

Environmental Ethics: Balancing the Values of Current Lives, Future Lives, and Quality of Life

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Environmental ethics literature often argues that we should conserve the environment in order to (1) preserve the lives of future people and (2) provide future people with a basic level of quality of life. (For instance, see the writings of Barry, Bayet, and Naess.) But what must we give up in exchange? Garrett Hardin's argument for lifeboat ethics implies that we should conserve the environment even if it requires sacrificing the lives of current people (see section 2). Should we sacrifice current lives in order to save future lives? Should we sacrifice current lives in order to provide a certain level of quality of life for future people? Should we regard current people's quality of life interests as equally valuable to future people's quality of life interests? This paper examines these moral concerns within the context of environmental ethics.

I. Hardin's Lifeboat Ethics

Hardin confronts us with an ethical scenario that puts (1) future lives and (2) future people's quality of life squarely at odds with (3) the lives of current people. The scenario, and Hardin's proposed solution to it, proceed as follows. Hardin asks us to imagine the nations of the Earth as lifeboats with limited carrying capacities (as an analogy to the limited carrying capacity of each nation's land).¹ Rich nations are lifeboats filled with relatively wealthy people; poor nations are lifeboats crowded with relatively poor people. Suppose our lifeboat has 50 people with space for 10 more (although, by adding 10 more, we eliminate our safety buffer which protects against the possibility that an unforeseen future event diminishes the 60-person carrying capacity of our boat).² Hardin argues that, supposing that we observe 100 people swimming outside of our boat asking to join us, we should *not* add further people to our boat. (If someone onboard feels this is unjust, that person may give up their seat to someone outside of the boat.) Citing that

1 Hardin, Garrett. "Living on a Lifeboat." *BioScience* (1974): 2.

2 *Ibid.*, p. 2.

unchecked reproduction rates in poor nations are much higher than those in rich nations, Hardin worries that by giving foreign aid, establishing world food banks, and allowing unrestricted immigration,³ rich nations are (metaphorically) adding more people to the water outside of our boat and overcrowding the rich boats. This inevitably results in global overpopulation which can only end with the “total collapse of the whole system, producing a catastrophe of scarcely imaginable proportions.” Through so-called charitable efforts the rich nations are in fact incentivizing poor nations to irresponsibly increase the world population to a point that eclipses the world’s carrying capacity.⁴ Until there is some sort of sovereign world power that can set reproduction limits, each nation is a sovereign lifeboat⁵ that has an ethical duty to differentiate between being “generous” with its own “possessions” and being “generous” with posterity’s⁶ “possessions.”⁷ In effect, by allowing unchecked reproduction rates to threaten nations’ and the Earth’s carrying capacity, current people are depleting something that does not belong to them—the quality of life on earth in the future (which ostensibly belongs to future people). Hardin sums up the sentiment in this way: “*Every life saved this year in a poor country diminishes the quality of life for subsequent generations.*”⁸ Hardin ultimately concludes, “For the foreseeable future survival demands that we govern our actions by the ethics of a lifeboat. Posterity will be ill served if we do not.”⁹

One very probable consequence of Hardin’s lifeboat ethics is that in order to (1) preserve the quality of life for future generations and (2) ensure that future people or entire future generations exist, we may need to allow current people to die.¹⁰ Thus, there are three different factors at stake: (1) the lives of current people, (2) the lives of future people, and (3) the quality of life of future people. We are confronted with two ethical dilemmas. First, should we sacrifice the lives of current people in order to protect the lives of future people? I consider this question below, in sections 3, 4, and 5. Second, should we sacrifice the lives of current people to preserve the quality of life for future people? I consider this question in section 6.

II. The Case for Prioritizing a Current Life over a Future Life

Given that we must choose, should we prioritize the lives of current

³ *Ibid.*, p. 11.

⁴ *Ibid.*, p. 7.

⁵ *Ibid.*, p. 13.

⁶ “Posterity” is used throughout this paper to mean all future generations of people.

⁷ *Ibid.*, p. 11

⁸ *Ibid.*, p. 9.

⁹ *Ibid.*, p. 13.

¹⁰ Carter, Alan. “Saving Nature and Feeding People.” *Environmental Ethics* 26 (2004): 343.

people or future people? The question is vague in that it fails to specify how many current and future lives are at stake. My analysis begins by narrowing the question to: Should we prioritize the life of one current person over one future person? I argue that, in the absence of knowledge of the particular features of the current person and future person (except that we know that they belong to either the current generation or a future generation), we should prioritize the life of the current person. There are three reasons why: (1) a current person's existence is more likely than a future person's, (2) we know with greater certainty that a current person desires to live than that a future person desires to live and (3) we can more efficaciously design policies to protect the life of a current person than to protect the life of a future person.

