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Chapter II: Our Common Inheritance

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# Chapter II: Against the Alternatives to the Common-Inheritance Idea

Around the turn of the 20th century, economically valuable metals were discovered in the Grand Canyon, and the government of the Arizona Territory had to decide whether to allow their mining or not. I take it that, despite the relative poverty of the early 20th century Americans, mining this awe-inspiring part of the natural world would have been impermissible. However, had similarly valuable metals been discovered in a far less majestic and ecologically unremarkable small canyon, I take it that its mining by the relatively poor early 20th century Americans would have been permissible.

These two cases present frameworks of environmental justice – the area of justice concerned with the relationship between human beings and the natural world – with a quandary that I call the Canyon Dilemma. To condemn the Grand Canyon's mining, frameworks of environmental justice must explain why economic benefits, even for relatively disadvantaged people, cannot justify destruction of very valuable parts of the natural world (e.g., the Grand Canyon). However, the protections granted to the natural world cannot be so robust so as to always privilege the continued existence of valuable parts of the natural world (e.g., the small canyon) over the economic well-being of human beings, especially when they are disadvantaged

relative to future people. I shall argue in this chapter that not one of several prominent frameworks of environmental justice, including prominent forms of egalitarianism, welfarism, communitarianism, and liberalism, can navigate this seemingly simple dilemma.

In the final section, I shall argue that a key reason none of these frameworks can navigate the Canyon Dilemma is their rejection of the idea that the natural world is the common inheritance of humankind – something to which both current *and future people* have rights, not merely as an instrument for satisfying basic needs, but as a resource with which to pursue life plans more generally. In defending the promise of this common-inheritance idea, I set the stage for the next chapter (Chapter III) in which I make the case for a novel framework of environmental justice that justifies treating the natural world as humanity's common inheritance. I shall argue in Chapter III that, unlike the frameworks of environmental justice examined in this piece, the novel framework introduced in Chapter III can navigate the Canyon Dilemma,

# 1. The Canyon Dilemma

Consider the following case (loosely based on a real-world quandary faced by the government of the Arizona Territory):[1]

> **Mining the Grand Canyon:** In 1900, Americans discover that the Grand Canyon holds large quantities of easily accessible metals worth $100 million.
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> The 1900ers[2] have a GDP per capita of $4,000.[3] It is impossible for them to borrow from future Americans and they cannot transform the existing physical capital stock into consumption.

[1] For further details, see Douglas Brinkley, *The Wilderness Warrior: Theodore Roosevelt and the Crusade for America* (Harper Collins, 2010), Ch. 19.
[2] I treat generations as monoliths merely as a simplification. I am not committed to the idea that generations as such are worthy of moral consideration independently from the individuals that comprise them.
[3] For the GDP figures, see Charles I. Jones, "The Facts of Economic Growth," *National Bureau of Economic Research Working Paper Series* No. 21142 (2015): 3.

> The mining would destroy the Grand Canyon's scenic beauty, which would otherwise last for 1,000 years. However, the resulting wealth would enable the 1900ers to moderately increase their advantage (welfare, freedom, capabilities, etc.) due to increased employment and increased government spending on social welfare programs.
>
> Whether or not the Grand Canyon is mined, the United States will enjoy a 1.5% economic growth rate in median income as well as a significant positive growth rate in median advantage for the next 1,000 years.
>
> The 1900ers mine the Grand Canyon.

To avoid issues extraneous to my core concerns, let us make a few additional assumptions:

1. There have never been Native Americans living in the area of the Grand Canyon.[4]
2. The Grand Canyon has no scientific value.
3. The United States is the only state.
4. Future people appear independently of the actions of current people.[5]
5. There are an identical number of individuals in every generation.

Even setting aside important considerations such as the moral claims of Native Americans, 1900ers' actions in this case seem to constitute a serious moral wrong – one that is based in large part on a violation of the 1900ers' obligation to protect the natural world. Indeed, it is this obligation that President Teddy Roosevelt appealed to in his impassioned speech against the proposed mining:

> In the Grand Canyon, Arizona has a natural wonder which, so far as I know, is in kind absolutely unparalleled throughout the rest of the world. I want to ask you to do one thing … Leave it as it is… [K]eep it for your children, your children's children, and for all who come after you… We have gotten past the stage, my fellow citizens, when we are to be pardoned if we treat any part of our country as something to be skinned for two or

[4] In fact, Native Americans have strong connections to the Grand Canyon. See, for example, Richard Stoffle, David Halmo, and Diane Austin, "Cultural Landscapes and Traditional Cultural Properties: A Southern Paiute View of the Grand Canyon and Colorado River," *American Indian Quarterly* 21, no. 2 (1997): 239-41.

[5] This assumption sets aside the special obligations that parents may have to their children as well as the non-identity problem, a discussion of which can be found in James Woodward, "The Non-Identity Problem," *Ethics* 96, no. 4 (1986).

> three years for the use of the present generation, whether it is the forest, the water, the scenery.[6]

I take it that Roosevelt was right in claiming that mining the Grand Canyon would have been impermissible. However, Roosevelt's claim that the destructive use of *any part* of America's scenery for short-term benefit is impermissible is far less convincing. Consider, for example, the following case:

> ***Mining the Small Canyon:*** The situation is identical to Mining the Grand Canyon except that the $100 million of metals are discovered in a far less majestic and ecologically unremarkable small canyon. The small canyon's modest scenic beauty would be destroyed by the mining and would otherwise have lasted for 1,000 years.

I take it that Mining the Small Canyon is permissible, especially given the relative poverty of the 1900ers and the predicted greater wealth and advantage of future people.

Taken together, this pair of cases present frameworks of environmental justice with a seemingly simple but surprisingly difficult challenge that I call the Canyon Dilemma.

> **The Canyon Dilemma*:*** An adequate framework of environmental justice should be able to:
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> a. Condemn the mining of the Grand Canyon (in the case described above and in similarly impermissible variations), and also
>
> b. Condone the mining of the small canyon (in the case above and in similarly permissible variations of the case)

[6] Theodore Roosevelt, *A Compilation of the Messages and Speeches of Theodore Roosevelt, 1901-1905*, vol. 1 (Bureau of National Literature and Art, 1906). The text of the speech is also available at: http://www.theodore-roosevelt.com/images/trenvpics/trgrandcanyonspeech.pdf (accessed December, 2016)

I now turn to considering whether prominent contemporary frameworks of environmental justice can navigate this dilemma.

## 2. Maximin, Sufficientarianism, and Egalitarianism

The Canyon Dilemma poses the greatest difficulty for frameworks of environmental justice that focus on achieving equality of advantage and/or ameliorating the plight of the disadvantaged.[7] Such frameworks often endorse some combination of the following commitments:

a) Maximin: A commitment to maximizing the advantage of the least advantaged

b) Sufficientarianism: A commitment to ensuring a minimum level of advantage for every individual (e.g., meeting basic needs)

c) Egalitarianism: A commitment to achieving equality of advantage across individuals

However, none of these commitments (alone or in combination with each other) can avoid the Grand Canyon horn of the Canyon Dilemma. Since the Grand Canyon's mining increases the advantage of the least advantaged, it is not only permissible but morally required by maximin. If we plausibly assume that the $100 million would satisfy unmet basic needs, mining the Grand Canyon would be required by sufficientarianism. And if we assume that the 1900ers' destruction of the Grand Canyon affects all future generations in roughly the same way, then

[7] This type of disadvantaged-focused approach is suggested by certain definitions of sustainable development that focus on the ability of all generations, present and future, to meet *their needs*. See, for example, Gru Brundtland et al., "Our Common Future " (United Nations, 1987), Sec. 3.27. For other frameworks that focus on the disadvantaged, see Chris Armstrong, "Natural Resources: The Demands of Equality," *Journal of Social Philosophy* 44, no. 4 (2013). See also Simon Caney, *On Cosmopolitanism: Equality, Ecology and the Transition to a Fairer World* (Oxford: Oxford University Press, Forthcoming). Armstrong and Caney's theories are admittedly more complex than the simplistic egalitarian frameworks considered here, and I cannot consider them fully. However, both frameworks may well face substantial difficulties in condemning the Grand Canyon's mining that are similar to the difficulties faced by the more simplistic egalitarian/sufficientarian frameworks considered here.

