, merely as a means? After all, Kant's categorical imperative is restricted to autonomous beings.

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[31] Benatar, *Better Never to Have Been*, p. 34.

[32] Karim Akerma, 'Theodicy shading off into Anthropodicy in Milton, Twain and Kant: Antinatalism as Eve's Escape Route in the Face of Wrongful Creation, Unrequested Existence and the Evil of Freedom', *Tabula Rasa* 41(1), 2010, URL: http://www.tabvlarasa.de/41/Akerma.php [online] (accessed 8 January, 2018).

[33] Benatar makes this point about his opponents. See *Better Never to Have Been*, p.129. Parallel arguments (and failures in reasoning) have been made with regards to (human) cloning. See Leon R. Kass, 'The wisdom of repugnance: why we should ban the cloning of humans', *Valparaiso University Law Review* 32(2), 1998: 696–697; and *President's Council on Bioethics*, 'Human Cloning and Human Dignity: An Ethical Inquiry', Washington, D.C., 2002.

[34] Benatar, *Better Never to Have Been*, p. 131.

[35] Thank you to Linden Edwards for raising this point.

The problem here is that the procreative act is an unusual case; it is one which (eventually) *produces* an autonomous being, at least most of the time. But an action which creates an autonomous person, whether gradually or instantaneously, cannot do so with the (eventual) person in mind. If an act does not treat an autonomous agent as an end in themselves, then that act is wrong. Why should the act of procreation, the act which *creates* the autonomous agent, be any different? It is still the case that an act has been performed such that an autonomous being has been treated merely as a means. What, then, about those foetuses or infants which never grow up to be autonomous agents? Can we still say that creating them is wrong – that they have been treated merely as a means? I think we can. When we universalise the procreative act we see that it is the wrong *kind* of act. Remember that the consequences are immaterial for Kant. Thus, when I lie to someone over the phone but the signal disappears and they do not hear me, I have still treated them merely as a means; the effects do not matter. The same is true of the procreative case: the act treats the recipient merely as a means.

Another objection to this anti-natalist argument that I should like to forestall is the idea that one can treat someone as an end in themselves without knowing who they are. An example might look like this: when one donates money to a child welfare organisation the act of charity treats each and every beneficiary of the donation as an end in themselves. This is true even if one does not know who the recipient(s) of the money will be when the donation is made. So, one can treat someone as an end in themselves even if one does so impersonally, that is, without knowing who they are. Similarly, the act of procreation can treat the recipient of that act as an end in themselves even if the progenitors do not know who that beneficiary will be. Except the analogy between the charity case and the procreative case fails for two reasons. The first reason it fails is that the procreative case is not one which treats the resulting person merely as a means because of some epistemic failure. The problem is a *metaphysical* one: the person who will be created does not exist prior to the act of procreation. We cannot appropriately respect them (by causing them to exist) because there *is* no 'them' to respect.[36] So, by being created one is necessarily being treated merely as a means, and thus harmed. This brings us to the second reason to consider the procreative case and the charity case as disanalogous: no

[36] Careful readers will realise that this looks a lot like the non-identity problem – in reverse. The non-identity problem is taken to be the problem of how we can harm someone who does not (yet) exist; specifically, how we can be said to be harming someone by creating them, when they would not exist in the counterfactual case (where they are not created). The inverse of the 'problem' (inverted commas are used because it is not really a problem) would thus be the problem of how we can benefit someone who does not (yet) exist. The non-identity 'problem' has numerous 'solutions', but the simplest follows naturally from my use of a non-comparative notion of harm. The child resulting from procreation need not be left worse off than the scenario where they do not exist; they only need to be harmed by being created. The fact that they *are* harmed (overall) constitutes my second response to the charity case here, as well as the main thrust in both the axiological asymmetry argument and the quality-of-life argument.

recipient of procreation will be benefited (overall). This is because life is harmful; it is always worse to exist than never to have existed. To substantiate this assertion, I turn to the second anti-natalist argument: the argument from the axiological asymmetry.

Argument 2: The Axiological Asymmetry Argument

The Axiological Asymmetry: Benatar's Formulation and Justification

Probably the most controversial argument against procreation is Benatar's axiological asymmetry argument. Although fairly complex, the central thesis can be summarised quite simply. While there is a symmetry between harms and benefits – the former is bad, whereas the latter is good – there is an asymmetry between the *absence* of harms and the *absence* of benefits – the former is good even when there is no one to enjoy this good, whereas the latter is bad only if there is someone who is deprived of said benefits. In Benatar's own words, this shows "that the avoidance of the bad by never existing is a real advantage over existence, whereas the loss of certain goods by not existing is not a real disadvantage over never existing".[37] Thus, being created is always worse than not being created, and so it would be better, morally speaking, never to exist at all.[38]

There is a lot going on in the short passage above, and we must make sure we understand the argument before we can address the litany of objections that has been raised against it. Perhaps this is most easily done by visualising the asymmetry.

Scenario A: X exists	Scenario B: X never exists
1. Presence of harm (BAD)	3. Absence of harm (GOOD)
2. Presence of benefit (GOOD)	4. Absence of benefit (NOT BAD)

Figure 1 (Benatar, 'The Asymmetry Argument', in *Debating Procreation*, p. 24.)

What this matrix entails is that existence is always worse than nonexistence. This is because we have to compare scenario A with scenario B to see which is preferable. Comparing (1) with (2) cannot tell us whether existing is better than never existing; only comparing (1) with (3) and (2) with (4) can tell us that. (3) is always better than (1), but (4) is never worse than (2). (The 'not bad' in (4) should be understood not as being of 'zero' value but as being valueless; it is not bad, nor is it good.)[39] Scenario

[37] Benatar, *Better Never to Have Been*, p. 14.
[38] All claims about nonexistence being better than or preferable to existence are made from the point of view, not of the nonexistent being itself, for that is absurd, but from the counterfactual perspective of the person who *would* have lived.
[39] The problem is that we cannot quantify values here, as I show directly hereafter.

A contains good and bad. In contrast, there is *only* good in scenario B; the absence of any benefits accrued by not being created is not a bad thing for the person who has not been created because there *is* no such person. So, given the facts of existence (i.e., all actual lives contain harms), never existing is always better than existing. (In the purely theoretical case in which a life contains no harms whatsoever we should be indifferent between existing and never existing.) One way to think about this is to say that it is impossible to be better off by existing, because one would otherwise not exist, but one can (and indeed this is the case for everyone who ever was, is, and will be) be made *worse* off by existing. The implication is that it is better never to exist.

Aware that this asymmetry is tricky to come to grips with, Benatar draws a helpful analogy. Instead of comparing existing with never existing, Benatar asks us to compare being sick with being healthy.

Scenario A: S is sick	**Scenario B: H is healthy**
5. Presence of sickness (BAD)	7. Absence of sickness (GOOD)
6. Presence of ability to recover quickly (GOOD)	8. Absence of ability to recover quickly (NOT BAD)

Figure 2 (Benatar, *Better Never to Have Been*, p. 47.)

In the first scenario S has an impaired immune system, meaning they often get sick. However, they also possess the ability to recover quickly. Clearly the former is bad while the latter is good. In the second scenario H has a perfect immune system, meaning they never get sick. The fact that they lack the ability to recover quickly is not a bad thing because the impossibility of ever getting sick means they will never require it.

We can also see here why allocating values to the various quadrants in the matrix will not work. Looking again at Figure 1, we might be tempted to assign a negative value to (1), positive values to (2) and (3), and a value of zero to (4). On the assumption that (1) and (3) are exactly inverse values, existing will be better than never existing whenever the benefits of existing are more than twice the harms of existing. Although there are several other problems with this reasoning, the chief absurdity can be understood by applying the same evaluative framework to Figure 2. Now we would obtain the result that being sick is better than being healthy as long as the value of the ability to recover quickly is more than twice the disvalue of the sickness. But how can being sick and recovering ever be better than never getting sick in the first place? After all, the point is that the presence of the ability to recover quickly is *good* for S when they are sick but does not constitute an *advantage* over

H's being healthy.[40] Assigning values to the quadrants in the matrix elicits an absurd conclusion. It is a mistake to attempt to quantify the harms and benefits in the axiological asymmetry.

But why should we accept the axiological asymmetry? (1) and (2) are surely uncontroversial; there is no doubt that the presence of harm is bad and the presence of benefit is good. Indeed, that is part of what we *mean* by harms and benefits. The controversy lies in the discrepancy between (3) and (4). Benatar substantiates his belief in this discrepancy by highlighting its explanatory power. Specifically, the asymmetry accounts for our moral intuitions in four derivative asymmetrical judgements. These asymmetries are plausible and appear to be widely held.

One asymmetry that the discrepancy between (3) and (4) explains is the asymmetry of procreational duties; that is, the belief that we have a duty to avoid creating suffering people, whereas we have no duty to create happy people. According to Benatar,

> the reason why we think that there is a duty not to bring suffering people into existence is that the presence of this suffering would be bad (for the sufferers) and the absence of the suffering is good (even though there is nobody to enjoy the absence of suffering). In contrast to this, we think that there is no duty to bring happy people into existence because while their pleasure would be good for them, its absence would not be bad for them (given that there would be nobody who would be deprived of it).[41]

This is eminently plausible. It is widely accepted that we must not create people who will or are likely to suffer. This is because creating suffering people is harmful to them. (See footnote 36 for why the non-identity problem is not a problem for this assertion.) In contrast, we certainly have no duty to create people who will or are likely to experience joy. Just think of all the potential joy-filled lives that are wasted with every act of ejaculation which does not lead to fertilisation and one will come to realise how implausible it would be to hold the ejaculator responsible for failing to create people who experience joy. (This would absurdly imply, in the words of the Monty Python skit, that "every sperm is sacred".[42]) The best explanation for this asymmetry is the underlying asymmetry between harms and benefits: we *can* act to stop the interests of someone who will never exist from being set back by not creating them, but we *cannot* act to further the interests of someone who will never exist.

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[40] Benatar, *Better Never to Have Been*, p. 46-47.
[41] *Ibid.*, p. 32.
[42] Thank you to both Baron Glanvill and Linden Edwards for pointing me to this hilarious commentary on a belief in such a duty.

Another asymmetry – the prospective beneficence asymmetry – which derives from the asymmetry between harms and benefits is the fact that, as Benatar puts it, it is "strange" to cite the benefits to a potential child in being created as a reason for creating them.[43] I have argued that it is not (only) strange; it is unintelligible. At any rate, it is not odd to cite the harms to a potential child in being created as a reason for not creating them. Indeed, prospective procreators do this routinely and are correctly applauded for doing so. The axiological asymmetry best explains this difference. If we created children for their own sake, then there would be a strong moral reason for people to create more children. On the other hand, our concern for the wellbeing of potential children provides an excellent reason for not creating children. Because the absence of benefits is only bad when there is someone who is deprived of that benefit, it makes no sense (if it ever could) to say that we could or should create children for their own sake. But because the absence of harms is good even if there is no one to enjoy that good, it means we can say that it is good to avoid creating suffering people.[44]

Support for the axiological asymmetry can also be found in a third derivative asymmetry: the retrospective beneficence asymmetry. Benatar notes that both procreating and failing to procreate can be regretted. However, only procreating can be regretted *for the sake of* the resulting person. One cannot regret the failure to procreate *for the sake of* the person who was not created, not because that never-existing person is unknown, but because 'they' never exist. We can regret the lack of a benefit for an existing person, even if we do not know them, but we cannot regret the lack of a benefit for a person who never exists, because there is no one who can be deprived by such a lack. This truth is captured by (4) in the axiological asymmetry. Regret for failing to procreate is not regret for a child who would have resulted; it is just regret for oneself (or someone else who already exists). Yet many people regret having created people – some for their own sake, but some also for the sake of the people they created. Usually this is because of the harm attending those created individuals' lives. This difference in retrospective judgements is best explained by the fact that the presence of harm is bad for an individual, whereas the absence of benefit is not bad for an individual who never exists.[45]

The final asymmetrical moral intuition explained by the axiological asymmetry is the difference in our reactions to (a) suffering which occurs in distant regions, and (b) joyless uninhabited places in the universe. (I shall label this the distance/nonexistence asymmetry.) The appropriate response to (a) is sadness, anger or a similar feeling. In contrast, the appropriate response to (b) is not the same.

[43] *Cf.* footnote 30.
[44] Benatar, *Better Never to Have Been*, p. 34.
[45] *Ibid.*, p. 34-35.

We are not, nor should we expect ourselves to be, sad or angry if we hear that a distant place – say, Mars – is not filled with happy creatures who, had they existed, would have lived there. However, if tormented Martians existed we would have reason to feel sorry for them. The point is that we regret the suffering of those who exist but not the absent pleasures of those who never do.[46] If we were informed that Martians, had they existed, would have led terrible lives, we would be glad that they never did.[47] That this is so is down to the asymmetry between harms and benefits.

Since these four asymmetries are widely held,[48] and because the axiological asymmetry provides the best explanation for all of them, it means that most people endorse the axiological asymmetry – at least they should on pain of inconsistency. Of course, broad appeal is not in and of itself reflective of correct moral judgements, as beliefs about the permissibility of procreation show all too clearly, but I hope that I have shown the reasonableness of these four asymmetries. The fact that acceptance of these other asymmetries is widespread is indicative of the pervasiveness and strength of cognitive dissonance in human thinking. This is because these asymmetries rest upon the asymmetry between harms and benefits. This asymmetry in turn directs us to the fact that being created is always worse than not being created. But the moment the implications are fleshed out, people backtrack on their beliefs. Attempts to reject the axiological asymmetry are a dime a dozen. In the subsequent parts of this section I discuss these attempts and show that they all fail.

Formal Objections: Searching for Symmetry

One standard method of denying the truth of the asymmetry between harms and benefits is to argue for formal symmetry. This can be done in one of two ways. One can either say instead of (3) that the absence of harms is not good for a nonexistent being, or one can replace (4) with the claim that the absence of benefits is bad for a nonexistent being. Elizabeth Harman[49] and Sam Harris[50] take the second route, while Julio Cabrera is indifferent between the two; the latter seems to suspect that

[46] *Ibid.*, p. 35-36.
[47] The word 'glad' here should not be understood as indicating joy. Rather, we would welcome the news of Martian non-suffering much like we would feel relieved upon hearing that a friend who had an accident was not physically hurt.
[48] One exception is the positive utilitarian, who would lament the lack of additional benefits in light of the fact that no one was created who could experience said benefits, unless they distinguished between (a) making people happy, and (b) making happy people. For a deeper discussion on positive utilitarianism, how it views the axiological asymmetry and why (a) is preferable to (b), see Benatar, *Better Never to Have Been*, p. 36-37.
[49] Elizabeth Harman, 'Critical Study: David Benatar, Better Never to Have Been: The Harm of Coming into Existence', *NOÛS* 43(4), 2009: 781-782.
[50] Sam Harris and David Benatar, '#107 – Is Life Actually Worth Living?: A Conversation with David Benatar', *Waking Up*, 5 December, 2017, URL: www.samharris.org/podcast/item/is-life-actually-worth-living/ [online] (accessed 7 December, 2018).

Benatar is guilty of an inconsistency.[51] What all three fail to realise, however, is that Benatar is not maintaining the existence of a logical asymmetry; he is arguing for an *axiological* asymmetry. In other words, the discrepancy between the absence of harms and the absence of benefits – the former is good even when no one exists to enjoy that good, whilst the latter is bad only if someone is deprived of said benefits – is a difference in *values*, that is, in moral judgements. It is perfectly possible for us to adopt an axiological symmetry, as Benatar acknowledges,[52] but logic does not require it.