First, the existence of a current person is more probable than the existence of a future person. This is because, by definition, a current person exists, whereas a future person does not (yet) exist. There is a probability, though it is extremely remote, that there will be no future people. The probability of the non-existence of future people increases the farther we look into the future. For the more time that passes, the more opportunities arise for the occurrence of a catastrophic event, such as a nuclear war that kills everyone. As the number of these opportunities increases, the probabilities of such disasters grow. Of course, such disasters are still highly unlikely. The important point is that when we must decide between saving the life of a current person and saving the life of a future person, such probabilities are morally relevant factors. That is, although John O'Neill points out that given the proper level of precaution we may safely assume future people will exist,¹¹ this is different from saying that the existence of a future person is equal to that of a current person. In situations where we must choose to save one life or another, the small chance that future people will not exist is one of the few impartial distinguishing characteristics we have access to.¹²

Second, we cannot know the preferences of a future person to the same extent that we can know the preferences of a current person. Current people can demonstrate their preferences through actions (e.g., voting, purchasing goods, or spending time in specific ways). We can also ask current people what their preferences are. Future people are neither able to act nor state their preferences. O'Neill rightly asserts that there are certain preferences that we can assume with a high level of confidence are

11 O'Neill, John. "The Constituency of Environmental Policy." *Ecology, Policy, and Politics: Human Well-being and the Natural World*. London: Routledge, 1993: 50.

12 I call this fact impartial because it holds true for all people equally and I call it a distinguishing characteristic because it does not apply to current people but does apply to all future people.

true for both current and future people, such as preferring to have food, energy sources, and basic materials. But when we assume that future people's preferences will include food, energy sources, and basic materials, we tacitly assume that future people will desire to live and that they will pursue their life projects. Yet, there is a very remote possibility that these assumptions are false. Suppose that, in the future, there is a widespread incurable disease which causes people intolerable pain. It may be the case that many of the future people afflicted with this disease will prefer to die rather than live. Though the possibility of this scenario is overwhelmingly unlikely, this sliver of uncertainty about the preferences of future people turns out to be a significant morally relevant difference. The fact that there is a very small possibility that a future person might choose to die, whereas a current person has stated or demonstrated their preference to live, gives us a second reason to prioritize saving a current life over a future life.

Third, there is a fundamental problem implied by our inability to fully understand and predict the effects of our actions. This problem becomes more pronounced the farther we look into the future. For example, suppose that the U.N. is evaluating whether or not a developing nation should continue industrializing. The benefit of industrializing consists in allowing its citizens to have jobs that provide sufficient money to buy food and obtain health care, thereby saving thousands of lives that otherwise might be lost due to starvation and disease.¹³ The cost is pollution, which contributes to the eventual death, several decades down the line, of future people in various ways, including by: (1) creating massive destructive storms, (2) causing sea levels to rise which in turn floods coastal cities and (3) producing contaminated air that causes lung cancer and other potentially fatal diseases. The choice comes down to (1) save current lives and sacrifice future lives by allowing industrialization or (2) save future lives and sacrifice current lives by preventing industrialization.¹⁴ A policy aimed

13 It may be objected that wealthy nations, which industrialized earlier than developing nations, and which therefore have already contributed significantly more pollution to the environment than developing nations, have a moral obligation to share their resultant economic benefits from industrialization with developing nations. This would help provide food and health care to the citizens of developing nations and avoid the environmental consequences that would result if developing nations continue industrializing (and thus contributing more pollution). While this is a powerful moral argument, presently it seems politically unachievable. For one, many industrialized nations already overspend their budgets. It would be difficult to convince them to allocate a significant amount of money to this cause. Secondly, the amount of resources necessary to offset the potential current and future benefits to developing nations from industrializing is large. This makes it increasingly unlikely that industrialized nations will contribute the requisite amount of funds to compensate for economic losses absorbed by developing nations due to halting industrialization.

14 For the purposes of this particular thought experiment, which aims to discover how we should weigh the life of a current person against the life of a future person, let us assume that

at saving current lives by allowing industrialization has a better chance of being actualized than a policy aimed at saving future lives by disallowing industrialization. This is because, typically, we can more accurately predict a policy's near-term consequences than long-term consequences, since there is less of an opportunity in the short term for an unexpected factor to cause a deviation from our predicted outcome. For instance, the effects of allowing industrialization will very likely continue saving current lives, and disallowing industrialization will very likely sacrifice current lives. We have very little reason to expect any unforeseen or unlikely circumstance to occur and alter that outcome (e.g., despite allowing industrialization, the price of food and health care abruptly skyrockets, causing people to starve from inability to buy food or die from the inability to afford to see a doctor). And if it does, resulting in its expected consequences failing to materialize, we will know right away, and we can modify the policy if need be (e.g., find a way to drive prices down or stop industrialization until prices go down, since, if food and health care are unaffordable even with industrialization, current people will lose their lives either way). On the other hand, it is relatively less certain that allowing industrialization will cost future lives, and that disallowing industrialization will save future lives. For we are less certain of the effects of a policy that is experienced in the future since, during the time between its implementation and the realization of its *long*-term goals (which, in this case, could be decades), there is a relatively higher likelihood that there might be an intervening factor that influences the outcome in unanticipated ways, since there is a relatively larger period of time between the enactment of the policy and the realization of its goals. For example, suppose that, in the interim, an unexpected method for artificially cleaning the air is invented and implemented over the next few decades, resulting in less future lives lost than originally anticipated. Or suppose that, in response to climate scientists' increasingly accurate predictions of the precise geographic locations of the impacts of pollution, the U.N. helps climate refugees relocate to other nations before they can be killed, again resulting in less future lives lost than originally predicted. On the other hand, suppose that unanticipated new sources of pollution emerge from other nations, increasing the amount of pollution above what was originally expected and