Mining the Grand Canyon would also unambiguously increase intergenerational equality of advantage and would therefore be morally required by egalitarianism as well.

The challenge posed by this case is not easy to evade. Egalitarians, for example, cannot avoid endorsing the Grand Canyon's mining by appealing to a prohibition against leveling down (i.e., achieving equality *solely* by making the better off less advantaged) since the mining increases the advantage of the 1900ers. Egalitarians also cannot avoid endorsing the Grand Canyon's mining by abandoning their commitment to equality of advantage in favor of equality *of opportunity* for advantage.[8] After all, the 1900ers are more disadvantaged than future generations *through no fault or choice of their own*. Their mining of the Grand Canyon thus unambiguously increases equality of opportunity for advantage and does so in a way that does not entail a simple levelling down.

## 3. Welfarism

A straightforward response to this problem is to insist that environmental justice should consider, not only equality of advantage and/or the plight of the disadvantaged, but also aggregate advantage. I cannot consider here the myriad frameworks of environmental justice that take some type of aggregate advantage (e.g., aggregate freedom or capabilities) into account. My focus instead will be on one particularly prominent set of frameworks in this category: welfarist frameworks.

[8] For a discussion, see Richard Arneson, "Equality and Equal Opportunity for Welfare," *Philosophical Studies* 56, no. 1 (1989). For an application of this type of principle to environmental justice problem, see Brian Barry, "Sustainability and Intergenerational Justice," in *Environmental Ethics*, ed. A Light and H Rolston (Malden, MA: Blackwell, 2003).

Welfarism holds that the just outcome is the one that maximizes some function of individual welfares and nothing else.[9] Welfarist frameworks of environmental justice, of which there are many examples,[10] come in many different forms based on how individual welfares determine social welfare. These include utilitarian, prioritarian, maximin, sufficientarian, and egalitarian versions (as well as many hybrids). The small subset of welfarist frameworks that focus *only* on equality of welfare, achieving a minimum level of welfare for everyone, or on improving the lot of the least well-off are subject to the objections raised in the previous section. My focus here will therefore be on welfarist frameworks that grant at least some weight to *aggregate welfare* (i.e., the weighted sum of individual welfares, where each individual's welfare is given a strictly positive weight).

In intertemporal contexts, frameworks that consider aggregate welfare must answer the following key question: How should future people's welfare be weighed relative to current people's welfare? *Non-discounting welfarists* place the same weight on present people's welfare and future people's welfare. *Discounting welfarists* place relatively less weight on (i.e., discount) the welfare of future people.

In the context of the Canyon Dilemma in which future people are assumed to be increasingly wealthier and better off than current people, there are four types of justifications for discounting the welfare of future people:

1) Justifications related to the fact that the welfare occurs *in the future*[11]

2) Egalitarian/prioritarian justifications based on the *greater welfare* of future people

[9] Amartya Sen, "Utilitarianism and Welfarism," *The Journal of Philosophy* 76, no. 9 (1979): 471-72.
[10] Examples include: Wilfred Beckerman and Joanna Pasek, *Justice, Posterity, and the Environment* (New York: Oxford University Press, 2001). Matthew D. Adler, "Future Generations: A Prioritarian View," *George Washington Law Review* 77 (2009). Nicholas H. Stern et al., *Stern Review: The Economics of Climate Change* (Cambridge: Cambridge University Press 2006).
[11] For an example of time discounting that appeals to legitimate partiality for nearer descendants, see Wilfred Beckerman and Cameron Hepburn, "Ethics of the Discount Rate in the Stern Review on the Economics of Climate Change," *World Economics* 8, no. 1 (2007).

3) Justifications related to the *greater wealth* of future people and the concomitant lower welfare that wealthier people may obtain from canyons

4) Justifications related to *risk or uncertainty* about the ability of humans to enjoy canyons in the future

For simplicity, I shall assume away risk/uncertainty. I shall also assume that the welfare that canyons generate for individuals is constant over time (i.e., independent of individuals' level of wealth). Thus, welfarist frameworks that do not discount at all or that only discount welfare for reasons in 3) and 4) will be classified non-discounting welfarist frameworks. These are the frameworks that I wish to consider first.

## 3.1 Non-Discounting Welfarism

Many forms of non-discounting welfarism are theoretically possible, and once again I cannot consider all the possibilities here. However, since forms of welfarism with any egalitarian or prioritarian component would discount the welfare of future people in the present context, and since purely maximin and sufficientarian forms of welfarism have already been dismissed, the only prominent form of non-discounting welfarism is non-time-discounting utilitarianism. This framework, which will be my focus here, endorses the policy that maximizes the sum of individual welfares, granting each person's welfare *the same* weight, regardless of when the person exists and regardless of how much total welfare she enjoys.

Non-time-discounting utilitarianism can easily condemn Mining the Grand Canyon by appealing to its effects on the welfare of future people. After all, the welfare that all future people will obtain from the Grand Canyon for 1,000 years clearly outweighs the welfare that the 1900ers could obtain from the $100 million of mining wealth.

However, non-time-discounting utilitarianism cannot avoid the small canyon horn of the Canyon Dilemma. To see why, let us specify that the yearly welfare future people would obtain from the scenic beauty of the unmined small canyon is *just barely* over 1/1,000$^{th}$ of the welfare the poor 1900ers could obtain from $100 million of mining wealth. I submit that Mining the Small Canyon is permissible in this case. Insisting that the relatively poor 1900ers forbear from accessing the metallurgical wealth of the small canyon merely because a very large succession of increasingly well-off and wealthy future Americans will derive a small amount of welfare from the small canyon's modest scenic beauty seems to fail to take the plight of the poor 1900ers seriously enough. Yet non-time-discounting utilitarianism would implausibly forbid the1900ers from mining the small canyon in this case.

Some non-time-discounting utilitarians might be tempted to simply bite this bullet. However, the intuitive problem for non-time-discounting utilitarianism can be strengthened in at least two ways. First, we can assume that, even if the 1900ers' mine the small canyon, future people will have access to greater natural wealth than do the1900ers (e.g., due to serendipitously discovered oil reserves, underwater reefs, etc.). The prohibition on mining of the small canyon seems even more intuitively problematic in this case. Yet as long as future people's additional natural wealth does not affect the welfare that they obtain from the small canyon, non-time-discounting utilitarianism would nevertheless its mining. (I will return below to the question of why the assumption of increased natural wealth might plausibly affect our judgment of permissibility in this case.)

A second way of making the intuitive problem for non-discounting utilitarianism more severe is by assuming that the 1900ers face *absolutely desperate poverty* (e.g., mass starvation). Yet if we also correspondingly sufficiently increase the number of generations of increasing

wealthy and well-off future people who would derive a small amount of welfare from the small canyon's scenic beauty, non-discounting utilitarianism would nevertheless forbid the 1900ers from mining the small canyon. This prohibition seems particularly implausible.

## 3.2 Discounting Welfarism

Faced with these problems, welfarists might turn to discounting welfarism. By discounting the welfare of increasingly well-off future people for either time-based or egalitarian/prioritarian reasons, discounting welfarists can permit the 1900ers to mine the small canyon. Moreover, discounting welfarism can still condemn Mining the Grand Canyon by appealing to the lost welfare of future people. Yet discounting welfarism cannot navigate the Canyon Dilemma, either. As I shall argue in this section, discounting welfarism cannot condemn the Grand Canyon's mining in cases in which the mining's benefits are realized immediately while the resulting destruction is substantially delayed.

Before developing this criticism in greater detail, I first wish to explain its importance. Discounting welfarism has admittedly already been subjected to a similar but more intuitively devastating criticism: the *environmental time bomb objection*.[12] The objection is that discounting welfarism seems implausibly committed to condoning activities that will cause *catastrophic* damage to the environment in the very distant future just as long as these activities produce a very modest benefits today. Since the endorsement of environmental time bomb policies constitutes a much more powerful objection than an endorsement of a delayed-

[12] For a discussion, see Avner de-Shalit, *Why Posterity Matters: Environmental Policy and Future Generations* (New York: Routledge, 1995), 6-9.

destruction variation of Mining the Grand Canyon, some readers may question the value of considering such a case.