The drawback of a logical symmetry is that it puts us at a loss to explain the secondary asymmetries. We cannot say, as Harman and Harris want us to, that the absence of benefits is bad, because this creates a strong moral reason, and so a presumptive duty, to create new people. As I indicated in the discussion of the derivative asymmetries above, we cannot be required to do this. Just think how many potential people are not being created right now, and how awful that supposedly is. For every child that is created (through sexual intercourse) there are billions of potential children in unfertilised ova and 'undeposited' sperm cells. It is utterly implausible to think that this is a bad thing – that *each and every* instance of non-procreation is to be regretted. Yet this is what follows from the modified version of (4).[53]

Modifying (3) to say that absent harms are not bad is equally implausible. In Benatar's own words:

> That would commit us to saying that we have no moral reason, grounded in the interests of a possible future suffering person, to avoid creating that person. We could no longer regret, based on the interests of a suffering child, that we created that child. Nor could we regret, for the sake of miserable people suffering in some [other] part of the world, that they were ever created.[54]

The axiological asymmetry is supported by the overwhelming plausibility of the four derivative asymmetries it explains. There is no basis to think that these asymmetries will be dislodged. Cabrera suggests 'restoring' symmetry to all four asymmetries,[55] which is theoretically possible; however, he offers no good reasons to think that these asymmetries do not actually hold. Thus, the axiological asymmetry is preserved, unless a superior explanation for these asymmetries exists.

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[51] Julio Cabrera, *A Critique of Affirmative Morality: A Reflection on Death, Birth and the Value of Life*, 3rd edition, translated by Ygor Buslik, Brasília: Julio Cabrera Editions, 2014, p. 216-220.
[52] Benatar, *Better Never to Have Been*, p. 31f.
[53] *Ibid.*, p. 204.
[54] *Ibid.*
[55] Cabrera, 'A Critique of Affirmative Morality', p. 220-224.

Alternative Explanations of the Derivative Asymmetries: Why They Do Not Hold Water

If the strength of the axiological asymmetry is down to its explanatory power, then a good bet for dissipating that strength is to demonstrate the superiority of alternative explanations for the four derivative asymmetries it purports to explain. I shall consider a few alternative explanations and show them to be implausible.

A different explanation for the asymmetry of procreational duties could be that "we have negative duties to avoid harm but no corresponding duties to bring about happiness".[56] Benatar concedes that this is possibly a good explanation *if* one thinks we have no positive duties and that such actions are supererogatory. I do not have space here to interrogate a more fundamental contention like the wholesale rejection of positive duties; suffice it to say that this position is highly controversial. (Parental responsibility triggered by reproduction is a seemingly strong counterexample.) Among those who think we have some positive duties there will be very few who think that one such duty is creating joy-filled people.[57] There are numerous reasons for this. One, it is impossible to procreate on one's own; even assisted reproduction requires the input of an ovum and/or a sperm cell. In the event that this alternative explanation were true we would expect far more people to be procreating (assuming that they do as they believe), including homosexuals, fertile singles, the partners of those who are infertile, and men already in heterosexual relationships whose partners are past the age of childbearing. We might also require egg and sperm cell donation on a large scale, which is untenable. Moreover, non-assisted procreation is onerous, at least for the pregnant woman. Finally, any resulting child who survives would require years of care.[58] This eats up plenty of time, effort and expense. Requiring the enormous sacrifices necessitated by any of these scenarios is too strenuous; hence, a duty to procreate is indefensible.

Another explanation for the third and fourth asymmetries might be the detail of whether there is or is not a subject of harms or benefits.[59] In other words, the proposal is that with regards to the retrospective beneficence asymmetry we regret creating a subject capable of experiencing harms, while we do not regret the failure to create a subject who would have been capable of experiencing

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[56] Benatar, *Better Never to Have Been*, p. 32.
[57] *Better Never to Have Been*, p. 32-33.
[58] It would be ridiculous to hold that we have a duty to procreate but then allow the resulting infant(s) to be killed off.
[59] This seems to be the rationale behind variabilism, a view which depends on a distinction between actual and 'merely possible' beings. For a brief introduction to this view, see Melinda A. Roberts, 'The Nonidentity Problem', *The Stanford Encyclopedia of Philosophy*, revised edition, edited by Edward N. Zalta, 25 September, 2015 (2009), URL: https://plato.stanford.edu/entries/nonidentity-problem/ [online] (accessed 29 June, 2017).

benefits because there is no such subject. Similarly, with regards to the distance/nonexistence asymmetry, we weep for the faraway subjects who experience harm but do not weep for the nonexistent subjects in empty places because there are no subjects to experience any benefits. The problem with this proposal is that it has limited explanatory power; it cannot account for the first two asymmetries, for there are subjects capable of experiencing harms and benefits in both those instances. Adopting the proposal would thus mean either denying the first and second asymmetries, or rejecting the unificatory explanatory power of the axiological asymmetry. Given that both these moves come at a significant cost, it makes sense to stick with the axiological asymmetry.[60]

Finally, Timothy Bayne thinks that the more basic asymmetry which accounts for our asymmetrical intuitions (i.e., the four derivative asymmetries) is not an asymmetry between harms and benefits but a brute asymmetry between good and bad lives.[61] The idea is instead of characterising the asymmetry in terms of individual harms and benefits, it would be better to explain it in terms of the overall quality of a life.[62] The problem with Bayne's suggestion is that he does not explain what he means by 'good' or 'bad' lives. If one were to reflect as to what *makes* a life good or bad for the individual in question it would be most intuitive, sensible and plausible to count the experiences of their life – the good things and the bad things – in the final evaluation, no matter the methodology. There is no doubt that good things contribute towards a good (or better) life and bad things contribute towards a bad (or worse) life. But 'good' and 'bad' things are just benefits and harms respectively. So, really, in the absence of other contributing factors (and it is hard to see what those would even look like), the asymmetry of good and bad lives appears *itself* to depend on the asymmetry between harms and benefits. Bayne's asymmetry therefore has explanatory power – if it has any; it appears to simply be a *description* of the four derivative asymmetries – only insofar as it derives from a more fundamental asymmetry, namely, the asymmetry between harms and benefits. Accordingly, Benatar's axiological asymmetry retains its explanatory power and therewith its plausibility.

Cause for Suicide?: Against Genethical Parity

A different strain of objection takes the axiological asymmetry argument to be a kind of *reductio ad absurdum* because of its implications. Those who make this charge naively understand the argument

[60] David Benatar, 'The Asymmetry Argument', in *Debating Procreation: Is It Wrong to Reproduce?*, David Benatar and David Wasserman, Oxford: Oxford University Press, 2015, pp. 29.
[61] Timothy J. Bayne, 'In Defence of Genethical Parity', in *Procreation and Parenthood: The Ethics of Bearing and Rearing Children*, edited by David Archard and David Benatar, Oxford: Oxford University Press, 2010, pp. 50-52.
[62] *Ibid.*, pp. 52.

to imply the goodness or desirability of suicide. Harris is a paradigmatic example.[63] He thinks that, if successful, the axiological asymmetry argument shows that one is always harmed by being created. On this point he is correct. But from this he reasons that it would be better to kill oneself, since it is always better not to exist. This last point, however, is wrong. There is a crucial distinction between 'not existing' and '*never* existing'. The former is ambiguous between 'never existing' and 'not existing right now', which is ambiguous between 'not yet existing' and 'no longer existing'. It is not *necessarily* true that existing is always worse than all three kinds of not-existing, and the axiological asymmetry does not purport to show that. The axiological asymmetry argument, for instance, stays silent about which state of affairs is better: existing or, in the case of suicide or any other form of death, no longer existing. All it shows is that existing is always worse than *never* existing. Suicide is certainly not entailed by the argument from the axiological asymmetry. The reason is captured in Emil Cioran's pithy remark: "It's not worth the bother of killing yourself, since you always kill yourself *too late*."[64]

This point requires some elucidation. The important thing to recognise is that there is a crucial *moral* distinction between (a) beginning to exist, and (b) continuing to exist. We may term this distinction 'genethical disparity'. Unfortunately, the majority of people who write on the topic of procreation ethics fail to observe or employ this distinction. They often use the lay phrase 'a life worth living' as if it is unproblematic when in reality it conflates 'a life worth beginning' and 'a life worth continuing'. (There is also a confusion about whether the worthiness of a life ought to be judged from a first- or a third-person perspective.[65]) The importance of this distinction is brought to light by the axiological asymmetry. It is entirely possible for a life to be worth continuing but never worth *beginning*. Indeed, we can take this to be a description of (moments in) most actual lives throughout human history.

Why should we believe this? There are two points to be made that I think will prove helpful here. The first is that while my life is certainly, in my view, worth continuing *now*, that may change if any number of factors changes (e.g., I contract a terminal illness; I become a quadriplegic; the world is thrown into a nuclear winter; machine intelligence takes over; etc.). Many people, probably most of

[63] Harris and Benatar, 'Is Life Actually Worth Living?'.
[64] Emil M. Cioran, *The Trouble with Being Born*, translated by Richard Howard, New York, NY: Arcade Publishing, 1976 (1973), p. 32.
[65] Further complications arise when we ask *when* this judgement can or should be made. Is it possible to deem a life 'worth living' at any given point in time (e.g., the present), or do we have to wait until a life is completed? If, for instance, the latter is the case, then we cannot rely on first-person life evaluations – by definition, no one is alive to evaluate their life after it has been completed. Then again, those seeking a rational answer to the question of whether or not to commit suicide (because life is or is not 'worth living') cannot wait to determine the value of their life until after death. All of these points are reasons to eschew the phrase 'a life worth living' in favour of the distinctions suggested in this passage.

those alive right now, judge the good things in life to outweigh the bad things. In the quality-of-life argument I show that they are wrong. Nevertheless, there may be expectations of future benefits, or just simple curiosity as to what will happen, either in one's own life or in the world out there, which keeps one going. Additionally, there is the significant cost of death. We all have an interest in staying alive. In contrast to Epicurus's doctrine, most people fear death or, what amounts to the same thing, the permanent cessation of consciousness. That is why suicide is such a tragic event: those who take their own lives have judged their lives to be *not worth continuing*. Death has become the lesser evil for them.[66] But notice that prior to the decision to commit suicide they thought (at some point) their life was worth continuing. Now the question is asked: was the suicidal individual's life worth *beginning*? If lives worth beginning are equivalent to lives worth continuing, then we can make the judgement – before they decide to kill themselves – that their life was worth beginning (because it is worth continuing). However, *after* they decide to kill themselves their life is no longer worth continuing and so, on the principle of genethical parity, their life was *not* worth beginning. Thus, the same life has thrown up a contradiction: the life both was *and* was not worth beginning.[67] We can get rid of this contradiction by disentangling the phrases 'a life worth beginning' and 'a life worth continuing'.

Specifically, a life may be worth continuing but not worth beginning. Stronger justifications are required for ending a life than not beginning one. We have here a second motivation for genethical disparity, one where the bar for beginning a life is higher than the bar for ending a life. That this is true can be seen in the fact that we may not murder people who lead lives of (what would be taken to be) sufficiently low quality, such as severely disabled individuals, but we often do, and we have a moral duty to, avoid creating people (by bringing them to term) who we expect will lead lives of sufficiently low quality. Not only do most of us believe this discrepancy exists, but we are right to believe it. One only gains morally relevant interests after having 'come into existence' in the morally relevant sense. Benatar compellingly argues that this only occurs quite late in the gestational stage, a short while before birth.[68] Once these interests, including the interest of staying alive, are developed, they are (usually) very strong. It takes substantial justification for us to override these interests (e.g., killing someone is justified in only the most exceptional circumstances, such as self-defence). In contrast, where there are no (or weak) interests in existing (in the morally relevant sense), we are not

[66] It is notoriously difficult to provide a knockdown argument to the effect that death is indeed an evil. I have nowhere near enough space to do this topic justice, so I simply affirm the commonsense view that holds death to be a harm.
[67] This contradiction does not exist for the statement 'a life worth continuing', because this statement is necessarily time-indexed. As I later maintain, statements about whether lives are worth beginning are not similarly time-indexed.
[68] Benatar, *Better Never to Have Been*, p. 26. His view bases 'morally relevant interests' on sentience.

justified in causing people impairments by creating them (by bringing them to term), precisely because they have no (or weak) interests in being created, and harming them (by virtue of their impairments) would be against their interests (had they existed in the morally relevant sense).[69]

In opposition to this, Bayne argues for genethical parity; that is, he takes the phrases 'a life worth beginning' and 'a life worth continuing' to collapse into 'a life worth living'.[70] I shall not focus on Bayne's argument here, for he reaches this view by erroneously arguing that two other models (the 'no-faults model' and the 'dual-benchmark model' – the latter constitutes genethical disparity) fall apart under closer scrutiny. Instead, I shall take issue with what he mistakenly believes the position of genethical parity to entail. It is worth quoting Bayne's discussion of an example in depth here. He asks us to consider the

> case of the concentration camp survivor – call him 'Carl' – whose life contained a period of grotesque suffering. Carl might have the view that his life as a whole was not worth living. Does parity entail that he would *now* be better off dead? Not at all, for Carl has survived the horrors of the concentration camp, and that period of his life that lies in front of him may well be worth living. Parity does *not* entail that if the value of an entire life is below the 'life worth living' threshold then at no point in the living of that life is it worth continuing. Parity says only that the kinds of conditions that make lives not worth creating are just the sorts of conditions that make lives not worth continuing, and it is obviously possible for a life to be characterized by such a condition during some of its temporal segments but not others. [71]

Bayne points to something important here, namely, the fact that statements about whether life is or was worth beginning are not time-indexed; a life is either worth beginning or it is not. Regardless of what Carl thinks of his own life, there is a fact of the matter: either his life was worth beginning, or it was not. If, as Bayne suggests, Carl's life after the concentration camp is worth living – that is, worth continuing – then the genethical parity model would require us to say, on pain of inconsistency, that Carl's life *in its entirety* was worth beginning. But then, as I argued above, we must say that his life is worth continuing as well. Bayne is attempting a sleight of hand; he wants to avoid the contradiction of saying that a life not worth continuing at a given point in time (such as Carl's during his time in the concentration camp) must be a life not worth beginning *at all*, since he acknowledges that a life which earlier was not worth continuing can become such that it is a life worth continuing (such as

[69] *Ibid.*
[70] Bayne, 'In Defence of Genethical Parity'.
[71] *Ibid.*, pp. 55. Emphasis in the original.

Carl's after his time in the concentration camp). The locus of the problem is that, on the genethical parity model, a life worth continuing is equivalent to a life worth beginning. Thus, if a life is worth continuing at one point but not at another, an absurd result is reached: the life both was and was not worth beginning. It is precisely this absurdity that Bayne is seeking to avoid, hence his claim that "[p]arity does *not* entail that if the value of an entire life is below the 'life worth living' threshold then at no point in the living of that life is it worth continuing". But this is disingenuous. On Bayne's own understanding of genethical parity, the model holds "that the level of well-being that determines whether or not a life is worth starting is identical to that which determines whether or not it is worth continuing".[72]

In other words, if a life is determined to be not worth continuing – at *any* point in time – then it is not worth beginning in the first place. Bayne thus speaks misleadingly about the view he defends; the genethical parity model *does* entail that if the level of well-being dips below the acceptable level of a 'life worth living' (however that may be defined), then the life in question is to be determined as not worth beginning. Of course, the axiological asymmetry argument indicates that any life less than a perfect life free of any and all harm would fall in that category.