(1) the amount of lives saved and sacrificed in either case are equal and (2) the very likely quality of life reduction experienced by future people, above and beyond the loss of life, stemming from the pollution of this particular developing nation, is offset by the increase in quality of life experienced by current people who consume the cheap goods that it produces. This second assumption may be objected to on a number of levels, but I will not take them up here. In order to give the concept of quality of life the proper attention and space, I will defer discussing it until later in the paper. By making these two assumptions, I can focus the discussion on a one-to-one comparison of the life of a current person against the life of a future person.

exacerbating its effects on the climate, yielding the loss of more future lives than predicted. In any of these scenarios, we will have already experienced the cost of sacrificing current lives (or the benefit of saving current lives) while waiting to see if future lives are saved (or if future lives are lost) in an amount consistent with our original prediction. Yet, if the first two scenarios materialized, those current lives would not have needed to be sacrificed, or fewer should have been sacrificed, in light of the lower than expected quantity of future lives lost. On the other hand, in the third scenario, it would turn out that more should have been done to prevent pollution, perhaps even at the cost of sacrificing more current lives than originally intended, in order to avoid the unexpected increase in loss of future lives. My point here is that the short term outcomes of a policy are more certain than its long term outcomes. This gives us a third reason to prioritize a current life over a future life, for it is more certain that we can design a policy that saves a current life than that we can design a policy that will save a future life.

III. Age and Other Morally Relevant Factors

The fact that a current person exists, whereas a future person will probably exist, is a morally relevant consideration in a variety of contexts. Consider, for example, its impact on the ethics of embryo research. Bonnie Steinbock writes, “If a fire broke out in a fertility lab and there was only time to save a two-month-old baby there in a bassinet or a rack with seven embryos, most would save the baby without hesitation. Yet carrying out the test-tube rack instead could have saved seven people, if indeed each embryo was a person.”¹⁵ We are inclined to save the life of the baby because the baby is a person already, whereas all seven embryos might fail to become people. For the same reason, it is argued, we should allow medical researchers to conduct experiments on embryos, which have only a 1 in 3 chance of becoming people, in order to further research that could save current people.¹⁶ To a certain extent, then, our analysis reflects the same moral intuition contained in this thought experiment: The epistemic uncertainty of future people means that we should prioritize the lives of current people.

The fertility lab thought experiment indirectly raises an important point. It mentions the age of the current person in question (a two-month-old baby), which, within the scope of our broader discussion about prioritizing a current life or a future life, brings to the fore that, if we can know certain features about the current person and future person whose lives are at stake, such as their age, this is morally relevant. Age matters because

¹⁵ Steinbock, Bonnie. *Life Before Birth: The Moral and Legal Status of Embryos and Fetuses*. Oxford University Press, 196: 215.

¹⁶ Shaw, D.M. “Moral Qualms, Future Persons, and Embryo Research.” *Bioethics* (2008): 223.

whereas a two-month-old baby probably has a full life ahead of it, a ninety-year-old person, for example, very likely has relatively less life ahead of them. For example, to return to the developing nation thought experiment: If we expect that the current person whose life is at stake is twenty-five years old, and the age at which the future person who will be killed by pollution will be fifty years old, then we have another reason to preserve the life of the current person, for they probably have relatively more life ahead of them.¹⁷ By the same token, if the ages are reversed, then, assuming a high probability of existence of a future person who would be affected by this particular pollution, we have a reason to preserve the life of the future person.

Beyond age, another morally relevant factor is one's personal interest in the existence of a current person or a future person. For example, suppose that the current person whose life is at stake is one's sibling. Or, suppose that the future person in question is one's grandchild, and there is reason to believe that if pollution continues being emitted at current levels, then by the time that they are born the air will be filled with smog that will cause health complications, such as lung disease and asthma, that will probably kill them by age sixty. All of the known morally relevant factors, such as era,¹⁸ age, and personal relationship to the current or future person at risk, will likely be weighed together when we make a moral decision about whether to prioritize a particular current life over a specific future life. It is possible that, given knowledge of the particular features of the current life and future life at stake, we will have stronger reasons to save the future life.

IV. Asteroid Thought Experiment

If we arrive at a situation in which we should prioritize a current life over a future life, this does not mean that the lives of a relatively small set of current people should outrank the lives of a sufficiently large group of future people. It seems that there are instances in which it is morally correct to favor a large group of future lives over a small group of current lives. The three reasons given above for prioritizing current lives provide only slight reasons to prioritize a current life over a future life. A large enough number of future lives at risk relative to a small enough number of current lives at risk can provide sufficient reason to prioritize the future lives, even if we agree that one current life trumps one future life. Suppose that there is an asteroid headed for impact with the Earth and it must be destroyed right away if we are to avoid a future collision. It is 500 years away and all current

¹⁷ Assuming that the current person and future person have similar life expectancies, and not taking into account quality of life considerations (quality of life is taken up below).