However, delayed-destruction variations of Mining the Grand Canyon are well worth considering because they challenge a much wider set of discounting welfarist frameworks than environmental time bomb cases. Although welfarist theories that discount future welfare only (or almost exclusively) for time-based reasons are vulnerable to the environmental time bomb objection, any form of discounting welfarism with a substantial prioritarian/egalitarian component is not vulnerable to it.[13] After all, the environmental time bomb will presumably make future people substantially *worse off* than current people. And so a *negative* prioritarian/egalitarian discount rate (which magnifies rather than shrinks the moral weight of the environmental time bomb's welfarist consequences) would be appropriate. Thus, discounting welfarist frameworks with significant prioritarian/egalitarian components can easily condemn environmental time bomb policies.[14]

However, an appeal to prioritarian/egalitarian considerations cannot rescue discounting welfarism from the intuitive problem posed by delayed-destruction variations of Mining the Grand Canyon. After all, while the destruction of the Grand Canyon would no doubt constitute a very significant loss for future people, it is easy to imagine that future people will nevertheless be better-off than the 1900ers overall. If so, then a positive egalitarian/prioritarian discount rate would continue to be appropriate, and the intuitive problem of condoning an unpalatable destruction of the natural world would remain.

Let us consider, then, the following variation of Mining the Grand Canyon:

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[13] Certain utilitarian frameworks may not vulnerable to this objection, either. For a discussion, see Marc Fleurbaey and Stéphane Zuber, "Climate Policies Deserve a Negative Discount Rate," *Chi. J. Int'l L.* 13 (2012): 578-81.

[14] Indeed, even *a risk* of a disastrous consequence can sometimes justify a negative discount rate within certain prioritarian frameworks. See ibid., 586.

> ***Delayed-Destruction Mining the Grand Canyon****:* This case is similar to Mining the Grand Canyon except that the 1900ers have a mining technique that allows them to extract metals from the Grand Canyon without causing any immediate damage to it. However, the mining technique will unavoidably cause the Grand Canyon to be destroyed in 200 years (i.e., in the year 2100) where the Grand Canyon would have otherwise lasted for 1,000 years.
>
> The 1900ers delayed-destruction mine the Grand Canyon.

Delayed-Destruction Mining the Grand Canyon is, I submit, impermissible. The somewhat smaller number of individuals who lose the opportunity to enjoy the Grand Canyon, and the somewhat greater average wealth and welfare of those affected do make the Grand Canyon's destruction easier to countenance. However, these factors seem insufficient to justify the destruction of the Grand Canyon for a mere $100 million of wealth for the 1900ers.

Yet many forms of discounting welfarism would condone the mining in this case. Take, for example, a form of discounting welfarism with a fairly modest annual discount rate of 1.5% (equal to the growth in median income). In order for such a framework to condemn Delayed-Destruction Mining the Grand Canyon, the Grand Canyon would have to generate welfare equal to *at least 30%* of the welfare that the relatively poor 1900ers could have obtained from the Grand Canyon's mining wealth *every year from 2101 to 2900*.[15] Although the Grand Canyon is an awe-inspiring natural wonder, it seems difficult to believe that it could generate this amount of human welfare *annually*.

The problem for discounting welfarism becomes even more severe if we assume a longer delay between the mining and the destruction. Imagine, for example, that mining in 1900 will only cause the Grand Canyon's destruction in the year 2400 (rather than 2100) but that the total

[15] Let X be the welfare that the 1900ers receive from mining the Grand Canyon and 0.29X be the yearly welfare from mining the Grand Canyon. The present discounted value of keeping the Grand Canyon intact would be $\sum_{t=201}^{1000}(\frac{0.29X}{1.015^t})$= 0.98X or just barely less than the welfarist value (X) of mining it.

number of years of Grand Canyon enjoyment lost due to the mining remains the same (i.e., if left unmined the Grand Canyon will remain intact until the year 3200 rather than 2900). In this long-delayed-destruction variation of the case, a welfarist framework with even a modest discount rate of 1.5% would be implausibly committed to permitting the Grand Canyon's destruction *for a pittance*.[16]

Long-delayed-destruction mining variations pose a particularly severe intuitive problem for discounting welfarist frameworks with a significant time-discounting component. Discounting welfarists with an *exclusively* prioritarian/egalitarian discount rate can at least appeal to the incredibly high wealth and welfare of the affected future people in long-delayed-destruction cases to justify the Grand Canyon's mining. And, though I deny that this justifies permitting the Grand Canyon's destruction *for a pittance*, it does admittedly make the long-delayed-destruction mining easier to countenance. However, discounting welfarists who endorse significant time-based discounting cannot even rely on this (somewhat plausible but ultimately inadequate) justification. After all, we can vary the case so that the welfare and wealth of future people is constant over time. Any discounting welfarist framework with a significant time-based discount rate would be implausibly committed to condoning the Grand Canyon's long-delayed-destruction mining for a pittance, even when future people are no better off than the 1900ers.

Some discounting welfarists might attempt to avoid these problems by endorsing a discounting welfarist framework without time-based discounting and with low egalitarian/prioritarian discount rates (e.g., lower than 1.5%). Such frameworks may indeed be

[16] Let us assume now that Y is the welfare that the Grand Canyon is responsible for generating *annually*. The mining wealth would *only* need to produce a welfare of $\sum_{t=501}^{1300}(\frac{Y}{1.015^t})$=0.04Y for the mining to be justified. It is not an exaggeration to call the amount of wealth needed to generate this low amount of welfare "a pittance" given the destruction that it justifies.

able to protect the Grand Canyon. However, they are vulnerable to the small canyon horn of the Canyon Dilemma.

To see why, consider the following variation of Mining the Small Canyon:

> ***Mining the Small Canyon with Welfare Plateau:*** This case is similar to Mining the Small Canyon with the following two exceptions:
>
> - Future people's welfare plateaus in the year 2000.
>
> - The small canyon has a yearly welfarist value of 1/150$^{th}$ of the welfare that the 1900ers can obtain from $100 million of wealth.

I take it that mining the small canyon is permissible, even when future people's welfare plateaus in this way. Although distant future people are not *fabulously* well-off and although the small canyon generates somewhat greater welfare in this case, the relatively small amount of yearly welfare that future people would obtain from the unmined small canyon for 1,000 years nevertheless does not seem to justify insisting that the small canyon be kept intact in the face of the 1900ers' poverty, especially given future people's assumed access to greater human-made and natural wealth.

Yet discounting welfarism with a low prioritarian/egalitarian discount rate of less than 1.5% would forbid this mining. Since future people's welfare plateaus in the year 2000, no further discounting on prioritarian/egalitarian grounds is warranted beyond this point in time. As a simple calculation demonstrates, a discount rate of 1.5% (and lower) therefore does not reduce the moral weight of future people's welfare from the small canyon sufficiently to permit its mining in this case.[17] Thus, those discounting welfarist frameworks that are able to condemn the

[17] Let Z be the welfare from mining the small canyon. $\frac{Z}{150}$ is the annual welfare from the intact small canyon. The welfarist value of keeping the small canyon intact is $\sum_{t=1}^{100}\left(\frac{(\frac{Z}{150})}{1.015^t}\right)+\frac{900\times(\frac{Z}{150})}{1.015^{100}} = 1.01Z$ (i.e., greater than the welfarist value of mining it). Thus, the small canyon would have to be kept intact.

Grand Canyon's delayed-destruction mining by assuming a sufficiently low discount rates are unable to avoid the small canyon horn of the dilemma.

### 3.3 A Goldilocks Discounting Schedule?

Admittedly, I have thus far only considered discounting welfarist frameworks with constant discount rates. Discounting welfarists might respond by proposing more complex, non-linear discounting schedules – combining time-based, egalitarian, and prioritarian considerations to generate a discounting method able to ground plausible judgments in all of the cases introduced thus far.[18]

I cannot consider the myriad possible approaches of this kind here. Instead, let me pose two general challenges to welfarists who would pursue this route. The first begins with a reminder that there are a variety of intergenerational justice problems besides the canyon mining cases introduced here. These include both environmental time bomb cases and optimal intergenerational savings problems.[19] Even with non-constant discount rates, it is difficult to find a theoretically plausible form of discounting welfarism that grounds attractive judgments in all of these disparate cases. The challenge of finding a plausible welfarist framework that *also* has plausible implications in the canyon mining cases introduced here may well prove insurmountable.