Why the Axiological Asymmetry's Implications Are Not Implausible

Many people, probably a majority of those alive today, believe that their lives are 'worth living'. Is it plausible to think, as the axiological asymmetry implies, that they are *all* wrong? Again, we must disambiguate between lives worth beginning and lives worth continuing. If self-evaluations are being applied to the latter, then the wrong question has been answered. What we are interested in here is whether lives are worth *beginning*. When asked this specific question, many people still answer in the affirmative. So, are they still wrong? Benatar's suspicion, which I share with him, is that most people do not carefully consider the counterfactual case of their never existing. Rather, they base their answers on a comparison between (1) and (2) (i.e., the presence of harms and benefits in their lives). This is the wrong comparison, since it tells nothing about the comparative values of existing versus never existing. The suspicion that people are illegitimately smuggling in the benefits of existence into the calculus is supported by an empirical study Benatar performed.[73] When proper consideration is not given to the counterfactual scenario wherein people do not exist, as the study found was the case

[72] *Ibid.*, pp. 55.
[73] David Benatar, 'To Be or Not to Have Been?: Defective Counterfactual Reasoning About One's Own Existence', *International Journal of Applied Ethics* 15(2), 2001: 255-266.

in a majority of surveys, judgements about preferences are ill-informed, and so ought not to count as evidence against the axiological asymmetry argument.

Another of the axiological asymmetry's implications is that even a life of tremendous bliss is at a net disadvantage to never existing if it is marred by just the tiniest pinprick of harm. This is a radically subversive position to hold, and it is unsurprising that people refuse to accept it as being remotely plausible. This is where a full understanding of the distinction between (a) the fact of existence being harmful, and (b) the extent of said harm, is useful for counteracting such a knee-jerk reaction. As pleasant as this hypothetical being's life would be, it is no advantage over not being created. This is because there is no interest in being created and no lack that they would be deprived of. But whereas never existing has no disadvantages, the life contains the disadvantage of a single harm. Irrespective of the severity of that harm, it is still undeniably a harm, and thus a disadvantage. The analogy of being sick or healthy is helpful here. Even if someone lives an almost perfectly healthy life, such that they experience a headache once (which soon evaporates thanks to their ability to recover quickly), that is still worse, *ceteris paribus*, than living a perfectly healthy life. It might only be a *tiny* bit worse, but it is nevertheless worse. Now, if all lives were actually as free of suffering as the hypothetical being's life, then the harms they are subject to could be overshadowed by the benefits accrued to others (e.g., their prospective parents). In the real world, however, there has never been a life so charmed,[74] nor can there be. Procreation is therefore not only a harm, but a *wrongful* harm.[75] To say more about the magnitude of the harms that attend human existence (and that outweigh the benefits of life), and thus to show why procreation is wrong, I turn now to Benatar's quality-of-life argument.

Argument 3: The Quality-of-life Argument

Life Is Bad – Really Bad

Thus far I have focussed on the harms and benefits to the (potential) new human being. But what about the procreators? Pro-natalists will be quick to assert that the harms which a resulting child

[74] Benatar, *Better Never to Have Been*, p. 49.

[75] It is true that the axiological asymmetry does not yield the anti-natalist conclusion *on its own*, as Benatar himself admits. David Benatar, 'Every Conceivable Harm: A Further Defence of Anti-Natalism', *South African Journal of Philosophy*, 31(1), 2012: 146. In order to underwrite the view that procreation is always wrong, the axiological asymmetry must be coupled with the facts of existence, to wit, the fact that harms always attend existence. (That these harms are severe, and that they outweigh life's benefits, is argued for in the quality-of-life argument.) However, the axiological asymmetry does provide us with a good (moral) reason not to procreate; namely, procreation is always a harm to the person who is created. It is for this reason that I label the axiological asymmetry argument an anti-natalist argument, in spite the fact it does not fully establish the *wrongness* of procreation.

may incur can be outweighed by the benefits accrued by their parents. Empirical evidence, however, suggests that this is never the case. (It is also worth noting that parental interests can be satisfied without procreating through adoption.) Although I shall not specifically attend to this challenge, the quality-of-life argument can be taken in its entirety as a response thereto. (The same goes for the misanthropic argument.) We shall see, then, that life is so bad for those who live it that it outweighs the good their existence brings to those who create them.

Now, it seems likely that most people alive today consider their lives to be going well.[76] But most peoples' self-evaluations of life quality are unreliable for a range of reasons, such as: evolutionary mechanisms (which gear us towards species or gene preservation); biases towards optimism (like the Pollyanna principle, which gives us an optimistic baseline from which to view reality and human existence);[77] the fact of human adaptation (which causes our expectations of what constitutes a good life to drop as we adapt to personal situations worse than in the past); our propensity for making comparative judgements (which means we arrive at relative and not absolute appreciations of our quality of life, particularly because we tend to filter out the bad aspects of life we all share);[78] plain self-denial; and perhaps even social pressure.

Although we must look to first-person self-evaluations of competent, autonomous agents in the face of vexing moral decisions whenever possible – this being the best approach to respecting a person's autonomy – we cannot do so in the case of not-yet-existent/never-existent beings. Instead, we need to view their potential interests from a third-person perspective.[79] This aligns with other cases where self-evaluations are impossible, such as abortion (for the foetus), animal euthanasia (for the animal) and so on. To figure out whether it is right or wrong to create a life, we must ask (working on the assumption that the axiological asymmetry has been rejected) the question: how good is life, really? The answer, no matter the methodology, is 'bad' – really bad. In fact, human existence is *so* bad that the harm of being created is sufficiently serious to establish that procreation is always wrong.

Since there are excellent reasons to doubt the accuracy of self-evaluations of life quality – for the reasons mentioned above, people are generally far likelier to *over*estimate the quality of their lives

[76] This is an overlapping but distinct claim to the one that most people think their lives are worth living.
[77] For evidence of Pollyannaism, see Margaret W. Matlin and David J. Stang, *The Pollyanna principle: selectivity in language, memory, and thought*, Cambridge, MA: Schenkman, 1978.
[78] Benatar, *Better Never to Have Been*, p. 64-69.
[79] Weinberg denies that a truly 'objective' quality-of-life evaluation is possible. *The Risk of a Lifetime*, p. 127. I address this objection in detail later in this section.

than *under*estimate it, or just evaluate it accurately – we need other methods of determining the 'true' quality of an individual's life. The three standard methods for evaluating the quality of human life are hedonistic theories, desire-fulfilment theories, and objective list theories. In the rest of this section I argue that all three evaluative frameworks reap the same result: life is bad – really bad – for us all.

Hedonistic Theories

Hedonistic theories of life quality distinguish between positive, negative and neutral mental states. A life goes better or worse to the extent that it contains positive or negative mental states. Among the negative mental states are "discomfort, pain, suffering, distress, guilt, shame, irritation, boredom, anxiety, frustration, stress, fear, grief, sadness and loneliness".[80] Positive mental states come in two general types: intrinsic pleasures or 'relief-from' pleasures. The former are characterised by "pleasant sensory experiences – tastes, smells, visual images, sounds, and tactile sensations – as well as some non-sensory conscious states (such as joy, love, and excitement)", while the latter involves "the subsiding of a pain (such as a headache), the mollification of an itch, the abatement of boredom, the alleviation of stress, the dissipation of anxiety or fear, and the assuagement of guilt".[81] Obviously there are also mental states which comprise a mixture of the two different types. Neutral mental states, on the other hand, are those states in which neither negative nor positive mental states are to be found.

Now, owing to the above-mentioned psychological phenomena, people tend to vastly underestimate and/or under-represent just how often our lives are filled with negative mental states. Benatar compels us to consider "hunger, thirst, bowel and bladder distension... tiredness, stress, thermal discomfort (that is, feeling too hot or too cold), and itch[iness]".[82] Each and every person feels at least some of these negative states every day, and a majority of people experience many or even all of them repeatedly. We typically just do not consider these negative states when evaluating our lives; they are forgotten or ignored because Pollyannaism helps us to overlook them. In addition, because everyone else also experiences these negatives states, albeit to differing degrees, they do not show up in our comparative quality-of-life evaluations; that is, they are cancelled out of the comparative equation. A good example of this is ageing; it happens to everyone, so we do not (always) factor it into our self-evaluations. And all of this, mind, is applicable to so-called 'healthy' people.

[80] Benatar, *Better Never to Have Been*, p. 70.
[81] *Ibid.*, p. 71.
[82] *Ibid.*

A large percentage of people suffers, has suffered, or will at some point in their life suffer from one of the following: "allergies, headaches, frustration, irritation, colds, menstrual pains, hot flushes, nausea, hypoglycaemia, seizures, guilt, shame, boredom, sadness, depression, loneliness, body-image dissatisfaction, the ravages of AIDS, of cancer, and of other such life-threatening diseases, and grief and bereavement".[83] Think also of the frequency of bullying, sexual harassment, assault, torture, rape, post-traumatic stress disorder, job loss, property loss, existential angst, failure to realise dreams, and encounters with unjust prejudice and discrimination. These negative states are *far more intense* than the previous ones. Yes, there are also intrinsic pleasures and neutral states. But the axiological asymmetry suggests that it can never be better to be created for those intrinsic pleasures; it is good to have them once one is alive, but they are obtained at the very heavy cost of life's misfortunes.[84]

Even without the support of the axiological asymmetry, however, it would be indecent, if not false, to suggest that but a few, if any, lives are beset by serious suffering. There are two extra issues that are unaccounted for by those who think that human existence is mostly good. First, there is arguably a threshold of pain which, if crossed, constitutes a life so bad as to be not worthwhile (i.e., not worth beginning), regardless how much total pleasure is accrued throughout the life. In the person's own estimation, no quantity of pleasure can compensate for that amount, intensity and distribution of pain. Second, there are empirical asymmetries between pleasures and pains (exemplars of benefits and harms respectively). The worst pains endure longer on average than the best pleasures. Sensory pleasures do not last longer than a few hours; a sense of achievement can sometimes last longer, but often does not. In contrast, non-terminal illnesses last anywhere from days to years; injuries can take weeks or months to heal, if they heal at all. Chronic pain is rampant in the human population, but an equivalent chronic pleasure does not exist. Some people occasionally experience a continuing sense of contentment, but that is not the inverse of chronic pain. Discontent is as durable as contentment, if not more so; hence, any positive here will be offset by the negative. Positive states are also more fragile than negative states – they are more easily and quickly overturned. Lastly, the worst pains are far more brutal than the best pleasures are delightful. For those who are not convinced, Benatar asks them to consider whether they would undergo an hour of the worst torture to secure an hour of the greatest enjoyment.[85] Or, as Arthur Schopenhauer asks, which animal feels more intensely: the one

[83] *Ibid.*, p. 72. Likely the only people who do not experience *any* of these things are those who die in their infancy.
[84] *Ibid.*, p. 73.
[85] David Benatar, 'The Quality-of-Life Argument', in *Debating Procreation: Is It Wrong to Reproduce?*, David Benatar and David Wasserman. Oxford: Oxford University Press, 2015, pp. 48-50.

being eaten, or the one doing the eating?[86] Hedonistic theories show that even the best lives are not actually good; they are (really) bad.

Desire-fulfilment Theories

A second way of evaluating the quality of life is by analysing the fulfilment of a person's desires. All things being equal, a fulfilled desire is good for a person and an unfulfilled desire is bad for a person. The optimist is immediately on the back foot on a desire-fulfilment theory. This is because there is a great overlap between hedonistic theories and desire-fulfilment theories. It is inexorably the case that people seek positive mental states and the avoidance of negative mental states. Given that there are so many negative mental states, any desires to avoid them are thwarted. And although we experience pleasurable things that we desire, this is not as often as we would like to think (Pollyannaism again plays its part), especially for those who lack the relevant power or capacity to fulfil their desires. Overall, contrary to what the optimists believe, there is much more dissatisfaction than satisfaction.[87]

Despite their similarity, however, there is a clear distinction between the two types of theories. We can, for instance, have desires fulfilled without experiencing any concomitant positive mental state, just as we can experience positive mental states without a desire having been fulfilled. Sometimes we are mistaken about whether a desire has or has not been fulfilled. Sometimes fulfilment of a desire does not bring about a positive mental state. On the other hand, sometimes we do not even desire a positive mental state, or find that we receive pleasure without an initial desire having been there. So, unlike the access we have to our own mental states, about which we cannot be mistaken, the access to facts of the matter regarding the (non-)fulfilment of our desires is fraught with the possibility of misjudgement. Unsurprisingly, because of human enslavement to optimism, we tend to overestimate how many of our desires have been fulfilled and how many have been left unfulfilled. Thus, we tend to overestimate how good our lives are using this evaluative framework.[88]

Important to note here is that there is *necessarily* a period of frustration, no matter how brief, between the development of a desire and it being fulfilled. (Perhaps the only exception is when we desire to keep something we already have, in which case the only movement is in the opposite direction. If one wishes to stay young, one moves from an *already fulfilled* desire to an *unfulfilled* desire as one ages.)

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[86] Arthur Schopenhauer, *Complete Essays of Schopenhauer, vol. 5: Studies in Pessimism*, translated by Thomas B. Saunders, New York, NY: Wiley, 1942, p. 2.
[87] Benatar, *Better Never to Have Been*, p. 73.
[88] *Ibid.*, p. 73-74.

The way the world is, fulfilment of a desire can take anywhere from seconds to decades. A gigantic number of desires, both large and small, are never fulfilled. Desires often have as their objects things or events so infeasible or unlikely as to be for all intents and purposes impossible. Even if they are fulfilled, the satisfaction gained is often fleeting. Sometimes the *fulfilment* itself does not last long (e.g., one diets successfully for a day but then capitulates the next day). Then again, sometimes we change our minds anyway, often only after the desire has been fulfilled and realise it was something we did (or should) not actually want.

All these problems for the optimist appear before we even consider the reality of the 'treadmill of desires'. This phrase refers to the fact that the fulfilment of a desire often soon gives way to another desire. If the fulfilment of our desires truly made us enduringly happy, then we would not pursue further goals anymore – yet we do.[89] In light of this, it would be rational for the optimist to concede the view espoused by Schopenhauer; namely, human life is a condition of perennial striving, and so discontent.[90] In the absence of further desires or goals we would become bored very quickly – another negative experience. We have to constantly strive to keep suffering, including tedium, at bay. This is a cost to us. In any event, we do not always succeed, which is yet another cost. Moments or episodes of contentment occur within a maelstrom of dissatisfaction.