¹⁸ By era I mean the generation that one is born into (e.g., the current generation, or 50 years from now, or 500 years from now).

people will be dead by the time it arrives. If it reaches the Earth it will destroy all human life. In order to avoid this catastrophe, current people must send 1,000 people to blow up the asteroid and prevent it from colliding with the Earth (killing 1,000 current people in the process). As a result, all future generations will have been saved. This asteroid thought experiment provides an instance where moral intuition suggests that it would be ethically correct to sacrifice the lives of 1,000 current people to preserve posterity. Still, there are difficult ethical problems inherent in sacrificing current people for the sake of future people. *How many* future lives outweigh the value of one current life? How do we decide which particular current people should be sacrificed? It is unclear how to best answer these questions.

There is at least one plausible scenario in which we avoid both of these problems. A group of 1,000 people may individually volunteer to sacrifice themselves and blow up the asteroid. In such an instance we have not concluded that posterity is more valuable than 1,000 current lives nor have we chosen and forced any specific people to sacrifice their lives.

V. Current Lives and the Quality of Life of Future People

Suppose that allowing some current people to live means sacrificing the quality of life for a huge number of future people. For instance, returning to the developing nation thought experiment, suppose that the costs of the developing nation's industrialization (beyond the loss of some future lives) include that (1) many future generations will have less clean air, (2) some endangered animal species and forests will be destroyed, (3) there will be more dangerous extreme weather events and (4) people living in coastal areas will need to relocate due to flooding caused by rising sea levels. How should we weigh the loss of current lives against quality of life costs to future generations? It seems morally problematic that potentially billions of future people should experience substantial losses in quality of life due to environmental degradation in exchange for preserving a relatively small amount of current lives. Yet, it is unclear how many current lives should be sacrificed in exchange for the quality of life interests of future people. It is also unclear how severe those losses of quality of life must be, and how many future people must experience them, in order to justify sacrificing current lives. This is partly because it is unclear how to value a current *life* relative to the *quality of life* of other people, current or future. Furthermore, it is unclear how to value a future *life* relative to the *quality of life* of other people, current or future. Put more generally, it is unclear how to value one person's *life* relative to the *quality of life* of other people.

One possible solution that avoids this problem consists in increasing the level of moral concern of developed nations regarding (1) preserving

the lives of current people across the world and (2) increasing the welfare of future people, such that they make greater strides towards addressing both issues. Consider that we currently have the ability to provide sufficient food to ten billion people.¹⁹ It is possible to increase our efforts towards providing access to food and healthcare for all current people while simultaneously reducing the level of global pollution so that future people can have a cleaner environment. At the same time, this might yield a decrease in the quality of life for current people. It will likely entail consuming much less oil and experiencing an increase in the cost of basic goods, among other sacrifices. Yet, perhaps by increasing moral concern about preserving the lives of current people and improving environmental conditions for future people, the pleasure derived from creating solutions to these issues can offset the loss of quality of life for current people. Or, perhaps an increase in moral concern will cause current people to voluntarily sacrifice some of their quality of life. It is plausible that through increased public awareness of (1) the suffering of many current people across the world and (2) the impending environmental degradation due to pollution, that developed nations will take greater steps towards avoiding having to choose between saving a current life and sacrificing the quality of life of future people. This is an optimistic expectation, given that tremendous effort has already been invested into increasing public awareness of these realities. But without a significant increase in the level of moral concern, it seems that we cannot avoid having to make difficult decisions between prioritizing current lives and the quality of life of future people. It is unclear by what metric, if any, we can objectively compare life and quality of life, for they seem to be two separate and irreconcilable moral categories.

VI. Discounting

I have defined “quality of life” to include things like having relatively clean air, enjoying the existence of currently endangered animal species and forests, and living near coasts. To the extent that access to a basic level of quality of life, consisting of these conveniences and others, is a right, there are two opposing ways to address how we should value current people’s quality of life against future people’s quality of life: (1) All people, current and future, should have equal rights (and, therefore, access to equal qualities of life) and (2) Future people’s rights should be discounted (thus, future people are not entitled to access to an equal quality of life).²⁰

¹⁹ Sagoff, Mark. “Do We Consume Too Much?” *The Economy of the Earth*. Second Edition. Cambridge University Press, 2008: 119.

²⁰ I focus here on these two arguments as a way to understand how to compare the quality of life interests of current people against the quality of life interests of future people. This

I begin by exploring what is meant by “equal rights” for future people and “discounted rights” for future people. The former entails that certain rights of future people and current people should be weighed equally. The obligations that current people have to respect each other’s rights extend to all future people as well. Though there is great dispute about the content of the rights of current people, as evidenced in part by observing that rights across the world can vary, it seems one can say, at a minimum, that a belief in equal rights for future people implies consistency across time. Whatever rights governments delineate for their current citizens should also apply to all future citizens. Opposing this view is the position that the rights of future people should be “discounted.” Discounting the rights of future people implies that, in cases of conflict, preference is given to the rights of current people over the rights of future people. This is vague, since we have not clarified to what extent we should diminish the rights of future people nor have we stated whether *all* future people’s rights should be equally reduced (for instance, we might reduce the rights of very distant future people more than we reduce the rights of temporally nearer future people). I will focus here on the general question of whether or not we should discount future rights.