The second challenge is one more variation of Mining the Grand Canyon – a variation that no form of discounting welfarism can condemn:

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[18] For a discussion of the possibilities, see Christian Gollier, *Pricing the Planet's Future: The Economics of Discounting in an Uncertain World* (Princeton, NJ: Princeton University Press, 2013).

[19] For a discussion of the problem that certain discounting forms of welfarism face when it comes to intergenerational savings problems, see Tjalling C Koopmans, "Stationary Ordinal Utility and Impatience," *Econometrica: Journal of the Econometric Society* (1960).

***Mining the Temporary Grand Canyon*:** The situation is identical to Mining the Grand Canyon with two exceptions:

- It is known that the Grand Canyon will only last for 200 years (rather than 1,000 years) if it is not mined.

- Mining the Grand Canyon produces just enough wealth ($Y) for the 1900ers such that its mining would barely increase a non-time-discounted utilitarian social welfare function.

The 1900ers mine the Grand Canyon.

I concede that the impermissibility of Mining the Temporary Grand Canyon is not as clear as the impermissibility of the other Grand Canyon mining cases. Yet I nevertheless submit that Mining the Temporary Grand Canyon is impermissible. The substantial increase in the welfare of the 1900ers, poor though they might be, does not seem sufficient to justify the destruction of a natural wonder like the Grand Canyon – not even if it would have only lasted for only 200 years unmined.

To be clear, my claim is *not* that there is no amount of mining wealth for the 1900ers that would justify mining a temporary Grand Canyon. (Indeed, I would reject such a position even in the case of a permanent Grand Canyon.) Instead, I ask the reader to imagine the additional wealth for a poor generation (one with a GDP per capita of $4,000, equivalent approximately to present day Mongolia) that would generate *just* enough welfare to outweigh the welfare loss from the Grand Canyon for all future people alive up to 2100. My claim is that mining even a temporary Grand Canyon merely for *this* amount of wealth would be impermissible.

Yet no form of discounting welfarism can condemn Mining the Temporary Grand Canyon. Non-discounting utilitarianism would condone this mining. Moreover, the welfare losses that weigh against permitting the mining occur *in the future* and accrue to people who are *better off* than the 1900ers. Thus, forms of welfarism with either a time-based or

egalitarian/prioritarian discounting would even more clearly condone this mining, regardless of the particulars of the discounting schedules.

This example suggests that the difficulties welfarism faces in the realm of environmental justice cannot be solved by simply determining the proper weight to assign the welfare of future people relative to current people. The problem instead may well lie in the *types of tradeoffs* that welfarism utilizes in order to evaluate the permissibility of destructive uses of the natural world.

## 4. Green Welfarism

One framework that offers a different account of the tradeoffs that should be used in environmental justice is (what I call) *green welfarism*. Green welfarists hold that the natural world has a welfarist value for human beings that is non-negotiable in some way relative to welfare from human-made resources. Michael Jacobs encapsulates the key commitment of green welfarism when he writes, "[The natural world] … provides humankind with goods (social and cultural as well as individual) which are *necessary* for wellbeing; without them both individual lives and societies are impoverished, an impoverishment for which no substitution of human-made benefits can make up."[20] For green welfarists, the natural world has this type of special welfarist value, not only because it provides the physical essentials of human life (e.g., air) and because it is a necessary input in the production of certain physical goods, but also because certain types of natural functions and/or interactions with the natural world are crucial for human flourishing.[21]

[20] Michael Jacobs, "Sustainable Development, Capital Substitution and Economic Humility: A Response to Beckerman," *Environmental values* 4, no. 1 (1995): 64. Emphasis added.
[21] Ibid. For another version of a green welfarist framework, see Robert E. Goodin, *Green Political Theory* (Cambridge, MA: Polity Press, 1992).

Green welfarism appears to have significant potential for navigating the Canyon Dilemma. It can fairly easily avoid the Grand Canyon horn by simply assigning the Grand Canyon a very high or even a non-negotiable welfarist value. However, I shall argue in this section that, although there are forms of green welfarism that can avoid the Grand Canyon horn and forms that can avoid the small canyon horn, no form of green welfarism can negotiate both horns. In particular, any form of green welfarism that can avoid the small canyon horn will be unable to protect the Grand Canyon from destruction if the plight of the 1900ers is assumed to be substantially more severe.

## 4.1 The Small Canyon Horn, Non-Extremity, and Substantial Discounting

Note first that only certain forms of green welfarism can avoid the small canyon horn of the Canyon Dilemma. An *extreme* green welfarism that insists that *every part* of the natural world has a non-negotiable welfarist value clearly cannot condone the small canyon's mining.[22] To condone the small canyon's mining, green welfarism will instead have to be *non-extreme*. Non-extreme green welfarism holds that, although classes of natural functions have a non-negotiable welfarist value, *particular parts* of the natural world do not have a non-negotiable welfarist value (though they have a substantially higher welfarist value than is standardly recognized).[23]

In addition to being non-extreme, any form of green welfarism that hopes to avoid the small canyon horn will have to endorse discounting. Remember that non-discounting standard (i.e., non-green) welfarism was unable to condone Mining the Small Canyon. Non-discounting

[22] This is the interpretation that Beckerman attributes to proponents of "strong sustainability." See Wilfred Beckerman, "'Sustainable Development': Is It a Useful Concept?," *Environmental values* 3, no. 3 (1994): 194-95.
[23] See Michael Jacobs, "Sustainable Development, Capital Substitution and Economic Humility: A Response to Beckerman," ibid.4, no. 1 (1995): 62.

green welfarism, which assigns an even greater welfarist value to the small canyon, will a fortiori be unable to permit this mining.

Moreover, green welfarism's discounting will need to be egalitarian/prioritarian in nature rather than time-based to navigate the Grand Canyon horn. After all, any form of green welfarism with a significant time-based discount rate is vulnerable to long-delayed-destruction variations of Mining the Grand Canyon in which the welfare of future people remains constant while the delay between the mining's benefits and the Grand Canyon's destruction is assumed to be very long.

Finally, the egalitarian/prioritarian discounting will need to be *substantial* to avoid the small canyon horn. Remember that, without time-based discounting, standard welfarists needed to endorse an egalitarian/prioritarian discount rate of at least 1.5% to permit Mining the Small Canyon with Welfare Plateau. Green welfarism, with its commitment to the higher welfarist value of the natural world, will need to endorse an even greater egalitarian/prioritarian discounting to condone this variation of mining the small canyon. Thus, any form of green welfarism that hopes to avoid the objections raised thus far against welfarism will have to be non-extreme and committed to substantial prioritarian/egalitarian discounting.

## 4.2 The Grand Canyon Horn and the Problem of Poverty

However, this type of green welfarism cannot avoid the Grand Canyon horn of the Canyon Dilemma. Remember that, in Delayed-Destruction Mining the Grand Canyon, a 1.5% discount rate implied that the pristine Grand Canyon must generate welfare equal to nearly a third of the welfare that the poor 1900ers could have obtained from $100 million of wealth each year in order to be protected from mining. This, I suggested, was a very high welfarist value.

However, even if green welfarism could justify assigning the Grand Canyon a welfarist value of this magnitude, it would nevertheless be unable to plausibly protect the Grand Canyon from destruction if the poverty of the 1900ers is imagined to be somewhat more severe.

Consider, for example, the following variation:

> ***Poverty-Alleviating Delayed-Destruction Mining the Grand Canyon:*** The case is similar to Delayed-Destruction Mining the Grand Canyon with the following exceptions:
>
> - The community in the area of the Grand Canyon (which would primarily benefit from the mining) is particularly poor, with a GDP per capita of $2,000.
>
> - 100 destitute miners will predictably die of poverty-related reasons unless the Grand Canyon is mined.
>
> - Those future people who would enjoy the unmined Grand Canyon are on average twice as wealthy and significantly better off than the average member of their cohort.
>
> The 1900ers delayed-destruction mine the Grand Canyon.