Here the optimist will interject and point out that the period of striving and/or deprivation is itself valuable, at least for some people some of the time. One might doubt how often this is the case, but we should recognise the kernel of truth in that claim. Digging a little bit deeper, however, we realise what this claim entails. There are two ways to make sense of the claim that striving and/or deprivation is itself valuable. One, we could interpret this claim as saying that, on top of our desire for something, we desire striving towards the fulfilment of the primary desire. This interpretation, though, cannot make sense of the deprivation aspect as being valuable. Desiring something and simultaneously desiring that that desire not be fulfilled is contradictory. This is of course possible (e.g., wanting to smoke), but it is hard to think why it is valuable. Regardless, the idea that people desire the process of striving to fulfil a desire is not enough to swing the balance in favour of the optimist. Although it is an accurate description of some people to say that they sometimes enjoy the process of fulfilling a desire (for some things), it is also true that there are many people who *hate* the striving process. And some strivings just do not seem capable of being (reasonably) desired by

[89] *Ibid.*, p. 74-76.
[90] Schopenhauer, 'On the Sufferings of the World', p. 1.

anyone. Take the process of battling cancer: people want to be cured, but no one *wants* to undergo chemotherapy with all its horrible side-effects.[91]

A more plausible reading is that the period of deprivation and/or the process of striving towards the fulfilment of a desire enhances the intensity and duration of the satisfaction gained when that desire is eventually fulfilled. It strikes us as intuitively true that there is a positive correlation between the amount of effort or waiting done to achieve something and the amount of satisfaction gained from it. Just think of the phrase 'hunger is the best sauce'; we seem to enjoy food more the hungrier we are – at least up to a point. It may feel better to beat an opponent in a sports match when one has had to work harder for it. And so on. But again, this is not true of all strivings all the time. For many of them it would be much better if no striving had been required in the first place. Efforts to abolish the trans-Atlantic slave trade, or overthrow colonial powers, or secure the rights of women to vote, have reaped rewards. Yet it would be demonstrably false to say that oppression followed by freedom is *ever* better than lifelong freedom. In fact, to claim that a period of deprivation and/or a process of striving wins us the greatest satisfaction from desire-fulfilment is to admit an unfortunate fact about our existence. If we could get the same amount of satisfaction from eating without being hungry, our lives would go far better. The fact, if it is one, that we sometimes require a process of striving or a period of deprivation to make the fulfilment of our desires more 'worthwhile' indicates that our lives are not so good; our lives would go much better if striving and deprivation were not needed.[92]

What about those individuals who desire not to get cancer and are having that desire 'constantly' fulfilled by not getting cancer, or those people who get continual satisfaction from the fulfilment of their desire to be married? The problem is that people do not receive a *net* benefit from having their desires fulfilled. To see why, we can draw on Christoph Fehige's antifrustrationism.[93] Here is a view which outlines why having an extra desire fulfilled is *no better* than having no such desire in the first place. Fehige's argument for this view is fairly complex, and I do not have space to discuss it here, but the key insight is something I want to briefly consider. Imagine that, with your permission, we implant a new desire in you to have your hair dyed green, and that we then dye your hair green. You

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[91] Benatar, *Better Never to Have Been*, p. 77-78. Notice also that the fulfilment of the desire to beat cancer is not a net gain. Having cancer is horrible. Many people probably desire, if only subconsciously, not to get cancer in the first place, so getting cancer still means that a desire not to get cancer is (forever) unfulfilled. Hence, even if the desire to beat cancer is fulfilled one has incurred a significant cost in the process. The unfortunate reality is that there are many more desires of the cancer-beating kind than the optimist would have us believe.

[92] *Ibid.*, p. 78-79.

[93] Christoph Fehige, 'A Pareto Principle for Possible People', in *Preferences*, edited by Christoph Fehige and Ulla Wessels, Walter de Guyer: Berlin, 1998, pp. 508-543.

now have a new fulfilled desire; but are you *better off* than you were without the desire for green hair? It would appear not. Remember that once you have a desire it is good to have that desire fulfilled. And having a desire for green hair and then not getting green hair is bad. But it seems that we have done you no favours by furnishing you with a desire for green hair and then fulfilling it; without that desire you were not lacking by way of not having green hair.

It seems, then, that there *cannot* be a net advantage to existing (based on a desire-fulfilment theory of life quality). Even if this possibility is not ruled out by logical or axiological constraints (i.e., even if antifrustrationism is wrong), then it is almost certainly ruled out by practical ones. This pessimistic outlook becomes *more* persuasive when we consider that there are many desires which conflict with other desires, whether externally (i.e., between individuals) or internally (i.e., in the same individual). Thousands of people enter a competition or apply for a job, all or most of them seeking to emerge victorious, when often only one person can. Thus, even where the fulfilment of *a* desire is effectively guaranteed, it is often predicated on the frustration of other desires. Even for a single individual, conflict can and does arise. Think of a single parent in a civil war who can only afford to send one of their children away. They want their child to live a free and happy life, but they also want to keep them with their siblings. Their desires are incompatible; the fulfilling of one necessarily frustrates the other. Things get worse when we realise how many people desire that harm be done to others. We could frame this as a desire for other peoples' desires to remain unfulfilled. This happens far more often than we might think, from the small-scale (e.g., the common sensation of *schadenfreude* in response to an enormous array of misfortunes) to the large-scale (e.g., genocide and ethnic cleansing, religious persecution, war, annexation of a territory, etc.). Any rational being who employs a desire-fulfilment theory to evaluate the quality of human life must conclude that life is bad – really bad.

Objective List Theories

The above two discussions presumably apply to a discussion of objective list theories, too. It is not unreasonable to think that, whichever objective list theory one uses to evaluate life quality, positive mental states and the absence of negative mental states, as well as the fulfilment of (some) desires, should form part of the list of objective goods. The optimist thus has much ground to recover. Yet it is important to mention at the outset that objective lists of goods stack the dice in the optimist's favour. How so? These lists are chiefly designed to adhere to the limits of human achievability, and so to identify at least some human beings as flourishing. This means that these lists are 'objective'

only in the sense that they do not alter their criteria for any individual. They are *not* objective in the sense that they adopt a cosmic perspective on what constitutes a truly 'good' life. Instead, they adopt a decidedly human, and thus limited, perspective. This only tells us how good a human life is *relative to other human lives* (i.e., better or worse); it cannot establish whether life is truly good or bad.[94]

So, how do we establish an absolute value of the quality of human life? One option is to locate human lives somewhere on a spectrum from the most perfect paradise, in which every moment is one of pure, unmitigated bliss, to the worst hell, in which every moment is filled with pure suffering. Adopting a genuinely objective (i.e., cosmic) perspective would involve figuring out whether lives are closer to heaven or hell. Assuming they are equidistant from a completely 'neutral' existence (if such a life is even possible), a 'good' life would be closer to heaven than hell, while a 'bad' life would be closer to hell than heaven. Recall that the evidence from both the previous types of theories, which shows that there are more bad things than good things, points us to the view that human existence is closer to hell. (Recall also that the axiological asymmetry tells us that we should reject *any* life that is below the standard of the heavenly one.) We therefore have a *prima facie* reason for thinking that, although human lives can be better or worse, none is objectively good.

Whenever we think of people who lived a few centuries ago, we consider the vast majority of them to have led lives that were, in Thomas Hobbes's famous words, "nasty, brutish, and short".[95] There is no doubt that many lives are better now than previous ones, thanks mainly to technological, social and medical advances. Now, imagine a more blessed species than us: a sentient, intelligent alien race whose worst members lead lives that are of better quality than the best ever human life. They are vastly more creative, more empathetic, more altruistic, more aesthetically pleasing (to each other), and wittier. They have unlocked deeper mysteries about the universe, scaled greater artistic heights, and live longer than we do, up to a thousand years each, all while experiencing far fewer discomforts than we do. They would undoubtedly look upon *our* lives as nasty, brutish, and short. But notice that even these blessed beings ultimately decline and die. As a result of their deeper compassion, their loved ones would still be bereft. In fact, they may suffer *more* from bereavement than we do. It is a seemingly cruel irony about life that greater cognitive capacity and enhanced moral awareness –

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[94] *Ibid.*, p. 81-82.

[95] Thomas Hobbes, 'Chapter XIII: Of the Natural Condition of Mankind as Concerning Their Felicity and Misery', in *Of Man, Being the First Part of the Leviathan*, *Vol. XXXIV, Part 5, The Harvard Classics*, edited by Charles W. Eliot, New York, NY: P.F. Collier & Son, 1909-1914 (1651), Bartleby.com, 2001, URL: http://www.bartleby.com/34/5/13.html [online] (accessed 19 January, 2018).

things we take to be good – both appear to lead to more avenues for suffering. Confronted with our relatively awful lives, these compassionate creatures may experience terrible vicarious suffering of a nature we are incapable of imagining. And because we can expand this thought experiment, it would seem that there may well be an *inherent* limitation to how good any (sentient, conscious) life could ever be. That maximum life would still fall short of the halfway mark between heaven and hell.

Those who are unconvinced by this line of reasoning would do well to consider the meaninglessness of life. The possibility of meaning in life can be usefully divided into three types: individual meaning, group (or species) meaning, and cosmic meaning. While the first two are attainable by human beings, and add value to a life when present – we obtain meaning from personal projects and interpersonal relationships – the last one is impossible to attain. Cosmic meaning is the vital kind of meaning, as it is the only one which can provide a good reason to procreate.[96] Not procreating means no one new loses out on individual or group meaning, but it *might* mean that cosmic meaning has been hindered.

Now, the cosmos, which is not a conscious 'thing' (hence, any discussion of a 'perspective from the cosmos' must be understood as metaphorical, though still intelligible), is necessarily non-teleological, precisely because consciousness logically precedes purpose. Objects can have a function, but to have a purpose a thing must be endowed with a purpose, that is, considered by a conscious being to be *for* something. Being alive has no such purpose. Theists have tried to comfort people by conjuring up a cosmic creator who gives them cosmic meaning. But no benevolent creator would require creatures to love and serve them.[97] Nor would such a being create beings capable of suffering – not even for a heavenly afterlife. Indeed, it is not clear that the concept of an 'afterlife' makes sense. If immortality is the ultimate endpoint, why create mortal beings in the first place? And what about the possibility of a *hellish* afterlife?[98] Let us grant for argument's sake that our lives have cosmic meaning – say, because a creator has given it to us. What is the point if we do not know whether life *has* such a cosmic meaning or *what* it is? This alone is bad enough.[99] But in fact our lives have no good cosmic meaning. We live, and then we die, for no cosmic purpose. Indeed, there cannot *be* a (good) cosmic

[96] This is because, as I make clear below, procreating in order to provide meaning for *oneself* leads to an infinite regress.
[97] Even if this were true, where would that leave *all other forms of Earthly life*? The lives of other animals are more pointless than ours.
[98] For an argument, given the truth of Christian exclusivism and a traditional Christian doctrine of hell, that it is wrong to procreate, see Kenneth E. Himma, 'Birth as a Grave Misfortune: The Traditional Doctrine of Hell and Christian Salvific Exclusivism', in *The Problem of Hell: A Philosophical Anthology*, 2nd edition, edited by Joel Buenting, New York, NY: Routledge, 2016, pp. 179-198.
[99] David Benatar, *The Human Predicament: A Candid Guide to Life's Biggest Questions*, Oxford: Oxford University Press, 2017, p. 37-40.

reason, because there would have to be a cosmic creator who created us *for a good reason*. If the reason were a bad one – say, because the creator enjoys seeing us suffer – then our lives having cosmic 'meaning' would be a bad thing. Since there cannot be a good reason for this gratuitous suffering, both human and non-human, there cannot be any positive cosmic meaning to our lives.

It gets worse. In our estimation it is better to be smart. Just as we are capable of experiencing (more) wonder (than non-human animals), beings with superhuman intelligence would plausibly have even greater capacity for wonder than we do. However, they would almost certainly experience a parallel increase in capacity for existential angst and/or existential depression.[100] In fact, it seems likely that they would be seriously troubled by the pointlessness of existence. They would duly recognise that the existence of group meaning necessarily depends on the existence of other group members. (To paraphrase a standard formulation of *ubuntu*: a person obtains meaning through other people.) The only way to achieve and maintain group meaning is to create more group members. But new group members will also lead lives without cosmic meaning. Procreation, these beings would realise, is thus a kind of Ponzi scheme to provide meaning.[101] This is an example of what philosophers call an infinite regress, but 'vicious spiral' may be more apt. If, on the other hand, no new members are created (and the old members die off), there would be no one to experience a lack of meaning of *any* kind. And so, because every birth is a death sentence, these ultra-smart beings might reason themselves out of existence.[102] (Hopefully this happens to us sooner rather than later.)

This suggests that there is little, if any, *net* advantage to being much smarter and compassionate than we are; the positive will always be offset by the negative.[103] Even the best lives may well fall short of a good life; we, in turn, fall well short of the best lives. Thus, anyone who believes that life is

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[100] *Ibid.*, p. 88. This is admittedly somewhat speculative. But based on the limited evidence available (i.e., a comparison of our cognitive abilities and the cognitive abilities of non-human animals) there is no reason to think that more intelligence would not bring about both increased *thaûma* (wonder) and enhanced existential dread. To reiterate, I use these capacities as exemplars; other similar parallel increases in positive and negative features of human cognition are likely to occur.

[101] David Benatar, 'Contra Procreation', in *Debating Procreation: Is It Wrong to Reproduce?*, David Benatar and David Wasserman, Oxford: Oxford University Press, 2015, pp. 129-130.

[102] For a fascinating look at how 'artificial intelligence' might rationally approach existence, it is worth looking at Tom Murphy, 'The First Level of Super Mario Bros. is Easy with Lexicographic Orderings and Time Travel… after that it gets a little tricky', *SIGBOVIK* 7, 2013: 112-133. In this essay, Murphy details the results of an experiment in which he wrote software that learns how to play a variety of Nintendo Entertainment System games and then plays the game automatically. In many games, the programme will periodically pause the game as it seeks to avoid bad futures. This strategy reaches its zenith when playing Tetris, where the software stacks blocks until the moment right before the next block would cause the game to be over, at which point it then pauses it indefinitely. In Murphy's words, the programme realises that "the only winning move is not to play". *Ibid.*, 131.

[103] At least, this is true for the individual in question. There may of course be advantages to others, for they would likely be treated better by smarter, more compassionate creatures.

objectively good is probably delusional. No matter how one slices it, life is bad for those who live it. This yields the conclusion that procreation should be discontinued.

A Backup Argument from Risk

So, what are we to make of Weinberg's claim that "there is no objective perspective we can access in order to assess whether life is actually bad for people even though most of them seem to think it's good for them"?[104] If her claim is true, then my assertion that life is not objectively good for any being is false, or at least unjustified. But notice that there could be no successful anthropodicy[105] either. Weinberg's claim strikes me as a peculiar failure of the imagination. As I pointed out above, we can, and often do, make objective life evaluations. It is simply false to claim otherwise, and so there is no need to rely on the likely self-evaluations of future people, as Weinberg implores us to.

Nevertheless, let us assess Weinberg's proposal on its own merits. I agree with her that most people seem to think their lives are going well. (At least, I suspect this applies to most people alive today. It is less certain how many of the more than 100 billion human beings throughout history thought they fared.[106]) It is also right that we should resort to self-evaluations of life quality wherever viable, even if those evaluations are false. The problem, as Weinberg rightly points out, is that we cannot do that with the not-yet-existent/never-existent. Her proposal is thus that we base the likely self-evaluations of future people on *our* self-evaluations. Since our self-evaluations of quality of life are predominantly positive, she believes we can safely infer that procreation is worth the risk of harm to future people.[107]

Let us look, then, at how much (human) suffering this world contains, and see whether the infliction of harm and the risk of grievous harm is 'worth it'. 815 million people are undernourished.[108] Half of all children who die under five years of age – approximately 3 million per annum – do so because of

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[104] Weinberg, *The Risk of a Lifetime*, p. 125.

[105] I take this term from Akerma, 'Theodicy shading off into Anthropodicy in Milton, Twain and Kant'. Anthropodicies, or what Benatar calls 'secular theodicies', are attempts to justify humanity's goodness. As the term is employed here it refers specifically to an attempt to justify the positive *value* of human existence.

[106] This number is obviously a guesstimate. For an analysis of how it is arrived at, see Carl Haub, 'How Many People Have Ever Lived on Earth?', *Population Reference Bureau*, 2011, URL: http://www.prb.org/Publications/Articles/2002/HowManyPeopleHaveEverLivedonEarth.aspx [online] (accessed 19 January, 2018).