This discussion focuses on the *rights* of future and current people. This is an implication of discussions about determining the future value of goods. In such discussions a monetary value is assigned to all goods and it is assumed that all goods are, in principle, able to be compensated for.²¹ By “goods” I mean virtually anything that humans value: e.g., a clean environment, health care, education, peace of mind, and so on. Hence, for the purposes of this discussion, quality of life is conceived of as a bundle of goods. Discussions of the future value of goods take place within the context of cost-benefit analyses. Such analyses might ask: How does the *future* benefit of having a clean environment compare to the *current* cost of reducing greenhouse emissions? This is where discounting comes into play. If we discount the value of future goods at a compounding annual rate,

assumes that quality of life is a right. However, there are other ways to approach the quality of life problem. For one, we might believe that access to a basic level of quality of life (at least insofar as I have described it) is not a right. Secondly, we might hold that all current people should not have equal rights, nor should all future people. Thirdly, we might believe that future people do not have any rights. Each of these viewpoints implies wrestling with the quality of life problem from a different set of premises. However, each can still benefit from our discussion about whether or not future quality of life can be discounted, assuming that there is still some desire to find an ethical way to balance the quality of life interests of current people and future people.

21 O’Neill, John. “The Constituency of Environmental Policy.” *Ecology, Policy, and Politics: Human Well-being and the Natural World*. London: Routledge, 1993: 58. Web. 16 June 2014.

then the farther we look into the future, the less valuable a future good is.²² Consider that Stern argues for a 1.4% discount rate while Nordhaus argues for a 6% discount rate.²³ By Stern's discount rate, having \$247 billion today is equally valuable to having \$1 trillion one hundred years from now; by Nordhaus's discount rate, having \$2.5 billion today is equally valuable to having \$1 trillion one hundred years from now. Stern concludes that \$500 billion should be invested today (and 1% of total world production should be invested in perpetuity) in order to reduce greenhouse emissions. Nordhaus, by comparison, reasons that we are not compelled to incur such large costs to reduce greenhouse gases. Thus, we might say that Stern thinks that the well-being of future people is more valuable to us than does Nordhaus.²⁴ If we consider goods like having clean air, health care, education, peace of mind, and so on, to be rights, as at least some countries have, then discounting them is in effect discounting the rights of future people. Hence, in many cases discussions about discounting the value of future goods are *de facto* discussions about the rights of future people.

Arguments for equal rights of future citizens must therefore show that the value of future goods should not be discounted. In total, they must show more than this—they must also show why future citizens should have the same rights as current citizens. But if they can show that future goods should not be discounted then they have fended off a serious threat to their argument. I will now take up several reasons given for why future goods should not be discounted.

To start, a basic problem with discounting future goods is that not all goods are interchangeable.²⁵ If a good cannot be compensated for then there is no way to measure (nor discount) its value. For instance, there does not

22 It may be objected that plenty of goods (e.g., antiques, artwork, gems and artifacts) may rise in value over time, which would seemingly contradict the assumption that "the farther we look into the future, the less valuable a future good is." But any particular good that *changes* in value over time is a *different* good at various points in time. For instance, suppose that the value of a Michael Jordan rookie basketball card *during his rookie year* was \$5. Now, *several decades later*, after Jordan solidified his reputation as a great basketball player, it is worth, say, \$500. This is two different goods. It is (1) a rookie basketball player's trading card (from the perspective of people existing during his rookie year) and (2) a vintage basketball card portraying the rookie season of one of the greatest basketball players of all time (from the perspective of current people). In this paper, I assume that we are comparing *qualitatively identical* goods from the unique perspectives of current people and future people. E.g., we would compare the value of a rookie basketball player's trading card in the present and in the future. Similarly, when we conceive of access to clean air as a good, we mean that current people and future people should expect to enjoy equal access to the same quality of clean air.

23 Broome, John. "The Ethics of Climate Change." *Scientific American* (2008): 70. Web. 16 June 2014.

24 *Ibid.*, p. 70.

25 O'Neill, John. "The Constituency of Environmental Policy." *Ecology, Policy, and Politics: Human Well-being and the Natural World*. London: Routledge, 1993: 58.

seem to be a substitute for clean air. It may be objected that a substitute will likely be invented if we run out of clean air, but this assumption speculates that there *will be* a substitute, not that there currently is one. Until that substitute exists, there is nothing that can compensate for the loss of clean air, and therefore the value of clean air cannot be discounted. Other human values, like freedom from being enslaved, also seem to be incommensurable with other goods. This means that there are at least some future goods that are not discountable since their value cannot be quantified in terms of other goods. So, at a minimum, goods that do not have substitutes cannot have their future value discounted.