I concede that the judgment in this case is not as clear as in Delayed-Destruction Mining the Grand Canyon. The substantially greater poverty of the 1900ers, the prevention of the destitute miners' death, and the greater welfare of the affected future people makes the Grand Canyon's destruction easier to countenance. However, I nevertheless submit that Poverty-Alleviating Delayed-Destruction Mining the Grand Canyon is impermissible. Although alleviating *sufficiently extreme* poverty (e.g., mass starvation) would justify the destruction of even the Grand Canyon, the moderate alleviation of the 1900ers' poverty and even the saving of the 100 destitute miners seems insufficient to justify the destruction of this awe-inspiring part of the natural world.

However, it is difficult to see how any form of green welfarism that can avoid the small canyon horn of the Canyon Dilemma will be able to condemn the Grand Canyon's mining in this

case. Remember that, to condone Mining the Small Canyon with Welfare Plateau, green welfarists had to endorse a discount rate of at least 1.5%. Furthermore, given the 1900ers' substantially greater relative poverty in Poverty-Alleviating Delayed-Destruction Mining the Grand Canyon, a substantially higher egalitarian/prioritarian discount rate would be implied in this case. Yet, with a substantially higher discount rate, the welfarist value that would need to be assigned to the Grand Canyon to protect it from mining is simply implausibly high.

Consider, for example, an egalitarian/prioritarian discount rate of 2.5% (just one percentage point above the 1.5% rate needed to condone Mining the Small Canyon with Welfare Plateau). At this discount rate, the Grand Canyon would have to produce about *3.5 times* the welfare that the mining wealth would generate for the *very poor* 1900ers *every year* from 2101-2900 to be protected from delayed-destruction mining.[24] Yet it seems wholly implausible to attribute even to the Grand Canyon this gargantuan yearly welfarist value, even if we accept a green welfarist framework. Thus, it is very difficult to see how any form of green welfarism that can avoid the small canyon horn could also avoid the Grand Canyon horn of the Canyon Dilemma.

Some green welfarists might respond to this challenge by rejecting the non-extreme/extreme dichotomy that I introduced earlier. They might argue that, while the small canyon does not have a non-negotiable welfarist value, the Grand Canyon does. After all, although the small canyon is scenic, it certainly does not provide an experience of nature's majesty in the same way as the Grand Canyon. And it is this experience that might be viewed as

[24] Let W be the welfare that the very poor 1900ers receive from mining the Grand Canyon, let 3.4W be the yearly welfare generated by the Grand Canyon, and assume a discount rate of 2.5%. The present discounted value of keeping the Grand Canyon intact is $\sum_{t=201}^{1000}(\frac{3.4W}{1.015^t}) = 0.97W$. Since this is less than W, the Grand Canyon should be mined in this case. When the multiple is increased to 3.5, value is 1.003W and so is (just barely) protected from mining.

crucial to human flourishing. A version of green welfarism that assigned the Grand Canyon but not the small canyon a non-negotiable welfarist value would admittedly be able to navigate the Canyon Dilemma.

However, the claim that the Grand Canyon has a non-negotiable welfarist value is implausible. Even if we accept the controversial claim that experiencing nature's majesty is crucial to a flourishing human life, this would not establish that *the Grand Canyon* is crucial to human flourishing. There are, after all, other ways to experience nature's majesty besides visiting the Grand Canyon. Natural wonders like the Sunset Cliffs in California or Fjaðrárgljúfur Canyon in Iceland can allow human beings to experience nature's majesty in broadly similar ways. Moreover, if the Grand Canyon really were *crucial* to human flourishing, then not one of the billions of human beings who has never experienced the Grand Canyon could be said to have led a flourishing human life, even if they interacted in deep and meaningful ways with the natural world in other ways. This is implausible. The existence of (admittedly very rough) substitutes for the Grand Canyon not only undermines the claim that the Grand Canyon has a non-negotiable welfarist value. It also makes it very difficult to justify assigning the Grand Canyon the mammoth annual welfarist value necessary to protect it from poverty-alleviating destruction within any green welfarist framework that can avoid the small canyon horn of the Canyon Dilemma.

To summarize, green welfarism attempts to protect the natural world by assigning it a high welfarist value. However, assigning the natural world too high a welfarist value and/or refusing to grant the welfare of the badly-off greater weight makes green welfarism implausibly preservationist (e.g., unable to avoid the small canyon horn). Yet if green welfarists accept egalitarian/prioritarian discounting and moderate their commitments regarding nature's welfarist

value, then they cannot plausibly protect even highly valuable parts of the natural world when their destruction would alleviate substantial human poverty. This suggests that the fundamental problem with welfarism may lie, not in the particular welfarist value it assigns to the natural world (as green welfarists would claim), but rather in the subjection of the natural world to a welfarist calculus.

## 5. Deep-Green Welfarism

Environmental ethicists committed to welfarism might respond to the cases introduced thus far by endorsing a framework of environmental justice that combines welfarism (either standard or green) with a concern with *deep ecological* value – the value of the natural world *for its own* sake. I call this type of pluralist framework of environmental justice *deep-green welfarism*.[25]

There are a variety of possible deep-green welfarist frameworks, varying according to the particular axiological foundations for the non-anthropocentric value of the natural world they endorse. Prominent possibilities include appeals to the moral value of:

i) The interests of non-human biotic entities[26]

ii) A certain type of community with other living things[27]

iii) The richness or complexity in the universe.[28]

Any of these forms of deep-green welfarism appears to have significant potential to navigate the Canyon Dilemma. After all, any of these commitments implies that the Grand

[25] See, for example, Jacobs, "Sustainable Development, Capital Substitution and Economic Humility: A Response to Beckerman," 66.
[26] J.B. Callicott, "Non-Anthropocentric Value Theory and Environmental Ethics," *American Philosophical Quarterly* 21, no. 4 (1984): 301.
[27] Ibid., 305-06.
[28] Ibid., 302-04.

Canyon has substantially greater deep ecological value than the ecologically unremarkable small canyon. And since deep ecological value is not discounted in the same way as human welfare, differences in the deep ecological value of the two canyons open up a variety of possibilities for navigating the Canyon Dilemma.

However, deep-green welfarism cannot navigate the Canyon Dilemma, either. The key reason is that deep ecological considerations are simply not fundamental to this dilemma. Imagine that a *deep-ecology-friendly* mining technique is available to the 1900ers that destroys the scenic majesty of the Grand Canyon without threatening any of its individual creatures or its ecosystem. To appease deep ecologists who value the richness or uniqueness of non-biotic entities, we can imagine that it becomes known that a very large number of canyons very similar to the Grand Canyon exist in the universe, though none but the Grand Canyon is accessible to human beings. Assume, then, that the deep-ecology-friendly mining technique damages the deep ecological value of the Grand Canyon to a negligible extent.

I submit that the use of this technique would not make any of the variations of Mining the Grand Canyon considered above permissible. Unlike the Great Barrier Reef or the Arctic National Wildlife Refuge, what is valuable about the Grand Canyon is not fundamentally its rich animal and plant life nor its ecological uniqueness. Instead, its value fundamentally lies in its pristine scenic majesty *for human beings* and in the way in which in enables *human beings* to reflect on their place in the world. A deep-ecology-friendly mining technique thus only *modestly* mitigates the wrong of the Grand Canyon's destruction – a mitigation that seems insufficient to make the 1900ers' destruction of the Grand Canyon permissible in any of the cases considered thus far. Yet if deep ecological considerations cannot be used to explain the difference in

permissibility between the mining the Grand Canyon and the small canyon, then deep-green welfarism cannot avoid the objections to welfarism raised in the previous two sections.

To be clear, this argument does not challenge deep ecology. Simply because deep ecological considerations are not central to the Canyon Dilemma does not mean that they are not central to other questions of environmental justice. However, this argument does suggest that appeals to deep ecology cannot rescue welfarism from its difficulties in plausibly capturing the anthropocentric dimension of environmental justice.