[107] Weinberg, *The Risk of a Lifetime*, p. 135. She qualifies this proposal by saying we must have strong enough procreative interests. Another writer who thinks that procreation is "worth the gamble" is Len Doyal, 'Is Human Existence Worth Its Consequent Harm?', *Journal of Medical Ethics* 33(10), 2007: 574.

[108] 'Know Your World: Facts About Hunger and Poverty', *The Hunger Project*, November, 2017, URL: http://www.thp.org/knowledge-center/know-your-world-facts-about-hunger-poverty/ [online] (accessed 20 January, 2018). All the facts mentioned below (until the next reference) are from the same source.

undernourishment, and another 3 million deaths (women and children combined) occur on a yearly basis because there is inadequate care during pregnancy and childbirth. 155 million children under five years of age suffer from stunted growth. About 328 million children, and 767 million people in total (10% of everyone alive today), survive on US$1.90 or less per day. (This figure does not include the hundreds of millions of other people who also live in extreme poverty, such that they are unable to meet their basic needs.) 2.1 billion people lack access to safe drinking water, while 4.5 billion people lack safe and adequate sanitation (27.6% and 59.2% of the world's population respectively). Then there are people vulnerable to diseases. 36.7 million people are known to be living with HIV/Aids. 9.4% of people at risk of malarial infection caught the disease in 2015.[109] 10.4 million new cases of tuberculosis were reported the same year; 1.4 million died of the disease. 1.3 million deaths were caused by hepatitis. Vastly more deaths were due to non-communicable diseases: 17.7 million people died because of cardiovascular disease; cancer claimed 8.8 million lives; chronic respiratory diseases accounted for 3.9 million deaths; and 1.6 million deaths were attributable to diabetes. Nearly one-fifth of the global population between the ages of 30 and 70 die of these non-communicable diseases. The majority of these deaths are preceded by sustained periods of intense suffering. 1.25 million people died in road traffic accidents in 2015, a 13% increase since 2000, while *40 times* as many people suffered non-lethal injuries as a result. More than 150 000 died in conflicts and wars around the world, although this figure does not include the indirect effects of war, such as the lack of adequate healthcare, the absence of sufficient food and water, and exposure to diseases. 92% of the world's population live in places with substandard air quality. Conservative estimates show that about a quarter of all adults have experienced serious physical abuse as a child, while 35% of women have experienced physical and/or sexual abuse at some point in their lives. Considering the difficulty of obtaining accurate information on these types of abuse, these figures are doubtless a gross underrepresentation. 468 000 people, 80% of them male, were murdered by private citizens. One authority estimates that more than *40 million people* are enslaved at present,[110] more than the total number of people captured in the history of the trans-Atlantic slave trade.[111] Global mental health figures are hard to come by. Hundreds of millions of people are probably afflicted with neurological

[109] 'World Health Statistics 2017: Monitoring Health for the Sustainable Development Goals', *World Health Organization*, 2017, p. 30. All the facts mentioned below (until the next reference) are from the same source.
[110] 'Understand Modern Slavery', *Walk Free Foundation*, date unknown, URL: https://www.walkfreefoundation.org [online] (accessed 20 January, 2018).
[111] Patrick Manning, 'The Slave Trade: The Formal Demographics of a Global System', in *Atlantic Slave Trade: Effects on Economies, Societies and Peoples in Africa, the Americas, and Europe*, edited by Joseph E. Inikori and Stanley L. Engerman, Durham, NC: Duke University Press, 1992, pp. 119-120.

disorders of varying severity, while depression is thought to affect over 300 million people.[112] Over a billion people experience disability of some kind or another.[113] 800 000 people, in acknowledgement of life's difficulties, died by their own hand in 2015.[114] Note that, for the most part, death involves a multiplier effect: one person dies; many more mourn the departed.

Optimists are quick to remind us that these statistics represent a significant improvement. They are right (at least when looked at proportionally; in real terms things may be getting worse, according to many indicators). To the extent that there is an improvement in people's lives, that is clearly a good thing – a *relatively* good thing. But the absolute numbers suggest that the suffering people experience is extremely prevalent – and extreme – which is clearly bad – *absolutely* bad. The point here, which we must remind the optimists of, is the fact that life is gradually getting better for more people does not mean that life, in general, is *good*. Indeed, it highlights just how bad life was, and still is, for so many. But since so many optimists refuse to grasp this point, I shall have to illustrate a few of life's harms in some detail.

Over 200 million people living right now have undergone some form of female genital mutilation (FGM) or cutting – the practice of "partial or total removal of the female external genitalia or other injury to the female genital organs for non-medical reasons".[115] FGM can be extremely painful and lead to a plethora of complications, including (but not limited to): haemorrhaging; acute anaemia; an assortment of infections (including tetanus, septicaemia, and repeated infection of the urinary tract); abnormal scarring on or around the genitalia; severe pain during sexual intercourse;[116] and obstetric complications.[117] All these harms come with economic costs as well as severe psychological trauma.

An acid attack also causes the survivor terrible psychological trauma. Sulphuric acid corrodes the skin. The person who is attacked (often female) is left with a permanent disfigurement. In extremely patriarchal societies where acid attacks occur, this disfigurement is a source of dishonour and shame.

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112 'Mental health', *World Health Organization*, date unknown, URL: http://www.who.int/mental_health/en/ [online] (accessed 20 January, 2018).
113 'Disability', *World Health Organization*, date unknown, URL: http://www.who.int/disabilities/en/ [online] (accessed 20 January, 2018).
114 'World Health Statistics 2017', p. 32.
115 'Female Genital Mutilation and Cutting', *UNICEF Data*, date unknown, URL: https://data.unicef.org/topic/child-protection/female-genital-mutilation-and-cutting/ [online] (accessed 20 January, 2018).
116 Adriana Kaplan, Suiberto Hechavarria, Miguel Martin and Isabelle Bonhoure, 'Health consequences of female genital mutilation/cutting in the Gambia, evidence into action', *Reproductive Health* 8, 2011, URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3195700/ [online] (accessed 21 January, 2018).
117 Elise Johansen and Heli Bathija, 'Effects of female genital mutilation on childbirth in Africa', *World Health Organization* policy brief, 2008.

Acid attack survivors find it difficult to marry or gain employment, meaning that they become social and financial burdens for their families. Because the face is often targeted, many people are blinded. Even after months of painful treatment and reconstructive surgery, there is no hope of returning to the face one had before the attack. One survivor, who was attacked, aged 15, after rejecting a fellow classmate's advances, says that she considers an acid attack "worse than if you were to kill a human being", since the survivor "will always be reminded" of their condition.[118] Shame and fear of reprisal means that the reported global figure of approximately 1 500 annual acid attacks is far below the true number.[119]

Wanton acts of violence are clearly not confined to highly unequal nations. Rape is a commonplace occurrence around the world. As the recent #MeToo Movement has highlighted, the most powerful and visible people in our societies are not immune to the horrors of sexual assault. That rape used to be referred to by the euphemistic (?) phrase 'a fate worse than death' is telling. Survivors are often so terrorised and brutalised that they fear for their lives or wish to die instead of being subjected to the assault. Even without receiving associated injuries (e.g., strangulation or assault), a survivor will often experience physical injury in the form of bruises or lacerations as a result of the rape. Unfortunately, sexually transmitted infections (of which a million are acquired worldwide each day[120]) are regularly contracted. Fertile women can fall pregnant, causing severe psychological distress, especially if there is no option but to bring the foetus to term, perhaps because abortion is outlawed. In this case, the child serves as a constant reminder of the assault. Even if an abortion can be obtained, termination of the pregnancy may cause psychological trauma, especially if, as is often the case, there is a stigma attached to the procedure. Additional psychological harms, including shame, resentment, low self-esteem and difficulties with intimacy, frequently accompany all forms of sexual assault, and may last a lifetime. Society's most vulnerable people – the elderly, the mentally ill and young children, even sometimes infants just a few days old – are most at risk. Individuals may also be targeted by multiple assailants; gang rapes by three dozen perpetrators at a time have been reported.[121] As if this were not enough, survivors are frequently blamed for being raped or sexually assaulted, and can suffer from a

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[118] 'Acid attacks... a survivor's story', *ActionAid*, 21 June, 2011, URL: https://www.actionaid.org.uk/news-and-views/acid-attacks-a-survivors-story [online] (accessed 21 January, 2018).
[119] 'A Worldwide Problem', *Acid Survivors Trust International*, date unknown, URL: http://www.acidviolence.org/a-worldwide-problem.html [online] (accessed 21 January, 2018).
[120] 'Sexually transmitted infections (STIs)', *World Health Organization*, August, 2016, URL: http://www.who.int/mediacentre/factsheets/fs110/en/ [online] (accessed 22 January, 2018).
[121] Shasta Darlington, 'Video of girl allegedly gang-raped shocks Brazilians', *CNN*, 28 May, 2016, URL: https://edition.cnn.com/2016/05/27/americas/brazil-rape-social-media/index.html [online] (accessed 21 January, 2018).

lack of institutional and/or other support. In certain misogynistic cultures women are considered to be at fault for being raped; many are subsequently murdered to 'redeem their honour'.

Next, consider just how torturous physical pain can be. Chronic pain of varying degrees of intensity is thought to affect 19% of Europeans, with 16% of those afflicted describing the pain at its worst as making them want to die.[122] What are some of the worst pains? Kidney stones cause excruciating pain; they are often cited as one of the worst sensations known to humanity. More than 22 million cases of kidney stones were reported in 2015 alone,[123] and incidents are on the rise. One woman recounts the initial bout of pain as so bad that "it felt like I was peeing glass".[124] Third degree burns injure the epidermis and expose fatty tissue under the dermis, while fourth degree burns can expose and injure muscle tissue, tendons and even bones. Because the skin is missing, burn victims are susceptible to infections, and many need to have disinfectant 'baths', which are unbearably painful. Just as painful for some are when bandages are removed, stripping off some of the remaining flesh and blood. A slipped disc or pinched nerve can be equally debilitating for some. One man describes himself as being in horrific agony, such that there was nothing but pain in his consciousness, and all he cared about was being rid of it.[125] Approximately 40% of Americans will develop cancer in their lifetime.[126] Chemotherapy is often needed for treatment but is not always successful; it can leave a patient's insides feeling raw. Radiation treatment can be equally agonising. Either way, the combined effects of the malignancy and the requisite treatment can sap an individual's energy and will to live.

External sources of harm abound. The twin evils of racism and colourism are so insidious that they make some people hate their own skin. In the documentary, *Dark Girls*, one woman heartbreakingly describes the extent of her self-loathing: "I can remember being in the bathtub asking my mom to put bleach in the water so that my skin would be lighter and so that I could escape the feelings I had about not being as beautiful, as acceptable, as loveable."[127] As of May, 2017, homosexual acts and/or relationships were still criminalised in 72 UN member states, with eight countries applying laws that

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[122] Harald Breivik, Beverly Collett, Vittorio Ventafridda, Rob Cohen and Derek Gallacher, 'Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment', *European Journal of Pain* 10, 2006: 309.

[123] 'Kidney Stones', *Dhanvantary Bioscience (OPC) Private Limited*, date unknown, URL: https://www.dhanvantary.com/diseases-details.php?name=kidney-stones [online] (accessed 22 January, 2018).

[124] czaristacrystals, 'I Think I Might Have One', *The Experience Project*, 25 March, 2011, URL: http://www.experienceproject.com/stories/Have-Had-Kidney-Stones/1474776 [online] (accessed 22 January, 2018).

[125] Dan Holliday, 'What is the worst kind of pain anyone can go through? Be it psychological or physical or any other form that it may manifest.', *Quora*, 26 December, 2016, URL: https://www.quora.com/What-is-the-worst-kind-of-pain-anyone-can-go-through-Be-it-psychological-or-physical-or-any-other-form-that-it-may-manifest [online] (accessed 22 January, 2018).

[126] 'Cancer Facts & Figures 2018', *American Cancer Society*, 2018, p. 2.

[127] *Dark Girls*, directed by Bill Duke and D. Channsin Berry, 2011.

punish 'offenders' by death.[128] Forced displacement figures have reached record highs. More than 75 million people, or 1% of the world's population, are now either stateless, refugees, asylum seekers or internally displaced, meaning they lack access to some of the most basic rights many others take for granted.[129] Then again, protection of human rights is declining worldwide.[130]

Much harm is also suffered internally, that is, mentally. Schizophrenics suffer from hallucinations and delusions throughout their lives. Mental function can be significantly impaired, and in serious cases patients can completely lose touch with reality. People who endure severe depressive episodes can also lose the ability to function socially, domestically and at work or school. Sleep patterns are totally disrupted. Those unable to cope with life's horrors or the perfunctory nature of its minutiae – and, with it, life's meaninglessness – become like 'zombies'. Suicidal thoughts are common; many push through with the act to escape their suffering. Methods of easing or numbing the harsh reality of existence have always been sought after and are popular to this day. Some of the most damaging practices, to individuals and their broader communities, are the abuse of alcohol and/or narcotics. It is a common refrain on alcoholism that it turns otherwise decent, reasonable people into 'monsters'. Drug abuse is found among all demographics, and can eviscerate an individual to the point of death.

Who in their right mind would choose the possibility of any of the above things happening to them? In fact, Matti Häyry bases his own anti-natalist argument on exactly this point. Häyry contends that Rawls's 'maximin' strategy, whereby one seeks the option which maximises the minimum outcome, is the most rational.[131] On the maximin view, procreation is irrational. Since nonexistence has no value, and because existence contains the possibility – indeed, a high probability – of negative value, the avoidance of the negative entails not procreating.[132] Benatar makes a similar argument, showing that procreation is not merely irrational but also *immoral*. If 'merely possible' people were placed in the original position, a hypothetical position where parties do not have facts about themselves, they would choose nonexistence over existence because the only way to ensure that they do not lead a life that is not worth living (i.e., not worth continuing) is to not let anyone be created.[133]

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[128] 'Maps – Sexual Orientation Laws', *The International Lesbian, Gay, Bisexual, Trans and Intersex Association*, May, 2017, URL: http://ilga.org/maps-sexual-orientation-laws [online] (accessed 22 January, 2018).
[129] 'Figures at a Glance', *United Nations High Commissioner for Refugees*, 19 June, 2017, URL: http://www.unhcr.org/figures-at-a-glance.html [online] (accessed 22 January, 2018).
[130] See 'WJP Rule of Law Index 2017-2018 Report', *World Justice Project*, 2018.
[131] Matti Häyry, 'A rational cure for prereproductive stress syndrome', *Journal of Medical Ethics* 30(4), 2004: 377.
[132] *Ibid.*
[133] Benatar, *Better Never to Have Been*, p. 178-180.

In reply, Wasserman insists that this is unnecessarily risk averse; we condemn people only for imposing *unacceptable* risks of harm on others.[134] As he correctly observes, we all make decisions, big and small, that impose very small risks of disastrous outcomes for others and for ourselves. It is also true that these risks of disastrous outcomes are often traded off for expected benefits.[135] But what Wasserman fails to take into account is the fact that procreation *does* involve unacceptably high risks of harm, as my discussion on the frequency of various calamities should make clear. There are very few people who live (relatively) charmed lives – in excellent health, successful in their personal goals, with great interpersonal relationships, and subject to none of the horrific misfortunes mentioned here, or indeed a whole host of others – and then die abruptly in old age. As I have shown using all three evaluative frameworks of life quality, the bad always outweighs the good. It is thus false to claim that opting not to procreate because of the risks of harms to future people is risk averse. And even if it *is* risk averse, the severity of the potential harms awaiting new individuals suggests that it is wise to err on the side of caution.

