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Would it be unethical to dump nuclear waste in the ocean?

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Would it be Unethical to Dump Radioactive Wastes in the Ocean? The Surprising Implications of the Person-Altering Consequences of Policies

*Gregory Scott Crespi**

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INTRODUCTION

Should we put all of our high-level radioactive wastes into ordinary steel barrels that have perhaps 200-year expected containment capabilities in salt water, and then dump them all into the depths of the Pacific Ocean and forget about them? Such a policy would free the billions of dollars spent annually on radioactive waste storage for other pressing social needs. Despite these benefits, however, most would regard such a radically present-oriented policy as an egregious violation

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* Professor of Law, Southern Methodist University. Due to space constraints I will provide only minimal documentation in this brief essay. The interested reader should consult my longer and much more fully documented article on this subject. See Gregory Scott Crespi, *What's Wrong With Dumping Radioactive Wastes in the Ocean? The Surprising Ethical and Policy Analysis Implications of the Problem of Person-Altering Consequences*, 37 ENV. L. REP. 10873 (2007).

of our ethical obligations to distant future generations. There is broad consensus that we have ethical obligations to undertake policies that benefit distant future generations and to eschew policies that impose significant harms upon them, at least when these choices do not require excessive current sacrifice relative to the magnitude of long-term benefits.

However, it proves impossible to articulate a satisfactory rationale for this position solely on the basis of conventional secular and consequentialist ethical premises¹ (“conventional ethical premises”). The long-term consequences of radically present-oriented policies and the ethical questions they present are quite subtle and complicated by what I call the problem of person-altering consequences. The decision whether to undertake such a policy should be regarded as an empirical question and should be made solely on the basis of an assessment of the consequences for existing persons, and not upon any claimed ethical obligations to future generations distant enough from us in time for their members to all have had their genetic identities significantly altered by those person-altering consequences. We have no ethical obligations to these distant future generations based on conventional ethical premises to consider their rights or interests in making environmental or other policy decisions, because virtually nothing that we could possibly do would harm any specific future persons, counter-intuitive as this claim may seem.

It is more difficult to determine whether we have an ethical obligation of stewardship to the human race viewed in its entirety across time that exists apart from our ethical obligations to specific persons. Is the human race a morally significant entity apart from the specific persons who have lived or will live in the future to whom we do owe ethical duties?

I conclude that we have no duties to the human race as a whole that can be grounded on conventional ethical premises apart from our duties to respect the rights and interests of specific individuals. Since virtually nothing that we could do would harm the specific future persons that will comprise distant future generations, we have no ethical obligations to those distant future generations that can be grounded upon those

1. By the phrase “secular premises” I refer to ethical premises that are derived from reflections on the human condition that are agnostic with regard to the question of the existence of a supreme supernatural being. I will not address in this brief essay the difficult question as to whether there is a sufficient non-secular basis provided by one or more of the religious traditions for recognizing an ethical obligation to the members of distant future generations. By the phrase “consequentialist premises” I refer to the ethical premise that actions have ethical relevance only to the extent that they have consequences for the rights or interests of specific persons. I also will not consider whether there exist any sufficient secular but non-consequentialist grounds for asserting that we have any ethical obligations to the members of distant future generations, or to the human race as a whole, that exist apart from any ethical obligations that can be grounded in the consequences of our conduct for specific persons. *See id.*

premises. Seemingly radically short-sighted policies such as ocean dumping of high-level radioactive wastes should therefore not be rejected out of hand as unethical. If we reason from conventional ethical premises, these policies should instead be evaluated on a case-by-case basis by the same standard normative criteria that we conventionally apply to evaluate policies that impact only existing persons.² The effects of our choices on the welfare of distant future generations should not, however, be given any weight in such an analysis except to the extent that the welfare of existing persons is indirectly affected by those future consequences. Reasoning from religious premises, however, or from secular but non-consequentialist premises may lead to the conclusion that the effects of our choices on distant future generations are of ethical relevance, depending upon the particular premises embraced. We need to be more explicit in recognizing that those alternative ethical premises are a necessary predicate for our having ethical obligations to distant future generations, since no such obligations to them can be grounded in conventional ethical premises.

If I am correct, then what are the practical consequences for environmental policy? It might appear that the significance of recognizing that we have no ethical obligations to distant future generations that can be grounded on conventional ethical premises would be completely overwhelmed by the weight properly given to peoples' beliefs, whether correct or not, that we do have such obligations, and to their altruistic inclinations, which are both pervasive and often fervently embraced. However, it is possible that over time more people will become aware of and reflect upon the problem of person-altering consequences. If so, many of them may reach the same conclusions that I have. For at least some of these people, this realization will likely lead to reduced support for our making sacrifices on behalf of distant future generations. If so, then present levels of sacrifice for the sake of distant future generations can perhaps only be sustained if religious or non-consequentialist secular ethical premises are embraced.