## 6. Green Communitarianism

Perhaps, then, the solution to the Canyon Dilemma can be found by endorsing a non-welfarist (but still anthropocentric) framework of environmental justice. In this section, I turn to considering the potential of green communitarianism.[29]

Communitarians ground political obligations, not in what maximizes some aggregate social welfare, but rather in shared communal conceptions of the good life. Green communitarians (as I used the term) focus on the implications of communitarianism for the human relationship with the natural world and advance theories that claim to ground strong obligations to protect it.

There are many versions of green communitarianism,[30] and I cannot consider every possibility here. Instead, my focus will be the green communitarian framework defended by Avner de-Shalit in *Why Posterity Matters: Environmental Policies and Future Generations*,

[29] de-Shalit, *Why Posterity Matters*.
[30] See, for example, I. Barns, "Environment, Democracy and Community," *Environmental Politics* 4, no. 4 (1995).

which is arguably the most well-developed communitarian attempt to ground obligations to protect the natural world.

De-Shalit's communitarianism has three broad commitments:

1. Current people should make conservation decisions based on a shared societal conception of the good life.[31]

2. Current people have special *obligations of justice* to members of their own community, including contemporaries and immediate descendants, based on this societal conception of the good life, though not to distant future people.[32]

3. Current people have *humanitarian obligations* to distant future people that preclude policies that threaten basic human needs.[33]

De-Shalit's green communitarianism appears to have substantial potential for navigating the Canyon Dilemma. It can easily avoid the small canyon horn because it does not require taking the welfare of very distant future people into account as a matter of justice (as long as their basic needs are not threatened). Moreover, unlike certain forms of discounting welfarism, de-Shalit's framework is not vulnerable to the environmental time bomb objection (since environmental time bombs would threaten distant future people's basic needs).

However, while de-Shalit believes that his framework enjoins current people to avoid "spoiling beautiful landscapes,"[34] his framework cannot protect the Grand Canyon from destruction. Indeed, even the standard case of Mining the Grand Canyon could, under certain circumstances, be permitted by de-Shalit's communitarianism.

Consider a variation of Mining the Grand Canyon in which the 1900ers value economic growth and material prosperity much more highly than conservation, though they believe that future Americans will value the natural world much more highly than they do. I take it that it is

[31] de-Shalit, *Why Posterity Matters*, 24, 28-29.
[32] Ibid., 58-62.
[33] Ibid., 63-64.
[34] Ibid., 13.

impermissible for the 1900ers to mine the Grand Canyon in this case. Yet, according to de-Shalit's framework, the growth-focused 1900ers would have no obligations of justice to forbear from mining the Grand Canyon. Insofar as future American will have different values, they are, on de-Shalit's view, to a large extent no longer members of the same community and they thus are not owed obligations of justice. And since the mining of the Grand Canyon does not threaten future people's basic needs, there are no humanitarian obligations to forbear from mining the Grand Canyon, either.

In fact, de-Shalit's framework permits the 1900ers to mine the Grand Canyon even if they themselves believe that it is valuable, at least as long as the Grand Canyon's destruction occurs in the sufficiently distant future. Consider again Delayed-Destruction Mining the Grand Canyon. Even if we assume that the 1900ers are great admirers of the Grand Canyon's majestic beauty, de-Shalit's framework would permit the Grand Canyon's mining in this case. After all, the 1900ers' immediate, nature-loving descendants will still be able to enjoy the Grand Canyon (as will all people for the next 200 years). People living more than 200 years in the future will be unable to enjoy the Grand Canyon. But they are arguably sufficiently distant so as to not be part of the same community as the 1900ers and are thus not owed obligations of justice. And once again, since their basic needs are not threatened by the Grand Canyon's destruction, the 1900ers do not have humanitarian obligations to them to forbear from this mining, either. Thus, de-Shalit's green communitarianism fails to navigate the Canyon Dilemma.

## 7. Free-Market Environmentalism

A feature shared by all of the frameworks of environmental justice considered thus far is a lack of focus on individual rights. Perhaps, then, the solution to the Canyon Dilemma lies in

some type of green liberalism that grants such rights primacy. Indeed, I shall argue in Chapter III that a particular type of green liberalism can navigate the Canyon Dilemma. However, in this section, I wish to consider the Canyon-Dilemma-navigating potential of the most prominent contemporary form of green liberalism: free-market environmentalism.

The core idea of free-market environmentalism (FME) is that a regime of strong, well-defined, transferable private property rights is generally sufficient to protect the natural world. Private property gives actors incentives to appropriately husband natural resources, since they bear the cost and benefits associated with their use or misuse.[35]

While free-market environmentalists all agree on the importance of property rights, they disagree among themselves regarding how *initial* property rights to the natural world should be allocated. Jan Narveson argues that initial rights should be assigned to first-comers.[36] John Baden and Richard Stroup argue that initial rights to ecologically or scenically valuable parts of the natural world should be assigned to environmental groups.[37] Terry Anderson and Donald Leal argue that rights should be assigned to the entity with the highest willingness-to-pay (WTP) for them.[38] I shall argue that none of these ways of assigning initial rights to the natural world can enable FME to navigate the Canyon Dilemma.

The difficulties Narveson's proposal has in navigating the Canyon Dilemma are the most obvious. On Narveson's view, the first person to come across the Grand Canyon could blow it up for her own amusement. I take it that such an action would not only be imprudent, but also deeply unjust.

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[35] Richard Stroup, "Free-Market Environmentalism," Library of Economics and Liberty, http://www.econlib.org/library/Enc/FreeMarketEnvironmentalism.html. (Accessed December, 2016)
[36] Jan Narveson, "The Case for Free Market Environmentalism," *Journal of Agricultural and Environmental Ethics* 8, no. 2 (1995): 148.
[37] John Baden and Richard Stroup, "Saving the Wilderness: A Radical Proposal," *Reason* 13, no. 3 (1981).
[38] Terry Anderson and Donald Leal, *Free Market Environmentalism*, revised ed. (New York: Palgrave, 2001), 179-83.

Baden and Stroup's proposal to grant environmental groups rights to environmentally valuable parts of the natural world admittedly would provide strong protections for the Grand Canyon. However, their proposal cannot avoid the small canyon horn of the Canyon Dilemma. After all, it is not difficult to imagine environmental groups refusing to permit the small canyon's mining, even when the canyon is not particularly scenic nor ecologically valuable and even when $100 million would alleviate serious poverty among their fellow citizens.

Baden and Stroup respond to this type of objection by arguing that environmental groups will not be so stubborn. After all, the wealth that environmental groups could obtain from allowing the destructive use of one part of the natural world (e.g., the small canyon) would enable them to accomplish greater environmental good elsewhere.[39]

However, there is no guarantee that environmental groups will endorse this consequentialist logic. They may grow attached in certain ways to the small canyon. Or they may be unwilling to have their agency so closely implicated in the small canyon's destruction, even if the result is greater environmental good and much needed economic wealth for their fellow citizens. Biden and Stroup's approach is thus unable to avoid the small canyon horn of the Canyon Dilemma.

Anderson and Leal's proposal to auction off the natural world to the highest bidder is more difficult to dismiss. It appears plausible that preservationists would win the auction for the Grand Canyon while mining companies would win the auction for the small canyon. After all, the unmined Grand Canyon's total economic value as measured by individuals' aggregate willingness-to-pay (WTP) for its preservation, discounted by the time value of money, is undoubtedly many times greater than $100 million.[40] And since future people's WTP for the

[39] Baden and Stroup, "Saving the Wilderness: A Radical Proposal," 34-35.
[40] David William Pearce, *Economic Values and the Natural World* (London: Earthscan Publishers, 1993), 21-22.

Grand Canyon's preservation very plausibly grows with greater wealth, preservation may well be the Grand Canyon's highest economic-value-use even in delayed-destruction variations of the case in which the WTP of future people is heavily discounted. On the other hand, the $100 million of mining wealth could easily outweigh the economic value of the small canyon's preservation (at least given certain plausible assumptions about the real interest rate and future people's willingness-to-pay for the small canyon's preservation).