Jason Marsh, who draws a parallel between the problem of evil for theists and the immorality of procreation, notes that "[w]hether human or divine, it seems no truly loving agent would create people who suffer or are at such a high risk of suffering".[136] Given this reality, Benatar portrays procreators as "play[ing] Russian roulette with a *fully* loaded gun – aimed, of course, not at their own heads, but at those of their future offspring".[137] Even if one or two of the chambers are empty, it is non-negotiable that aiming a loaded gun at someone and pulling the trigger is a heinous moral crime.

Argument 4: The Misanthropic Argument

The Harms We Cause

The above anti-natalist argument focuses on the harms we incur as a consequence of being created. A parallel argument can be made about the harms we *cause*. Because we have a presumptive duty to avoid creating creatures that cause and are likely to continue causing enormous amounts of suffering and death, the fact that *we* cause (and are likely to continue causing) huge amounts of suffering and

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[134] Wasserman, 'Against Anti-Natalism', p. 174. For a similar reply, see Doyal, 'Is Human Existence Worth It?': 573-576.
[135] *Ibid.*
[136] Jason Marsh, 'Procreative Ethics and the Problem of Evil', in *Permissible Progeny?: The Morality of Procreation and Parenting,* edited by Sarah Hannan, Samantha Brennan and Richard Vernon, Oxford: Oxford University Press, 2015, pp. 73. As with Shiffrin, Marsh's observation inexplicably does not lead him to conclude that procreation is morally impermissible.
[137] Benatar, *Better Never to Have Been*, p. 92. Emphasis in the original.

death means that we have a presumptive duty to cease procreating.[138] This, in a nutshell, is Benatar's misanthropic argument. The suffering wrought by the human race is so immense as to be beyond our comprehension. We are by far the most destructive species. This is only made worse by the fact that most of us are moral agents. Our behaviour is not just harmful; it is *immoral*. The harms we perpetrate come in three categories: harm against other humans; harm against other sentient animals; and harm against both humans and sentient animals via environmental destruction. In this section I shall focus on and document some of the harms in the first two categories.

Some of the worst atrocities human beings participate in are genocides, ethnic cleansings and other mass killings. People are killed by being hacked to death, knifed, bludgeoned, hanged, shot, impaled, decapitated, starved, suffocated, frozen, drowned, burnt, gassed, poisoned or bombed.[139] Other deaths, such as road accidents, occur because of negligence or human error. If people do not die (or before they do), they can experience being raped, assaulted, flogged, maimed, branded, kidnapped, tortured, enslaved and/or humiliated. People are persecuted and tormented for their religious beliefs, political views, sexual orientation or identity, gender, race, ethnicity, nationality caste, social class or culture.[140] As I have already illustrated, the suffering people experience as a result of these torments is extreme.

The viciousness of human beings includes cases whereby: a woman was injected with heroin, raped, beaten and forced to perform fellatio on a dog;[141] child soldiers were (and continue to be) coerced into raping, maiming and murdering friends, family members and other children;[142] twins were sewn together by the notorious 'Angel of Death', Dr. Josef Mengele, in an attempt to create conjoined twins;[143] innocent people were shoved out of aeroplanes mid-flight;[144] and a woman was held captive by her own father in a windowless cell for 24 years into adulthood, during which she was raped

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138 David Benatar, 'The Misanthropic Argument', in *Debating Procreation: Is It Wrong to Reproduce?*, David Benatar and David Wasserman, Oxford: Oxford University Press, 2015, pp. 79.
139 *Ibid.*, pp. 86.
140 *Ibid.*, pp. 87.
141 Ashitha Nagesh, 'Woman injected with heroin, raped and forced to perform sex acts on dog by abusive boyfriend', *Metro*, 7 March, 2017, URL: http://metro.co.uk/2017/03/07/woman-injected-with-heroin-raped-and-forced-to-perform-sex-acts-on-dog-by-abusive-boyfriend-6492679/ [online] (accessed 23 January, 2018).
142 'Coercion and Intimidation of Child Soldiers to Participate in Violence', *Human Rights Watch*, 16 April, 2008, URL: https://www.hrw.org/news/2008/04/16/coercion-and-intimidation-child-soldiers-participate-violence [online] (accessed 23 January, 2018).
143 Michael Berenbaum, *The world must know: the history of the Holocaust as told in the United States Holocaust Memorial Museum*, Boston, MA: Little, Brown and Company, 1993, p. 194-195.
144 'Grim account of Argentine deaths', *BBC News*, 20 January, 2005, URL: http://news.bbc.co.uk/2/hi/americas/4193341.stm [online] (accessed 23 January, 2018).

more than 3 000 times and gave birth to seven children.[145] Torture implements also demonstrate the extent of human depravity. Prisoners throughout medieval Europe might expect to be: sawn in half; lowered onto a pyramid-shaped metal 'seat', with the spike inserted into their anus or vagina, causing death by impalement; tied to a Catherine wheel, a large wagon wheel with radial spokes, then beaten and lashed, with the wheel's gaps allowing for limbs to break off, before being left in position so as to succumb to their mortal wounds; have their skull placed in a vice so that their entire cranial structure would be slowly crushed; have a rat chew through their intestines until death; or plenty of other forms of torture.[146] Not that torture belongs solely to the past. As an example, waterboarding was widely practiced by US armed forces in the 21st century and sanctioned by the state.

Even where people do not directly participate in torture or killings, they often facilitate and support evil. It was 'ordinary' people who egged on lynch mobs, who ratted out 'undesirables' during the Holocaust, who voted in the apartheid government of South Africa, and it is 'ordinary' people who support the apartheid government of Israel today. 'Ordinary' people champion xenophobic, racist, sexist, homophobic, transphobic and anti-poor policies, or counterproductive campaigns which cause further harm. Even those who sacrifice big chunks of their time to perform acts of charity and speak out against injustice are not untainted. Many people who lead comfortable lives inadvertently support, for example, the trade of conflict minerals or the illegal logging industry, or use plastic.[147] The value of the diamond industry was placed at US$ 81.4b in 2014, and "the hard truth is that years after the term blood diamond breached the public consciousness, there is almost no way to know for sure that you're buying a diamond without blood on it".[148] Children and artisanal miners in countries like the Democratic Republic of Congo labour all day without being paid; they see next to nothing of the industry's overall wealth. Even after regulatory measures were put in place, their phrasing has meant that the incident in which the Zimbabwean army seized a large diamond deposit and massacred over 200 miners is not thought to produce 'conflict diamonds'.[149] Other conflict minerals make their way around the globe. The coltan industry may be smaller than the diamond

[145] Kate Connolly, 'Josef Fritzl trial: 'She spent the first five years entirely alone. He hardly ever spoke to her", *The Guardian*, 19 March, 2009, URL: https://www.theguardian.com/world/2009/mar/19/josef-fritzl-austria [online] (accessed 23 January, 2018).
[146] George Dvorsky, 'The 10 Most Gruesome Torture Techniques From Mediaeval Europe', *io9*, 26 August, 2014, URL: https://io9.gizmodo.com/the-10-most-gruesome-torture-techniques-from-medieval-e-1626942115 [online] (accessed 23 January, 2018).
[147] Much of what I say here and below is relevant to, and augments, the quality-of-life argument.
[148] Aryn Baker, 'Blood Diamonds', *Time*, 2015, URL: http://time.com/blood-diamonds/ [online] (accessed 23 January, 2018).
[149] *Ibid.*

industry but more people depend on it. Coltan is used extensively in electronic products, including mobile phones, computer hard drives, gaming consoles and digital cameras. The mineral has been identified as a major cause of civil wars in the DRC.[150] And conflict resources are not restricted to minerals. The global illegal logging industry is thought to be worth anywhere between US$ 30b and US$ 100b.[151] Where illegal logging occurs, locals are displaced, deprived of their livelihoods, or even murdered in cold blood. This is just the tip of the iceberg. Everything from clothes to electricity to foodstuffs depends at some point in the supply chain on the maltreatment of workers and horrific working conditions. Exploitation of human beings contaminates almost every kind of consumer good. Those who live relatively carefree lives are fortunate in that their hardship and toil is for all intents and purposes outsourced. And I have not even mentioned the comparatively minor yet still awful, even life-changing, harms people inflict on others, such as lying, cheating, stealing, harassing, intimidating, and violating privacy or promises.

In addition (and here we come to the harms caused to other sentient animals), people eat and use animal products, or otherwise support or profit from the slaughter of sentient animals. The annual figures relating to slaughter of animals are simply staggering – too large for anyone to comprehend. The best estimate is that more than 100 billion aquatic animals are killed *every year*.[152] In other words, roughly the same number of sentient marine creatures as human beings that have existed *throughout human history* are killed every year. Another 63 billion land animals (including birds) are slaughtered annually.[153] Taken together, these numbers amount to one animal being killed for every living person every fortnight. And these are just the lower bounds of the estimates! Many countries and regions do not provide reliable data or any data at all. Excluded from the calculations are billions of male chicks deemed surplus to the poultry industry, the billions of 'bycatch' – animals like sharks, dolphins and turtles who get caught incidentally – and the cats and dogs eaten predominantly in Asia.[154]

The overwhelming majority of these animals die immensely painful and traumatic deaths. Chickens are hung upside down and have their throats slit. Male chicks are killed by suffocating, crushing or gassing them, or by being instantly macerated. Pigs – highly intelligent animals – are hung up by one

[150] Ewan Sutherland, 'Coltan, the Congo and your cell phone: The connection between your mobile phone and human rights abuses in Africa', research paper prepared for the LINK Centre, University of the Witwatersrand, 11 April, 2011.
[151] 'Green Carbon, Black Trade: Illegal Logging, Tax Fraud and Laundering in the World's Tropical Forests', *United Nations Environmental Programme & Interpol*, edited by Christian Nellemann, 2012, p. 6.
[152] Benatar, 'The Misanthropic Argument', pp. 93. To see how this figure is arrived at, see footnote 48 of that chapter.
[153] *Ibid.*
[154] *Ibid.*

leg and have their throats slit, often without being stunned beforehand.[155] Cattle are subjected to equally horrific violence. They too are hung up by one leg and, after their throats are cut, sometimes remain fully conscious while being skinned and gutted.[156] Most other land animals suffer similar fates or worse. Marine animals fare no better. Those caught in the oceans suffocate once out of the water. If they are hauled out quickly they endure barometric trauma, meaning that gas bubbles form inside their bodies. This causes severe pain. Fish caught by line and bait struggle for their lives. Dolphins are highly intelligent mammals, and suffer tremendously when they are driven into bays and butchered; so do whales when they are harpooned.[157] Many millions of wild animals are hunted and killed for sport. They often writhe in agony because the first shot does not kill them.

We do not just cause animals suffering when we kill them, though. Battery chickens are fattened to the point where many of them cannot support their own body weight, leaving them with broken bones. The space they have is usually so limited that many chickens are trampled to death. To avoid them pecking at themselves from the stress, chickens are de-beaked with a hot blade. Veal calves are kept in similarly confined spaces, so much so that they can barely move their entire lives. Many animals in the factory farming industry are branded, castrated or otherwise mutilated – without anaesthetic. They are also transported enormous distances in foul, cramped conditions on their way to being slaughtered. Many animals are also used in laboratory experiments or for testing cosmetics and other products.[158] Some unusually cruel experiments from the past include: grafting the head, shoulders and front legs of a living puppy onto another dog's neck; observing people's facial expressions while they are beheading a rat; testing whether people would shock a puppy to death; performing a head transplant on a monkey (for no medical benefit); and remote controlling a bull with the use of a computer chip in its brain.[159] Animals are still subject to substances like ethanol or methamphetamine; some are induced to experience strokes, sciatica, cancer and various degenerative diseases.[160] Untold psychological trauma is also produced whenever animals with naturally strong maternal bonds are separated from their offspring. Many are forced to participate in 'entertainment', from circuses to rodeos; from dog fighting to horseracing. Pets are routinely abused and neglected. If domestic animals in a shelter cannot attract an owner they are killed. Some humans experience

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[155] *Ibid.*, pp. 94.
[156] 'Cows Used for Food', *People for the Ethical Treatment of Animals*, date unknown, URL: https://www.peta.org/issues/animals-used-for-food/factory-farming/cows/ [online] (accessed 23 January, 2018).
[157] Benatar, 'The Misanthropic Argument', pp. 94.
[158] *Ibid.*, pp. 95.
[159] Alex Boese, *Elephants on Acid and Other Bizarre Experiments*, San Diego, CA: Harcourt, 2007.
[160] Benatar, 'The Misanthropic Argument', pp. 96-97.

cognitive dissonance on a colossal scale: they cry out against the poaching of rhinoceroses and elephants *while* eating meat, using leather products or wearing fur. We truly are a most evil species.

At this juncture, the optimist will rear their head again to ask about the good we do. Although it is true that we do much good, there can be no doubt that this is far, *far* outweighed by the harm we do. If the optimists disagree, it is incumbent upon them to demonstrate that we do more good in a year than the slaughter of more than 160 billion sentient creatures, many of whom we treat horrifically while they are alive. And how much good is needed to compensate for institutionalised misogyny, unjust incarceration, mass rape, ethnic cleansing, etc.? Whatever the amount, it is unquestionably the case that we fall a long way short of it. In any event, even if it is the case that an *individual* human can produce a net benefit, it is both incredibly rare and nearly impossible to predict prior to procreation.

Are Procreators Responsible for the Actions of Their Progeny?

Now, one might acknowledge all of the above, but still wonder what bearing it has on procreation. If I should not be held accountable when someone else is responsible for wrongdoing, then why am I considered culpable when my child commits harm? The reason is that we have a duty to avoid inflicting harm. Benatar points out that we have a *presumptive* duty to avoid creating new members of species that commit or are likely to cause devastation.[161] This means it could potentially be defeated (e.g., if the species brought about greater benefits than harms). I have already shown that human beings bring about far greater harms than benefits, both to sentient non-human animals and to our fellow human beings. The presumptive duty is thus not an absolute duty, although it does not seem likely to ever be defeated. Those who are quick to dismiss this chain of reasoning should think about a different presumptive duty we have: the duty not to drink and drive. We have this duty because drinking and driving is dangerous. One's motor coordination is badly impaired the more alcohol one drinks. It does not matter that there are many instances where drinking and driving does not result in injury or death. The point is that drinking and driving has an unacceptably high chance of causing harm. In comparison, procreation has a much higher chance of causing severe harm. Those who refuse to admit this are almost certainly overly attached to the human species. If we bred another species as harmful as ours, or if scientists created and released a virus as harmful as ours, the outcry would be deafening, and we would work to prevent the harm from spreading. The fact that we have not directed such outrage at ourselves on a large scale is just another one of our many failures.

[161] *Ibid.*, pp. 101.

Section D: Human Extinction

The above anti-natalist arguments demonstrate that it would be better for no one to be created. They also entail the goodness or moral desirability of human extinction. If it is wrong to create people, then a state whereby no new people are created (i.e., extinction) is not wrong. Inasmuch as extinction averts harm, it is a *good* thing. Extinction is therefore preferable to non-extinction (the continuation of the species) because the latter involves considerable harms and wrongs. Of course, this does not mean that we ought to strive for extinction by murdering or forcibly sterilising people. Achieving extinction in this manner is objectionable precisely because such actions are harmful and immoral. Instead, we can bring about human extinction by ceasing to procreate. There is nothing morally problematic about that. (Just because human lives can be worth continuing does not mean the *species* is worth continuing.) Quite the contrary; it is the best course of action. If this assertion is wrong and we have an imperative to *prevent* extinction, it would mean that a duty to procreate would exist at least some of the time for some people. I have already shown such a duty to be too onerous. Nevertheless, some argue that extinction ought to be prevented.