Moreover, arguments for discounting make several problematic assumptions. First, it is assumed that future people will be wealthier than current people.²⁶ This implies, using a utilitarian calculus with diminishing marginal returns,²⁷ that the marginal utility derived from an identical unit of wealth is relatively smaller for future people than it is for current people.²⁸ This assumption may prove faulty if we run out of non-renewable resources or if climate change results in catastrophe.²⁹ There are plausible future scenarios in which future people are much poorer than current people. If this is so then future people will derive *greater* marginal utility from an identical unit of wealth than current people. If such conditions were to materialize, they would undermine one of the main justifications for discounting.³⁰

Second, it is assumed that people always prefer current benefits to future benefits (the argument from pure time preference).³¹ Yet, there are instances in which this is not true. Consider my brief and incomplete recapitulation of O'Neill's honeymoon thought experiment.³² Imagine that a couple is taking a two week honeymoon. The honeymoon can go two different ways: (A) The couple is miserable at first as they discover many undesirable qualities in each other. They resolve their differences by day nine, develop an appreciation for each other, and the honeymoon ends happily. On the return flight home their plane crashes and they die. Or: (B) They have an excellent initial twelve days of their honeymoon. On the thirteenth day their relationship completely falls apart and they find many qualities in themselves and their spouse that they resent. They end the honeymoon in spiteful conflict. On the return flight home their plane crashes and they die. It is not

26 *Ibid.*, p. 52.

27 Broome, John. "The Ethics of Climate Change." *Scientific American* (2008): 71.

28 O'Neill, John. "The Constituency of Environmental Policy." *Ecology, Policy, and Politics: Human Well-being and the Natural World*. London: Routledge, 1993: 51.

29 *Ibid.*, p. 52.

30 Broome, John. "The Ethics of Climate Change." *Scientific American* (2008): 71.

31 O'Neill, John. "The Constituency of Environmental Policy." *Ecology, Policy, and Politics: Human Well-being and the Natural World*. London: Routledge, 1993: 52.

32 *Ibid.*, p. 54.

obvious that (B) is what people would choose, although proponents of pure time preference seem obligated to say that it is the preferable outcome. In fact, it seems that many people would prefer scenario (A) in which benefits are deferred into the future. Thus, the first takeaway from O'Neill's thought experiment is that since there are scenarios in which we do not prefer present benefits to future benefits, we cannot automatically discount future benefits. The larger takeaway is that, without knowing the "narrative order" of the events of our lives, we cannot ascertain whether we prefer benefits in the present or in the future. Since we cannot know this narrative order beforehand, this is problematic for attempts to discount future benefits.

Third, it is assumed that there is some epistemic uncertainty about the existence of future people and the preferences of future people. Proponents of discounting reason that future people's goods should be discounted because we are sure that current people exist while there are possible scenarios in which future people will not exist. Yet, it seems highly plausible that if current people act as they always have, then future people will exist. Furthermore, while it is true that we cannot know all of the preferences of future people, there are preferences of future people that we do know. For instance, "one can assume that toxic materials will be harmful and that they will need sources of energy, food and basic raw materials."³³ Yet, it is morally relevant that (1) current people exist and (2) it is highly probable that future people will exist. It is reasonable to assume that there is a very slight possibility that future people will not exist and that we might not know what their preferences are.³⁴ However, the slightness of this possibility does not give strong reason to discount the goods of future people, since, first, if we act properly, we can ensure that future people do exist, and, second, there are specific interests of future people that we are capable of accurately predicting.

Though these critiques of discounting are cogent and pose problems for it, they do not amount to a logical framework sufficient to displace it. They only indicate that if discounting's assumptions are false then it does not apply. Since there are plausible scenarios in which the premises of discounting can turn out to be correct—instances where (1) the good in question is interchangeable (e.g., a substitute for having access clean air is invented), (2) future people prove to be wealthier than current people (e.g., they do not run out of non-renewable resources, or there are substitutes invented that replace the non-renewable resources, and there is not a catastrophic event), and (3) current people, upon later reflection, will have preferred current benefits to future benefits—there are plausible scenarios

³³ *Ibid.*, p. 50.

³⁴ See section 3 for a fuller discussion of the epistemic uncertainty of the existence of future people and of our ability to accurately predict their preferences.

in which discounting may be cogently employed. Though these scenarios involve some conditions that cannot be known until after the fact, such as that future people will have proven to be wealthier than current people and that current benefits will have proven to be preferable to future benefits, we can assign probabilities to these outcomes. Furthermore, if the good in question (such as having access to clean air) is not presently interchangeable, but, in principle, a substitute could be invented for it, and therefore could become interchangeable in the future, we can also assign a probability to the likelihood that a substitute will be invented. Thus, in many possible scenarios, discounting has at least a probability of being correct, since its assumptions have a probability of being correct. Identifying the potentially flawed assumptions of discounting is a worthwhile effort. It suggests that there are some goods that cannot be discounted (goods that have no possibility of being interchangeable, such as freedom from slavery) and that, for goods that probably can be discounted, we should factor into our analysis the probability that the assumptions of discounting are false. But this is not enough to establish that future people have equal rights. Even if a good (that is considered a right) cannot be discounted, we still must show that future people's rights are equal to current people's rights.