However, a commitment to selling the natural world to the highest bidder cannot reliably protect the Grand Canyon from destruction. A familiar difficulty is market failure, a problem that would be particularly severe in the case of a Grand Canyon auction. After all, much of the Grand Canyon's economic value is *existence value* – individuals' willingness-to-pay for the unmined Grand Canyon's continued existence independently of any benefit they obtain from visiting it.[41] This existence value is a non-excludable good – it cannot be provided to some but not others. Thus, preservationists would face great difficulties in fully tapping into their contemporaries' existence value for the Grand Canyon due to temptation of some to free-ride on others' preservation efforts.

Moreover, even if environmental groups could overcome the free-rider problem among their contemporaries, it is very difficult to see how they could substantially tap into *future people's* Grand Canyon existence value. To do so, a preservation group bidding for the Grand Canyon would have to rely on future people contributing *retrospectively* – even decades after the fact – to the Grand Canyon's successful preservation. Such requests for ex post preservation funds would have to compete, not only with individuals' private consumption desires, but also with campaigns to protect parts of the natural world whose fate still hangs in the balance. Thus,

[41] Ibid.

the idea that a laissez-faire market auction would ensure the Grand Canyon is used in the most economically valuable way is far-fetched.

However, even if we assume away market failures, Anderson and Leal's FME would still be unable to avoid the Grand Canyon horn of the Canyon Dilemma. To see why, consider a final variation of Mining the Grand Canyon:

> ***Ascetic Future People:*** The case is similar to Mining the Grand Canyon except that it is known that future people will be poor because they are predicted to adopt a more ascetic lifestyle.
>
> Assume also:
>
> - Despite their poverty, future people are no worse off than the 1900ers.
> - Mining companies would use a deep-ecology-friendly mining technique.

I take it that the Grand Canyon's destruction would be impermissible, even in the case of Ascetic Future People. Yet in this case, future people's willingness-to-pay to protect the Grand Canyon could well be insufficiently high to outweigh $100 million in current mining wealth, even if there are no market failures. The example of Ascetic Future People suggests that the use of economic efficiency as the sole criterion for determining what is to be done with the natural world is implausible.

Admittedly, examples demonstrating the implausibility of an exclusive focus on efficiency in environmental justice are nothing new. However, the Ascetic Future People case is interesting because several of the traditional explanations for *why* a sole focus on inefficiency is inappropriate are inapplicable in this case. Critics of FME commonly argue that economic efficiency is inappropriate because:

i) It fails to capture the deep ecological value of the natural world.[42]

[42] Mark Sagoff, "Free-Market Versus Libertarian Environmentalism," *Critical Review* 6, no. 2-3 (1992): 214-15.

ii) It denies certain individuals (e.g., the poor) access to those parts of the natural world necessary for satisfying their basic needs.[43]

iii) It fails to grant sufficient weight to concerns of equity (i.e., the welfare of the less well off).[44]

Yet in Ascetic Future People, i)-iii) clearly cannot explain the problem with free-market environmentalism. Deep ecological value is not significantly threatened in this case. Future people's basic needs are not at stake. And, although future people are poor, they are ex hypothesi no worse off than the 1900ers.

It is possible to argue that the problem in Ascetic Future People is simply that the impoverished future people's welfare is not given sufficient weight when we only consider their willingness-to-pay.[45] However, if free-market environmentalists fall back on welfarism to give greater weight to the WTP of the ascetic future people, they will also have to give less weight to the WTP of wealthy future people in delayed-destruction variations of Mining the Grand Canyon. This would make FME subject to the same intuitive objections that undermined welfarist frameworks of environmental justice.

The case of Ascetic Future People therefore suggests that there may well be an unrecognized problem with Anderson and Leal's free-market environmentalism – a problem that may also be relevant for understanding the other environmental justice frameworks' failure to navigate the Canyon Dilemma. I turn now to exploring this possibility.

[43] Tony Smith, "The Case against Free Market Environmentalism," *Journal of Agricultural and Environmental Ethics* 8, no. 2 (1995): 138.
[44] Michael C. Blumm, "The Fallacies of Free Market Environmentalism," *Harvard Journal of Law and Public Policy* 15 (1992): 376.
[45] Anderson and Leal, *Free Market Environmentalism*, 24-25.

## 8. The Natural World as the Common Inheritance of Humankind

One possible problem with Anderson and Leal's free-market environmentalism that has not received sufficient scholarly attention is this. In assigning rights to the natural world to those with the highest WTP, Anderson and Leal fail to respect *the rights of future people to the natural world,* not merely as an instrument for satisfying basic needs, but as something with which to pursue life plans more generally. On this view, though the ascetic future people admittedly cannot afford to "bribe" the 1900ers to keep the Grand Canyon intact, they should not have to do so. The Grand Canyon is not the 1900ers' alone. It is instead part of humanity's common inheritance – something to which *all human beings, present and future, have robust, equal initial rights.*

Indeed, Anderson and Leal are not the only scholars who reject this *common-inheritance idea*. Every framework of environmental justice considered thus far rejects the claim that future people have rights to the natural world (besides instrumentally as a means for satisfying their basic needs). Narveson assigns rights to the natural world only to first-comers, Biden and Stroup to environmental groups, and egalitarians and sufficientarians to the disadvantaged. De-Shalit grants distant future people rights only to those parts of the natural world necessary to satisfy basic needs.

Welfarism (whether standard, green, or deep-green) also fails to respect the common-inheritance idea. Aggregative welfarists admittedly grant the welfare of each person (present and future) some weight in deciding what is to be done with the natural world. However, this can hardly be said to treat the natural world as the common inheritance of humankind. After all, if we accept this very weak way of understanding "common inheritance," then *every* resource is humanity's common inheritance. For example, any living person's body is also humanity's

common inheritance on this view since its proper use, too, is determined by aggregative welfarists through a process that grants each person's welfare some weight. As many theorists have argued, a person's right to X is not appropriately respected merely by taking the person's welfare into account in some aggregative process when deciding what is to be done with X.[46]

Since the common-inheritance idea is so widely rejected, readers steeped in the contemporary environmental justice literature might view this idea as prima facie implausible. However, a broader perspective suggests that this idea certainly should not be rejected out of hand. Consider first other areas of distributive justice. It is commonly recognized that certain distributive issues, such as the distribution of rights to body parts, should not be decided by simply determining what best fosters equality, sufficiency, or aggregate welfare. Forcible redistribution of kidneys, for example, would almost surely increase aggregate welfare, equality, and the number of individuals who have a minimally decent life. Yet we nevertheless reject such a policy, not only for practical reasons, but for moral ones as well. It is widely accepted that every individual has certain rights to her body parts, not only because body parts are instrumentally necessary for the individual's basic functioning, but because a person's body is in an important sense *hers* and should be devoted to her life plans. Thus, once we broaden our perspective beyond environmental justice, the idea of rights to resources that are in some sense prior to or independent from egalitarian, sufficientarian, welfarist, or communitarian considerations becomes far easier to take seriously.

Broadening our perspective historically also reveals that the common-inheritance idea is hardly unusual. Indeed, in much of the history of Western political thought, this idea was taken

[46] See, for example, Ronald Dworkin, "Rights as Trumps," in *Theories of Rights*, ed. Jeremy Waldron (New York: Oxford University Press, 1984).

as a starting point for thinking about the allocation of rights to the natural world.[47] Consider, for example, the following passage from Henry George's *Progress and Poverty*:

> If all existing men were to unite to grant away their equal rights [to the earth], they could not grant away the right of those who follow them. For what are we but tenants for a day? Have we made the earth, that we should determine the rights of those who after us shall tenant it in their turn?[48]

A historical perspective reveals that, if anything, it is the rejection of the common-inheritance idea in the contemporary environmental justice literature that is unusual.

Both of these broader perspectives suggest that the common-inheritance idea merits serious consideration. My aim in the rest of this section is to further strengthen the case for taking this idea seriously by arguing that the common-inheritance idea has significant potential to navigate the Canyon Dilemma. My argument will admittedly be merely suggestive. The aim is to motivate the much deeper inquiry into the relationship between the common-inheritance idea and environmental justice that I shall take up in Chapter III.