Living in Order to Die Off: Why There Is No Reason to Prevent Extinction

One objection to the pro-extinction view is that extinction would bring about substantial harm to the final people. If all procreation suddenly ceased and humanity veered abruptly towards extinction, it seems plausible to think that the lives of the final people would be filled with harm – more harm than they would ordinarily experience? – especially as they got closer and closer to the final death. Elizabeth Finneron-Burns argues that institutions would start to collapse and soon thereafter whole economies, too. People would be shorn of the care they require and would probably suffer from diminished morale, as they realise that their life projects will come to naught. The final people would feel the meaninglessness of life more intensely than previous generations because there would be *no future*. Finneron-Burns reasons that because these harms are unjustified, it is thus wrong to cause or to allow extinction to occur.[162]

What is important to notice about the scenario sketched above, however, is that barring a climactic catastrophe in the shape of, say, an asteroid impact or a supervolcano exploding, which brings about a sudden demise to our species, the final people will likely suffer very much *no matter when they exist*. So, all things being equal, the harms that extinction will mete out to the final people are seemingly

[162] Elizabeth Finneron-Burns, 'What's wrong with human extinction?', *Canadian Journal of Philosophy* 47(2), 2017: 333-337.

inevitable. But this means that the harms attending extinction cannot be used as a reason to prevent it from occurring. Nothing is gained by delaying extinction – no harm is evaded – but the sooner extinction occurs, the more potential harm is evaded.[163] Although it may be counterintuitive, the fact that the final people will suffer is a motivating factor for bringing the extinction event *closer*, since in that way we can avoid the suffering of those who will live between now and the final moments.

Johann Frick argues that extinction must be prevented because human existence has final value. By 'final' value Frick means something of non-instrumental value, but not necessarily intrinsic value. A thing, he says, has final value "if it is valuable for its own sake".[164] In contrast, things are intrinsically valuable when they are valuable in terms of their internal or non-relational properties.[165] Frick takes it for granted in his argument against human extinction that humanity has final value, commenting that many of our "unique capacities", including those for complex language, rational thought and moral deliberation, as well as the capacities for producing and appreciating art, music and scientific knowledge, contribute to making this assumption "plausible".[166] If true, Frick argues, it entails a duty that we urgently seek ways to stave off the total eradication of our species for as long as possible, as it is imperative that humanity survives and flourishes.

The problem is that Frick does not actually argue for the so-called final value of human existence; he simply assumes it. Since this is the most important aspect in the argument for continuing existence, it strikes one as baffling that he does not bother to defend the claim. Frick has done his argument against extinction no favours. Moreover, a lot seems to ride on his conceptual underpinning. While it is undoubtedly true that *individuals* have final value qua sentient (or, for Kant, qua rational) beings, it does not follow that human *existence* has final value. Frick's argument conflates this distinction. "If there were no humans," says Benatar, "there would also be nobody to regret that state of affairs".[167] When a human being dies, their death constitutes a loss to themselves and to their loved ones. In the event of human extinction, where is there an equivalent loss? There cannot be such a loss, as there is no one *for whom* it would constitute a loss.[168] Trying to locate human value in the capacities for language, rational thought, moral deliberation, curiosity or creativity does not help, either. How

[163] Benatar, *Better Never to Have Been*, p. 198.
[164] Johann Frick, 'On the survival of humanity', *Canadian Journal of Philosophy* 47(2), 2017: 359.
[165] *Ibid.*
[166] *Ibid.*
[167] Benatar, *Better Never to Have Been*, p. 199.
[168] If one claims that the loss is borne by animals, such as pets, then we can simply broaden the question to include the extinction of all sentient creatures. In that case, who or what would extinction be a loss *for*?

would the cosmos be worse off if there were no more creatures with these capacities? What crucial difference would that make? If, as some suggest, we are perhaps the only source of value in the cosmos, since we are the only beings capable of *valuing* things, then how could the nonexistence of our species be worse than our existence? If we went extinct, and if we are in fact the only source of value in existence, then the cosmos would become a place in which 'better' or 'worse' no longer made any sense! Finally, even if it were the case that human existence (and not just individuals) possessed final value, such value would almost certainly fail to outweigh the tremendous amounts of harm that accompany life. Given the above, misplaced concerns about the end of the human race reek of arrogant and/or sentimental beliefs about human exceptionalism.

Ensuring Extinction through Planetary Confinement

Since extinction is something we should strive towards – passively, by not procreating – anything which impedes this moral imperative is a wrong. Given what is at stake, it is a *grievous* wrong. What, then, does this mean for efforts to combat climate change, or other projects aimed at preventing or reversing the (alleged) acceleration of our so-called demise?[169] These are thorny issues. The practical implications of anti-natalism for efforts to keep extinction at bay deserve considered reflection and careful, rigorous analysis. Each such effort should be examined separately. I cannot hope to provide adequate commentary on the wide array of attempts to escape extinction; nor do I seek to. My focus here is solely on proposals to build permanent human settlements in outer space. To reiterate, I have argued that successful space colonisation, defined thusly, constitutes a particularly serious threat to well-being in the form of harm to future and perhaps present people. Moreover, I am of the opinion that this threat is extremely urgent, seeing as plans to colonise Mars are well under way.[170] Taken in conjunction, the points mentioned here serve to justify the value of the limited scope of my project.

The most obvious act which impedes our path towards extinction (or delays it) – and the one which has received the most airtime – is procreation. Procreation thus constitutes a grievous wrong. Much of the focus in the debates on anti-natalism has been restricted to the morality of procreation and whether it is ever justified (or whether abortion is mandatory).[171] I do not want to run over the same old ground, but a few words about the matter will hopefully shed some light on my task. Although

[169] Thank you to Linden Edwards for raising this question.
[170] If Musk's projected timelines are right we may only have four years left to prevent space colonisation. *Cf.* footnote 4.
[171] Interestingly, Benatar, who subscribes to a 'pro-death' position on abortion, observes the possibility of permissible procreative acts in circumstances where 'phasing out' the species would have the best outcome, at least under certain theoretical frameworks. See Benatar, *Better Never to Have Been*, p. 183-193.

each and every procreative act is *morally* undesirable, I do not believe procreation must be outlawed. This is because legal prohibition would be so impractical as to be futile, and if enforced it would almost certainly cause significant harms. In other words, although we have a moral duty not to procreate (as established by the above anti-natalist arguments), and thus cannot have a moral right to procreate, people should nevertheless be afforded a legal right to procreate. Why should we permit the freedom to cause someone substantial harm, even if that harm is caused by *creating* them?

The reason is that a total ban on procreation in any country would cause a deafening outcry. People have such strong inclinations towards creating new people that they would find ways to break the law. Enforcing it, then, would require the kind of intrusive policing and violations of privacy seen in apartheid South Africa with respect to its anti-miscegenation laws. It goes without saying that sexual intercourse should not and anyway cannot be effectively prohibited, so law enforcement would have to determine on a case-by-case basis who had conceived wittingly, negligently, accidentally or against their will. Pregnancies would have to be terminated by the state.[172] Many women would be unwilling; this would then require them to be held against their will and perhaps be sedated with drugs so that abortions may be performed. Alternatively, or additionally, infertility drugs could be placed in the air or the water supply so as to prevent women from falling pregnant in the first place.[173] Dreading this reality, it seems likely that many women would go underground to gestate and give birth with the help of 'future-proofing' networks.[174] Such actions would plausibly cause maternal mortality rates to soar.[175] These sorts of foreseeable costs indicate that the end (i.e., extinction), though noble, does not justify the means. Personal autonomy violations of such magnitude cannot be defended, unless perhaps one utilises a utilitarian framework. It is no use, and maybe immoral, to commit atrocities in order to thwart other atrocities; at least, it would be no use in this instance, given the odds of failure.

Additionally, there are legitimate concerns about personal autonomy. Performing an abortion against someone's will is an unjustified violation of bodily autonomy. But if forced abortions are wrong, that implies the existence of a negative right to *finish* procreating (i.e., non-interference in situations where a person – wittingly or unwittingly, willingly or unwillingly – conceives a child, and decides to bring it to term).[176] So, although the failure to abort will cause grievous harm (to the future person),

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[172] *Ibid.*, p. 105-106.
[173] *Ibid.*
[174] A society like this would almost be the (equally terrifying) inverse of the Republic of Gilead in *The Handmaid's Tale*.
[175] Benatar, *Better Never to Have Been*, p. 106.
[176] This right to *finish* procreating may exist even if one thinks, as Benatar seems to, that personal autonomy does not constitute good grounds to *start* procreating. *Ibid.*, p. 104-105.

the person carrying the foetus should be legally entitled to bring it to term. This, in effect, establishes a negative right to finish procreating, since conception is infeasible to monitor, never mind prevent.

One of the reasons, then, for my wishing to discuss the importance of space colonisation is precisely because it affords us a better strategy for, if you will, preventing the deferment of human extinction. While procreation should remain legal, at least for the time being, space colonisation should be made illegal. Giving up procreative freedom is a major restriction on personal autonomy. By comparison, waiving the right to colonise space is hardly an infringement on personal autonomy at all: the vast majority of human beings alive today will never, and would never have expected to, be able to travel beyond Earth's atmosphere and found a space settlement.[177] Another factor is that a procreative ban would be unviable, whereas a ban on colonising space would be (relatively) easy to implement. In other words, the reasons for not criminalising procreation do not apply to space colonisation.

Given the fact that people will continue to procreate, because of their biological urges or because of the importance of having children to them, their families or their communities, we need to look at other ways extinction might be postponed and nip them in the bud. One of the most likely avenues for postponing human extinction is space colonisation. Bostrom estimates that *every second* we delay the colonisation of the Virgo Supercluster corresponds to a potential non-realisation of anywhere from 10^{13} to 10^{29} human lives.[178] These numbers are so unfathomably large that we cannot properly wrap our heads around them. What we do know is that they make the number of current, past *and* potential (Earth-bound) human lives in the future pale in comparison. Just try to imagine how much suffering that will involve – we cannot; we are incapable of imagining all the suffering experienced right now by humans alone – and you will realise that giving up the space colonisation project is one of the most, if not the most, harm-avoiding actions we can take, and at a piffling cost. Avoiding all that harm is morally desirable, perhaps even obligatory. There is no way that anyone can persuasively argue for a right to colonise space.

But why, one might ask, is colonising *space* worse than colonising an uninhabited piece of land on Earth? Although there may be no real moral difference between the two ventures, the important thing to realise is that the latter does not involve the same chances of extended species perpetuation. There is a time limit to staying on Earth. Our descendants may be able to survive beyond that time

[177] Is there such a moral right? If yes, has it existed for millennia and simply been inert, or has it only sprung up with the rise in technology in the past century or so?
[178] Bostrom, 'Astronomical Waste', 310.

limit if they disperse across the universe. And if they form independent population 'cells' in a cellular organisational system, much like guerrilla and terrorist groups, the extinction of one 'cell' would not eliminate the entire species. This would be an appalling situation. So, *taking into account the near certain continuation of human breeding*, we must confine ourselves to Earth to ensure that (non-objectionable) extinction occurs as soon as possible.

Section E: Policy Implications[179]

All the arguments in favour of space colonisation are in effect pro-natalist in spirit. Musk, Hawking and others who endorse the colonisation of space for the express purpose of deferring extinction are ineluctably in favour of procreation. They take the continuation of the species to be an undeniable good. I have shown them all to be categorically mistaken. The preservation of the species represents a threat to all those who will exist in the future. Those who are pro-space colonisation need to meet this challenge head on and show that human existence is good and human extinction is wrong. Only once this challenge has been met can they go on to argue for efforts to colonise space. Needless to say, I am strongly optimistic that this challenge will not be met.

The conclusion that space colonisation is a grievous moral wrong and therefore should be outlawed has significant implications for space law. In this section I shall: provide an overview on a few of the relevant existing international agreements; proffer suggestions for a new policy framework, as well as revisions and additions to current space law; and survey the chances of success for these changes.

Current Treaties and Principles

International space law currently consists of five treaties and five principles that govern forays into outer space. The regulatory body overseeing these agreements is the Committee on the Peaceful Uses of Outer Space (COPUOS). Supplementing these agreements (and occasionally contradicting them) are numerous national legislations covering space-related activities. All the international space law treaties and principles stress the idea that activities conducted in outer space and concomitant benefits that might be accrued must be devoted to furthering the well-being of humanity as a whole.

The 'Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies'[180] (Outer Space Treaty) is an agreement that

[179] I am indebted to Prashanti Ramnanan for her invaluable insight and suggestions on various matters throughout this section.

was put before the United Nations General Assembly in January, 1967, and entered into force nine months later. The Outer Space Treaty supplies the most basic framework for international space law. Among its many provisions are the following declarations: all states will be able to freely explore and use outer space, and will have free access to all areas of celestial bodies; this exploration and use must be conducted for the benefit of humanity and in the interests of all states; freedom of scientific investigation will be allowed; no part of outer space may be subject to national appropriation through claims of sovereignty, occupation, or any other means; signatories commit to using celestial bodies exclusively for peaceful purposes; and states will assume responsibility for all national activities undertaken in outer space, whether by government agencies or non-governmental entities (including corporations), the latter of which must be duly authorised and continually supervised by the relevant state in order to undertake activities in outer space.[181]

Another important space law treaty with potential implications for the legality of space colonisation is the 'Agreement Governing the Activities of States on the Moon and Other Celestial Bodies'[182] (Moon Agreement). It was signed in 1979 and entered into force in 1984. Although this agreement has just 17 signatories, none of which is a leading space nation, it provides useful guidelines on a number of issues left unaddressed by the Outer Space Treaty. For example, the Moon Agreement specifies that states will inform the Secretary-General of the United Nations (UN), the international scientific community and the general public of any activities associated with the exploration and use of celestial bodies in the solar system. The agreement also requires that states make it known if they encounter any signs of organic life or extraterrestrial threats to human life. Regarding the potential implications for establishing colonies, the Moon Agreement obliges states to take the necessary measures to prevent the 'existing balance' of the environment that space-farers find themselves in from being disrupted. Moreover, while space stations may be set up, property rights will not become applicable in any way, shape or form; no part of a celestial body or natural resources in outer space may be owned by any organisation – public or private – or natural person.[183]

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[180] Resolution 2222 (XXI), 'Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies', *United Nations Office for Outer Space Affairs*, 27 January, 1967, URL: http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html [online] (accessed 29 January, 2018).

[181] *Ibid.*

[182] Resolution 34/68, 'Agreement Governing the Activities of States on the Moon and Other Celestial Bodies', *United Nations Office for Outer Space Affairs*, 18 December, 1979, URL: http://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/moon-agreement.html [online] (accessed 29 January, 2018).

[183] *Ibid.*

So, what is the legal status of space colonisation? The answer is that it is complicated and uncertain. This is because some states have national legislation which departs from the international treaties discussed above. The most noteworthy is the United States of America, which has developed its own domestic laws governing space-related activities, and is home to several commercial operators seeking to establish space settlements.[184] For these reasons I shall limit myself to a discussion on US attempts to colonise space. An expert in space law and policy, Michael Listner, recently explored the legal issues surrounding space colonisation from an American perspective, with specific reference to Elon Musk's plans to colonise Mars and set up a trade route between the planets (at least initially[185]).