Thus, in an effort to construct a theory of "intergenerational justice" in which future people have equal rights, Brian Barry understands fundamental equality of humans across time to be "*prima facie* valid." Barry writes, "I do not know of any way of providing a justification for the premise of fundamental equality; its status is that of an axiom."³⁵ But this overlooks the case that John Rawls makes for fundamental equality. If, as Rawls argues, it is true that from behind the veil of ignorance it is rational for hypothetical impartial parties to agree that all current people deserve certain basic equal rights, then we have offered at least some justification for a minimal level of fundamental equality.³⁶ The problem is with justifying fundamental equality *for posterity*. For it is not obviously rational for current people, from behind the veil of ignorance, to hold that future people have *any* rights. Rawls sums up this worry in this way: "Since the persons in the original position know that they are contemporaries...they can favor their generation by refusing to make any sacrifices at all for their successors; they simply acknowledge the principle that no one has a duty to save for posterity."³⁷ In an attempt to work around this problem, Rawls offers the following way to justify obligations to future generations: "We can adopt a motivation assumption and think of the parties as representing a continuing line of claims. For example, we can

35 Barry, Brian. "Sustainability and Intergenerational Justice." *Environmental Ethics: An Anthology*: 489.

36 Rawls, John. *A Theory of Justice*. Cambridge: Harvard University Press, 1999: 118-139

37 *Ibid.*, p. 121.

assume they are heads of families and therefore have a desire to further the well-being of at least their more immediate descendants.”³⁸ However, though it is true that the egoistic interests of current people (such as an interest in legacy) might cause current people to act in accordance with specific interests of future people, this fails to provide an argument that future people should have equal rights. On the contrary, this supports the notion that current people’s rights are primary and that the preservation of the interests of future people are contingent upon their concurrence with the interests of current people.

Barry aims to incorporate rationality into intergenerational justice in a different way, asserting, “I believe that the core idea of universalism—that place and time do not provide a morally relevant basis on which to differentiate the weight to be given to the interests of different people—has an immense rational appeal. Its corollaries—the illegitimacy of slavery and the impermissibility of assigning women an inferior legal status, for example—have been acted on for the past two centuries in a significant part of the world.”³⁹ But the wrongness of slavery and sexism also follow from the more basic idea that *current* people are fundamentally equal, which only requires universalism across space. If our reason for accepting universalism is that we agree with these corollaries, we are inclined to accept only the more basic and agreeable tenet that current people are fundamentally equal and avoid inheriting the problems attendant to a belief in intergenerational equality. Put another way, if we remove the reference to “time” from Barry’s statement it retains the exact same moral force. In short: It seems that claims that posterity has equal rights are more difficult to justify than claims that only current people have equal rights and therefore are probably too strong.

If future people do not have equal rights, we still might have reason to strongly value at least some of their rights. For instance, suppose that having access to clean air is a right. Since there are, in principle, ways to substitute for clean air, such as by artificially cleaning the air, we can discount having access to clean air. Our level of optimism that we will invent a way to substitute for clean air will affect how much we discount having access to clean air. If we think there is a low probability that a substitute for clean air will be invented soon, then at most we should only slightly discount the right of temporally proximate future generations to have access to clean air. Of course, there are other factors that will impact our discounting procedure as well, such as how optimistic we are that future people will be wealthier than current people and how much wealthier we think that they will be. The point is that future people do not need to have equal rights in order for

38 *Ibid.*, p. 111.

39 Barry, Brian. “Sustainability and Intergenerational Justice.” *Environmental Ethics: An Anthology*: 490.

us to strongly respect at least some of their rights. This seems to be a more reasonable approach than assuming that equal rights exist across current and future generations, while still giving substantial weight to at least some of the rights of future generations.

VII. Closing: Terrorism and Oil Fields Thought Experiment

Concerns over preserving the environment often involve balancing each of the four following values: (1) saving a current life, (2) saving a future life, (3) preserving the quality of life of current people, and (4) providing some basic level of quality of life of future people. In this paper, I have attempted to flesh out some important moral concerns arising from the interplay of these four categories. First, I have argued that in situations where we must choose to save (1) a current life or (2) a future life, the current life should be prioritized. When we know additional morally relevant facts about the current life and/or future life beyond era, such as age and our personal relationship to the lives at stake, weighing all of these factors together could produce strong reasons to prioritize either the current life or the future life. When there is a sufficiently large number of future lives at stake, moral intuition suggests that they should be prioritized over a sufficiently small number of current lives at stake, though it is unclear at what precise quantities of future lives and current lives this becomes true and how to determine which particular current lives should be sacrificed. Second, I have observed that there seems to be something fundamentally problematic about comparing the value of a life, whether (1) current or (2) future, against quality of life, whether (3) current or (4) future, on the grounds that one person's life seemingly belongs to a separate and irreconcilable moral category than another person's quality of life. Still, moral intuition suggests that there is a point at which a severe enough decrease in the quality of life of future people outweighs the value of saving the lives of a sufficiently small number of current people. Third, I have attempted to show that, when (3) the quality of life of current people conflicts with (4) the quality of life of future people, in many cases we have reasons to discount the quality of life of future people. However, there are plausible scenarios in which we should only discount the quality of life of future people very slightly.