## 8.1 The Common-Inheritance Idea and Mining the Grand Canyon

It is not difficult to recognize the common-inheritance idea's potential to protect the Grand Canyon from the 1900ers' mining. If the natural world is the common inheritance of humankind, *the Grand Canyon is not the 1900ers' to destroy*. Future people have rights to it as well, including distant future people. Any number of conceptions of what it means to respect future people's equal rights to the natural world could justify insisting that the Grand Canyon remain unmined.

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[47] For a survey of contemporary thinkers, see Peter Vallentyne and Hillel Steiner, eds., *Left-Libertarianism and Its Critics : The Contemporary Debate* (New York: Palgrave, 2000). For a survey of historical thinkers, see "The Origins of Left-Libertarianism : An Anthology of Historical Writings," (New York: St. Martin's Press, 2000).
[48] Henry George, *Progress and Poverty* (New York: Robert Schalkenbach Foundation, 1935), 338-39.

A key reason why the common-inheritance idea fares better than a framework like prioritarian welfarism is that it need not grant better-off future people's claims to the natural world less weight than those of badly-off current people. Just as wealthier, better-off heirs do not receive weaker rights to a common inheritance simply because they are wealthier or better off, so too, proponents of the common-inheritance idea (or at least certain conceptions of it) can reject a substantial weakening of better off future people's rights to the natural world. Thus, despite the 1900ers' poverty and despite the fact that the Grand Canyon is not necessary for satisfying future people's basic needs, the common-inheritance idea has significant potential for justifying the Grand Canyon's preservation.

## 8.4 The Special Wrong of Mining the Grand Canyon

The common-inheritance idea not only has the theoretical resources to condemn the 1900ers' mining of the Grand Canyon. It can also explain the special wrong associated with its destruction. To see why, consider the following case:

> ***Dismantling the Grand Monument:*** Imagine the Grand Canyon never existed. In 1895*, the 1900ers build* a Grand Monument, with the same aesthetic value (according to the reader's preferred aesthetic theory) as the Grand Canyon. Assume also that the welfarist values of the Grand Canyon and the Grand Monument are the same for the 1900ers and for all future generations.
>
> In 1899, a disaster occurs that causes the knowledge of the arts used to build the Grand Monument to be lost forever.
>
> In 1900, the prices of Grand Monument's materials increase. The 1900ers dismantle the Grand Monument to fund an increase in consumption similar to the one enjoyed in Mining the Grand Canyon (as well as sufficient wealth to compensate themselves for the various costs of building the monument).

I do not wish to take a position on whether the 1900ers act permissibly in dismantling the Grand Monument. I am interested instead in *comparing* the wrong done in Dismantling the

Grand Monument to the wrong done in mining the Grand Canyon in the variation in which a deep-ecology-friendly mining technique is used. I submit that mining the Grand Canyon constitutes a graver wrong.

Yet many frameworks of environmental justice cannot explain why this is so. Standard welfarists are committed the claim that both actions are equally bad since the welfare effects are ex hypothesi precisely the same. Moreover, given the assumptions above, the differences between the two cases cannot be explained by appeal to aesthetic value, irreversibility, or deep-ecological considerations.

The common-inheritance idea, however, can explain the difference between the two cases. *The 1900ers created* the Grand Monument and therefore have substantial labor-based rights to it. The Grand Monument is therefore not the common inheritance of humankind in the same way as the Grand Canyon is.[49] The 1900ers may well be acting wrongly when they dismantle the Grand Monument. But the wrong done is not as grave as when they destructively use the Grand Canyon for their own benefit, since the common-inheritance idea implies that they are infringing *on future people's rights* when they take this action. The ability of the common-inheritance idea to explain the special wrong associated with destroying the Grand Canyon compared with the Grand Monument strengthens the case for granting this idea serious consideration.

[49] However, if the Grand Monument had been created by previous generations, the differences between these two cases might well be far less stark.

## 8.5 The Common-Inheritance Idea and Mining the Small Canyon

The final task I take up in this chapter is considering the common-inheritance idea's potential to navigate the small canyon horn of the Canyon Dilemma. The small canyon horn is by far the more challenging of the two horns for the common-inheritance idea. After all, if future people have equal rights to the small canyon, why is it permissible for the 1900ers to mine it?

A full answer to this question will have to wait until Chapter III. My aim in this section is a fairly modest one – to explain how the small canyon's mining could be justified by at least one type of conception of the common-inheritance idea in cases in which natural wealth is growing over time.

Opponents of the idea of equal rights to the natural world often identify this idea with a commitment to some kind of joint-ownership of the natural world – one that requires granting every person a say in how every part of the natural world is used.[50] Yet this is merely one conception of how equal rights to the natural world might be respected (and not a particularly plausible one at that). An alternative conception with greater plausibility is that equal rights to the natural world can be respected by granting each person *an equal share* of it.[51]

If we interpret the common-inheritance idea in an equal-share way, and if we assume that natural wealth is growing over time, justifying the small canyon's destruction is not difficult. Consider the analogy of a person who leaves monetary wealth to successive equal heirs. If the wealth is growing over time, each heir can consume some of the wealth without depriving any future heir of the ability to consume an equal share of the wealth. Similarly, if humanity's

[50] Narveson, "The Case for Free Market Environmentalism," 148.
[51] See, for example, Hillel Steiner, *An Essay on Rights* (Cambridge, MA: Blackwell, 1994), Ch. 7.

natural wealth is growing over time, the destructive use by each generation of some of the natural world is compatible with each individual having equal rights to it. Given the relatively low value of the small canyon and its metallurgical wealth to future people, it is not implausible for the 1900ers to claim the small canyon and its wealth as their equal share of humanity's growing natural inheritance.

Note that the assumption of growing natural wealth is by no means fanciful. Although the physical Earth is (largely) fixed, the share of the Earth (and the natural world beyond the Earth) available to human beings is growing over time. New discoveries and scientific advances mean that, assuming climate and other catastrophes can be avoided, individuals alive in 2400 could well have far greater access to natural wealth than the 1900ers did. If so, and if we understand the common-inheritance idea in an equal share way, then the 2400ers can hardly complain that the 1900ers' mining of one small canyon violated their equal rights to the natural world.

Many questions admittedly remain unanswered. Can the common-inheritance idea permit the mining of the small canyon in a world with constant natural wealth? Why can the 1900ers not similarly claim the Grand Canyon as their equal share of the natural world? What precisely does the common-inheritance idea imply about the allocation of rights to the natural world? Why should rights to the natural world be allocated in this way? My aim in this section has been to motivate Chapter III's consideration of these questions by suggesting that the common-inheritance idea has significant potential to navigate the Canyon Dilemma.

## Conclusion

I began this chapter with a seemingly simple challenge for frameworks of environmental justice: Condemn the mining of the Grand Canyon by a relatively disadvantaged generation while condoning that generation's mining of a similarly-endowed small canyon (in several variations of these cases). I then put this challenge to a selection of the most prominent contemporary frameworks of environmental justice, including egalitarian, welfarist, communitarian, and free-market environmentalist frameworks. I have shown that none of these frameworks can navigate this seemingly simple dilemma.

The case of mining the Grand Canyon was chosen, not only because of its historical importance, but also because of its unusual combination of features, including the relative disadvantage of those who would have benefitted from the natural world's destruction, the absence of threat to future people's basic needs, and the fundamentally anthropocentric character of the natural world's value in this case. These features make many of the commonly used justifications for protecting the natural world inapplicable. Other common justifications are ruled out by the need to condone the small canyon's destructive use.

The Canyon Dilemma thus reveals, in ways that can be obscured by more complex cases, the importance of the common-inheritance idea for environmental justice. Respect for the rights of future people to the natural world can explain why the 1900ers' destructive use of the Grand Canyon would have been impermissible (and morally worse than the destruction of similarly valuable 1900er-made resources). And respect for the rights of current people to the natural world can explain why the destructive use of the small canyon could have been permissible, at

least assuming growing natural wealth. Thus, the claim that the natural world is humanity's common inheritance is an idea worthy of further consideration.

Of course, many questions remain unanswered about this idea. Most importantly, *how and why* should we treat the natural world as humanity's common inheritance? I turn now to considering these questions in Chapter III.