First, writes Listner, Musk and company would need to be issued a licence for a private mission to Mars. But the Federal Aviation Administration's current licensing authority is insufficient to do this. Either the licensing scheme will have to undergo significant alteration or the colonisation attempt would have to be organised under governmental purview.[186] Assuming one of these two options are executed, there is still the question of government sanction for a private effort to colonise (parts of) another celestial body, including Musk's proposed activities. This question depends on the legal definition of 'colonisation'. In the United States of America, a colony is defined as:

> [a] dependent political community, consisting of a number of citizens of the same country who have emigrated therefrom to people another, and remain subject to the mother-country. [It is a] settlement in a foreign country possessed and cultivated, either wholly or partially, by immigrants and their descendants, who have a political connection with and subordination to the mother-country, whence they emigrated. In other words, it is a place peopled from some more ancient city or country.[187]

Listner accepts that this 'terrestrial' definition is not identical to the settling of an extraterrestrial site, and so could be considered immaterial. "Yet," he writes, "given the nature of international space law, the fundamental nature of a terrestrial colony is germane to the private creation of settlements on celestial bodies".[188] In his opinion, the central aspect of a colony is the fact that it is a "dependent political community" which "remain[s] subject to the mother-country". Now, this relationship of

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[184] I am not aware of any non-American organisations making a concerted effort to colonise space in the near future.
[185] Details are murky but the idea is to create a self-sufficient Martian society. Urban, 'SpaceX's Big Fucking Rocket'.
[186] Michael J. Listner, 'A legal look at Elon Musk's plans to colonise Mars', *The Space Review*, 17 July, 2017, URL: http://www.thespacereview.com/article/3286/1 [online] (accessed 29 January, 2018).
[187] 'What is COLONY?', *The Law Dictionary (featuring Black's Law Dictionary Free Online Legal Dictionary, 2nd edition)*, date unknown, URL: https://thelawdictionary.org/colony/ [online] (accessed 30 January, 2018).
[188] Listner, 'A legal look at Elon Musk's plans to colonise Mars'.

dependency is facilitated by the Outer Space Treaty. According to the treaty, states have a legal duty to authorise and supervise private space activities; hence, any activities proposed by Musk or others will remain under government jurisdiction. In fact, the treaty stipulates that government jurisdiction will extend over all spacecrafts launched to Mars, all human constructions, and all 'colonists', too.[189]

Potential obstacles for colonising space appear in the second part of the legal definition of a colony. One problem is the specification of a 'foreign country', which Mars is not. The space law expert does not, however, envision this proving much of a stumbling block.[190] Rather, the bigger problem for space colonisation advocates lies in the 'possession' condition. Space-farers who arrive on Mars may not 'possess' a settlement there, whether partially or fully, because it violates the Outer Space Treaty. The treaty invokes the *res communis* doctrine by claiming that outer space, including celestial bodies other than Earth, is "the province of all [hu]mankind".[191] Sovereignty cannot be claimed by a government by any means; *ipso facto* the celestial bodies belong to no single government or person – they belong to everyone. Moreover, settlers will not even hold exclusive domain over the equipment and supplies they take with them or the facilities they construct. All people arriving at the settlement must be allowed access to every part of the 'colony'. But Listner concludes that if Musk's plans are realised, at least in their present guise, then that would constitute a colony, and as such it would be subject to the rights and duties of the US government under the Outer Space Treaty.[192]

I am not a legal scholar, and yet I must admit to finding Listner's conclusion confusing. How is it possible that a settlement on Mars would both be in violation of the most fundamental prescription of space law (as it requires US sovereignty) *and* a legitimate US colony subject to that same law? Such an outcome strikes me as incongruous. Listner opines that the US government will have jurisdiction over all activities carried out by (American) 'colonisers' while simultaneously acknowledging that *no national government can have jurisdiction over (any part of) a celestial body*. Moreover, explicit in the definition of 'colony' is the occupation and possession of territory; no colony can exist without a territory that is "possessed". But the Outer Space Treaty requires that all people be permitted access to all areas of outer space. So, if 'possession' entails exclusive access,[193] how can a Martian colony be created? The

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189 *Ibid.*
190 *Ibid.*
191 Resolution 2222 (XXI), 'Outer Space Treaty'.
192 Listner, 'A legal look at Elon Musk's plans to colonise Mars'.
193 This is if we understand the term 'possession' in accordance with the US legal definition thereof, where possession is the "condition of facts under which one can exercise his power over a corporeal thing at his pleasure to the exclusion of all other persons". 'What is POSSESSION?', *The Law Dictionary (featuring Black's Law Dictionary Free Online Legal Dictionary,*

Moon Agreement, which Listner does not discuss, probably because the United States of America is not bound by it, and because it is considered a 'failed treaty',[194] is even more forceful: property rights are not applicable in outer space. In addition, there is a concern about not disrupting the existing balance of the Martian environment. One of the suggestions for making Mars habitable for human beings is 'terraforming' – the process of modifying the topography, atmosphere, temperature and ecology of a celestial body to be more like Earth's, thus laying the groundwork for cultivation. Such a process would clearly contravene the Moon Agreement. As I say, however, my legal knowledge is limited, and Listner's interpretation of the law might be correct. If so, the current dispensation is imprecise and requires clarification. The legal status of space colonisation remains up in the air.

Suggested Policy Framework, Revisions and Additions

In the absence of a clear international space law framework on the subject of space colonisation, and given the gargantuan harms that would result were space colonisation to take place, it behoves me to suggest a new policy framework. This framework can be administered as all five previous space law treaties have been administered. That is, it can be deposited by at least one UN member state, signed and ratified by the rest of the member states, and entered into force as soon as it is feasible. As with the other treaties, this declaration can fall under the auspices of the COPUOS. Hence, in light of the above, my suggestions are as follows.

First, the guiding principle for space-related activities must be Planetary Confinement. Amendments should be made to all the annexes of the current treaties to reflect this guiding principle; any new policies drawn up should also include it. A possible addition to the introduction of the treaties could be: "*Recognising* the harms and uncertainties attending permanent occupation of outer space, both for humankind and any sentient extraterrestrial life..." At the same time, to avert any ambiguity over the legal status of space colonisation, the phrase 'exploration and use of outer space/the moon', which appears several times in many of the treaties, including the full title of the Outer Space Treaty, should be qualified with the condition "excluding the continuous residency or habitation of any

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2nd edition), date unknown, URL: https://thelawdictionary.org/possession/ [online] (accessed 25 February, 2018). Unlike other legal traditions, such as Roman-Dutch Law, the American definition emphasises the exclusivity of the possession condition. This means that a Martian colony would involve the possession of territory in outer space *to the exclusion of all other persons*, which would violate the *res communis* clause of the Outer Space Treaty. Thank you to Prashanti Ramnanan for alerting me to the ambiguity in this crucial term.

194 Philip De Man, 'Luxembourg's law on space resources rests on a contentious relationship with international framework', *The Space Review*, 23 October, 2017, URL: http://www.thespacereview.com/article/3355/1 [online] (accessed 29 January, 2018).

individual or group of persons in outer space for any reason exceeding one thousand five hundred days". The phrasing suggested here is clumsy, but I am sure that legal minds sharper than my own can address this. The amount of time suggested (just over four years) is somewhat of a thumb-suck; it will, though, as an example, allow for an extended stay on Mars in the name of scientific research. The key aspect of this suggestion is simply the notion that nobody may spend an indefinite amount of time in outer space. Whatever limit is agreed upon should be implemented to avoid a scenario whereby a group of persons is left in outer space, as they may end up having sexual intercourse and, intentionally or not, thereby effectively establishing a space colony.

Before I continue I should address a concern that the reader may have. If space colonisation should be outlawed, then why not space exploration, or indeed all space-related activities which call for a human presence, too? As of this writing, there are three astronauts in outer space,[195] all of whom are residing on the International Space Station (ISS). The ISS serves as a platform to carry out scientific research. It also engages in educational outreach by involving schoolgoers in scientific experiments and demonstrations. Finally, it allows for private expeditions into outer space. Although one can ask questions about the cost-effectiveness of the creation and maintenance of the ISS, there appears to be no *a priori* moral reason to prohibit astronauts or other adventurers from going there to perform these activities.

This rationale can be extended to include other places in outer space. Just because a permanent stay in outer space would be, in light of my arguments, morally wrong (at least insofar as it would contribute to an extraterrestrial human population), it does not mean that a temporary visit is similarly impermissible. There are then questions about, for example, the permissibility of sending a solitary volunteer on a one-way mission to the nether regions of the solar system (admittedly this would be prohibited by the suggestion above) and other 'in-between' scenarios whereby people are in outer space for an indefinite period of time but do not cause an extraterrestrial human population to be created. While I cannot address the whole range of these scenarios, I should like to emphasise that the argument I am making here is that in order to avoid the grave *moral* sin of setting up a space colony we must take certain *practical* steps (which may in isolation be morally permissible) to prevent that reality. I see no reason why those steps should include a ban on entering outer space. Seeking to stop space exploration would also be a much harder sell than seeking to prevent space colonisation.

[195] *How Many People Are in Space Right Now?*, 14 March, 2018, URL: https://www.howmanypeopleareinspacerightnow.com [online] (accessed 14 March, 2018).

I now move swiftly on to my next suggestion. A new treaty with the proposals I suggest here should be drawn up and put before the UN General Assembly. The first thing that this treaty should do is explicitly prohibit the formation of a space colony of any kind. This has several implications. One is that the treaty should specifically forbid procreation in outer space, perhaps citing unknown health risks such as those stemming from exposure to radiation.[196] Signatories to this treaty must agree to alter their domestic laws to make procreation in outer space a punishable offence. (I would counsel a stiff penalty, such as a lengthy prison sentence, for contravening this law.) A second consequence of the prohibition on space colonisation would be that anyone who goes 'missing in action' and misses their return flight to Earth, or otherwise attempts to escape a space station anywhere in outer space, would also face punishment. (Again, I would recommend a similarly stiff sentence for the offender.) And perhaps most importantly, the United Nations Office for Outer Space Affairs (UNOOSA), the Secretariat to the COPUOS, needs a means of enforcing these laws, especially since the most likely transgressor of such a treaty would be a permanent member of the UN Security Council.

Is a Planetary Confinement Policy Realistic?

The problem is that the ability to prevent a UN Security Council member such as Russia, China, the United Kingdom or the United States of America from establishing a space colony would require a radical shakeup of international law, seeing as these countries hold veto power in the face of any substantive resolutions adopted. Such a shakeup is incredibly unlikely to happen anytime soon, and decidedly not because of attempts to colonise space. Furthermore, because of widespread, fervent opposition to anti-natalist doctrine, the chances of a planetary confinement policy succeeding, never mind one motivated by a belief in the goodness of human extinction, is effectively zero. The only way that I can foresee a policy in this vein being adopted and adhered to is if: (a) the hazards of living in outer space, including the harms of human procreation, are judged too severe; or (b) the world's superpowers entertain a mutual fear that one of the others will be the first to 'conquer' outer space and so will move to keep one another in check. Even if both those conditions hold true, however, I am not hopeful that space colonisation will be prevented. It seems likely that the harms of radiation exposure and other hazards of living in space will one day be minimised to a sufficient degree (in the eyes of would-be space-dwellers). And it is also likely that (b) will lead not only to

[196] There may be obstacles that inhibit the possibility of human reproduction in space. Roach, 'Packing for Mars', p. 242. This may make the prohibition of procreation in outer space far more palatable than a similar policy would be on Earth, as previously indicated. Thanks to the external examiner of this report for questioning the likely acceptance of this policy proposal.

efforts to prevent other nations from participating in the space settlement race, but also to active attempts to 'win' it by being the first to colonise space. Indeed, the rationale of this potential first-mover advantage has already been espoused by nationalistic zealots like Buzz Aldrin.[197]

Inevitably, I shall have to field the following question: Why insist on making anti-space colonisation policy suggestions if you believe that they will never be implemented? What is the *point*? There are a few responses worth outlining here. First, there is a distinction between the question whether space colonisation *will* be outlawed and whether it *should* be outlawed. The fact that the answers to those questions are different is not a problem. I have framed the latter as a question of practical morality. Since the answer is 'yes' (i.e., space colonisation *should* be outlawed), this overrides all other kinds of 'should' questions. It does not matter that this is very unlikely to take place; one can still stake out a position on the latter question. Second, there is value in doing so. As I indicated in the introduction, there has been very little philosophical discussion on the morality of colonising space. Just by virtue of making these arguments, further debate will hopefully be ignited. This debate is crucial, as space colonisation could well end up being as consequential, if not more so, than artificial intelligence. We can only hope for such an ensuing din that policymakers decide on the correct outcome, even if they are not swayed by what I take to be the most powerful basis for that outcome, namely, anti-natalism.

Section F: Conclusion

The morality of space colonisation represents hitherto largely unexplored terrain. In many ways this essay serves as an exercise in moral topography. I have drawn a straight line from the morality of space colonisation to the morality of procreation. We may colonise space only if human extinction is bad. Anti-natalism arguments show human extinction to in fact be *good*. Four anti-natalist arguments have been advanced and successfully defended from an assortment of objections. These arguments work independently of one another (bearing in mind the proviso for the axiological asymmetry argument). So, even if one rejects Benatar's axiological asymmetry *and* Kant's categorical imperative, both of which require argument, one is still faced with the counterpart anti-natalist arguments based on the harms we experience and perpetrate. While I believe that all four of these arguments are correct, it is certainly possible that some people think one or two may be defeated. However, the chances that all four arguments are specious are incredibly low. For those sitting on the fence about the morality of procreation there is therefore an extra reason to err on the side of caution and accept

[197] Edwin E. Aldrin, Jr., *Mission to Mars: My Vision for Space Exploration*, Washington, D.C.: National Geographic, 2013, p. 38-39; 45.

the anti-natalist conclusion. The burden of proof lies with the pro-natalists to show that procreation is morally permissible.

From the badness of procreation to the goodness of (human) extinction; the latter follows for the same reasons as the former. If no new human beings ought to be created, because creating human beings is wrong, then eventually *Homo sapiens* should go extinct. Since all human beings experience (enormous amounts of) harm, a world with zero human beings is always better than a world with human beings. (This is captured by the asymmetry between harms and benefits.) Even if extinction brings about harm to the final people, which it likely will, this cannot serve as a reason for deferring extinction, for this harm is far outweighed by the harm that will accrue in the meantime if extinction is indeed deferred. Nor is there a good (enough) reason to continue propagating rational deliberators or moral agents; the final value such agents possess belongs only to existent beings. So, human extinction is something we should aim for, not by killing or forcibly sterilising people, nor coercing them to abort foetuses, but by ceasing to procreate. The sooner extinction occurs, the better.

I have argued that, if we have a moral duty to avoid begetting people, and so to bring about (non-objectionable) extinction, then we must act to prevent people from permanently leaving Earth. Since space colonisation is likely to significantly prolong humanity's lifespan – the assumption being that procreation will continue indefinitely – it must be thwarted before it is too late. The anti-space colonisation position articulated in this essay is therefore best viewed as a pragmatic action (morally) motivated by the 'theoretical' anti-natalist arguments. As a start, I have proposed a set of changes to international space law that should be enacted immediately. These policy recommendations seek to stop plans to colonise space in their tracks. If my arguments above are correct, endorsement of these suggestions, or ones likely to have a similar outcome, is a no-brainer. However, the acceptance and implementation of anti-space colonisation policies faces a gamut of irrational challenges, ranging from the political (at the macro level) to the biological (at the micro level). Depressingly, humankind appears to be gearing up for one of its most dangerous leaps: shooting its eggs out of Earth's basket and disseminating them across the universe.

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