We should expect to experience situations that require us to make these types of moral judgements and to have to weigh their consequences together. For instance, consider the following thought experiment. Suppose: (1) A terrorist organization derives its wealth primarily from its control over oil fields. (2) It uses this wealth to buy weapons. (3) It has utilized and depleted its current stash of weapons. (4) There is reliable intelligence suggesting that it is planning to kill several hundred current people as soon

as it obtains more funds to buy the weapons necessary to carry out the attack. (5) The U.S. and several of its allies would like to prevent this attack. (6) The surest way to stop the attack is to prevent the terrorist group from obtaining weapons, and the only way to prevent it from obtaining weapons is to eliminate its primary sources of wealth, which means destroying the oil fields it controls.⁴⁰ (7) Climate scientists have predicted that destroying these oil fields would generate significant pollution that would eventually result in several hundred temporally proximate future people dying, as well cause minor decreases in the quality of life of current people and slightly larger decreases in the quality of life of future people. (8) We have good reason to believe that destroying these oil fields will not generate any *additional* blowback. I.e., destroying these oil fields will not contribute to the creation of new terrorist groups nor will it inspire new terrorist activities that otherwise would not have happened. (9) Current people are aware of this looming terrorist attack, creating psychological stress and anxiety, which negatively impacts their quality of life.

In such a situation, current lives, future lives, the quality of life for current people, and the quality of life for future people are all at stake. Should we destroy the oil fields? The benefits include (1) saving several hundred current lives and (2) improving the quality of life of current people by alleviating their fear of a terrorist attack. The costs include (1) sacrificing several hundred future lives, (2) incurring quality of life losses for future people due to pollution, and (3) incurring quality of life losses for current people due to pollution. On the other hand, should we not destroy the oil fields? The benefits include (1) saving several hundred future lives, (2) sparing quality of life losses for future people due to pollution, and (3) sparing quality of life losses for current people due to pollution. The costs include (1) sacrificing several hundred current lives and (2) incurring quality of life losses for current people due to their fear of a terrorist attack.

Suppose that the only things we know about the current and future

⁴⁰ This assumption can be objected to in a number of ways. For example, we can imagine scenarios in which it would not be necessary to destroy the terrorist group's oil fields. The U.S. and its allies could impose economic sanctions against anyone who trades with the terrorist group. If these economic sanctions prevent anyone from trading with it, then it will not obtain wealth from its oil fields. However, it is not clear that economic sanctions would prove efficacious. For one, oil is an important commodity for many nations. If the terrorist organization is selling oil at a competitive price, groups might find ways to covertly buy its oil. They also they might be willing to endure economic sanctions, depending on their severity. Furthermore, it is not clear that the enactment of sufficiently severe economic sanctions is possible, since this would likely require a level of agreement among powerful nations with competing interests that may not be politically achievable. For the immediate purposes of this thought experiment, let us assume that we must destroy the oil fields in order to stop the terrorist group from obtaining wealth.

lives at stake are (1) the era to which they belong and (2) that there are as many current lives as future lives at risk. This factor suggests, if considered in isolation, that we should prioritize saving the current lives, and therefore that we should destroy the oil fields. However, this factor must be weighted together with quality of life considerations. Suppose that whether or not we destroy the oil fields, current people's quality of life remains relatively constant (either they suffer from the pollution resulting from destroying the oil fields or they suffer from living in fear of the impending terrorist attack). By contrast, if we destroy the oil fields, future people's quality of life will suffer more than if we do not. Supposing that future people's quality of life considerations at stake here can be discounted, even after discounting them, this is a substantive factor. Since current people's quality of life remains constant no matter which option we choose, this factor suggests that we should prioritize preserving the discounted quality of future lives and that we should not destroy the oil fields.

We must therefore weigh (1) prioritizing the lives of current people over the lives of future people against (2) protecting future people's quality of life. Problematically, these categories seem to be morally irreconcilable. There is no uncontroversial answer. I suggest that, in this particular case, because the isolated act of destroying these oil fields will cause only relatively minor decreases to future people's quality of life, we should weigh (1) more strongly than (2). Therefore we should destroy the oil fields. But it is conceivable that in a different scenario, which is identical in every aspect except that now there will be an enormous amount of damage done to the quality of future lives, we should not destroy the fields.

Of course, in reality, there are many more complicating factors. For example, choosing to not destroy the oil fields does not preclude us from other courses of action to prevent the terrorist attack, such as attempting to cut off funds generated by the oil fields through economic sanctions or temporarily increasing security measures to protect current people. Even if these preventative methods are less likely to succeed than destroying the oil fields, their probability of success still matters, and factors into the decision. Furthermore, in reality, the details of any given scenario will probably not be as concrete. For example, we would probably have only rough estimates of how many current people would die from the terrorist attack and how many future people would die from the pollution that results from this particular act of destroying the oil fields. It is also unlikely that these estimates would amount to a one-to-one tradeoff of current lives and future lives. Nonetheless, it is still worthwhile to try to understand and develop our moral reasoning through these sorts of oversimplified thought experiments in order to ensure that we have not overlooked important ethical considerations and to test the logical strength of our currently held moral beliefs.