I. THE PROBLEM OF PERSON-ALTERING CONSEQUENCES

The noted British philosopher Derek Parfit first articulated a simple yet profound insight, the problem of person-altering consequences, which calls into serious question whether we have any ethical obligations at all to distant future generations that can be justified on conventional ethical

2. The conventional analytical framework used for guiding policy decisions is the use of a cost-benefit analysis of the various consequences of the policy in question, with the impacts of the policy defined relative to a hypothetical, counterfactual baseline state of affairs, and then each impact is valued on the basis of the willingness to pay of the affected persons, and with future impacts also discounted at some appropriate discount rate before aggregation with current impacts. *See id.*

premises. Stated succinctly, Parfit's insight is that virtually any human action is sure to have at least minor effects on the timing of some acts of sexual reproduction, leading to different sperm-egg fertilizations than would otherwise take place. Over time, this will have exponentially cascading person-altering consequences as now genetically different individuals mature and influence the sexual behavior of a broader and broader circle of people. After a relatively short period of time, in historical terms, this will lead to the entire human population being composed of individuals with significantly different genetic endowments from those persons that would have existed absent that action. In other words, one rather dramatic consequence of virtually any policy, even one of rather limited and localized initial impact, is that in the longer term it will eliminate the coming into existence of many and eventually all individuals who would otherwise have been born. It will result instead in the birth of an increasingly and eventually entirely genetically different group of people.

Parfit's insight is somewhat disturbing, to put it mildly, in that it makes it impossible to meaningfully assess the merits of environmental policies that will have long-term consequences by conventional cost-benefit criteria that do not sharply differentiate between impacts upon existing persons and impacts upon future persons. Such analyses are implicitly based upon a covert and completely untenable assumption that is rarely if ever articulated that the same future persons will exist whether or not a policy is implemented. They consequently are inadequate approaches for dealing with the deeper ethical questions that are raised by the problem of person-altering consequences.

II. THE ETHICAL ISSUES RAISED BY PERSON-ALTERING CONSEQUENCES

A. Can an Ethical Obligation to Distant Future Generations be Grounded Upon Conventional Ethical Premises Regarding the Rights or Interests of Specific Future Persons?

Let me first examine the question of our ethical obligations to distant future generations with regard to those specific potential persons who will now not be born as a result of the person-altering consequences of the implementation of a particular policy. I will then consider the matter with regard to those future persons who will be born as a consequence of that policy.

One possible argument for respecting the rights or interests of potential persons who due to the person-altering consequences of a policy will never be born is that they might nevertheless still exist in some meaningful sense. This is an absurd position and should be rejected. First, consider the matter of the rights of such never-born potential persons. If a valuation criterion incorporates even only a minimalist

concept of rights for potential persons as a constraint upon policy choices it will at least accord them the right that they not be subjected to policies that would eliminate their existence altogether, even if it does not preclude lesser transgressions of their rights. However, a valuation criterion with even such a limited “right to existence” constraint appended would rule unacceptable both the decision to implement a policy with person-altering consequences and the decision not to implement that policy, because either of these choices would preclude the birth of a very large group of potential persons. These inconsistent directives would result not only for radically present-oriented ocean radioactive waste dumping-type policies but also all other policies that have person-altering consequences, which probably includes even those policies with initially only minor and localized impacts.

Once one recognizes the pervasiveness of the person-altering consequences of policies it is clear that even the minimal right to existence of potential persons is not a viable policy constraint. The implementation of virtually any policy will mean that untold trillions of potential persons who would eventually have been born under one or another of the very large if not infinite number of possible alternatives to that policy will now never come into existence. Any ethical principle that declares that both implementing and not implementing any policy will each violate the rights of untold trillions of persons would be absurd. This absurdity demonstrates that the notion that unborn future persons have rights is based upon a fundamental mistake as to what rights are. Unless and until people are born they have no rights or even interests.

But what about those future persons who will be born into a perhaps uncongenial world as a consequence of a policy, and who may well not approve of some of its impacts upon their welfare? Do they have any rights or interests that might be violated by, for example, massive radioactive pollution of the oceans, or by fossil fuel consumption policies that would allow rampant global warming? The question of whether these future persons who will be born as a consequence of a radically present-oriented policy have any rights or interests that place ethical constraints upon our decision to pursue that policy is more complicated than was the comparable question for those future persons who will not be born as a result of the policy.

One would expect that the overwhelming majority of future persons who would owe their existence to the implementation of a policy would be very strongly in its favor, even if that policy had some catastrophic consequences for their well-being. Any policy undertaken, regardless of its long-term consequences for distant future generations, is ethically self-validating under conventional ethical premises because it would receive overwhelming if not unanimous approval from distant future generations since all of its consequences, good or bad, are necessary conditions of their existence. So we are under no ethical obligations based on the

rights or interests of those specific future persons who will be born as a consequence of a policy since by pursuing it we will not have harmed any person; they would, if possible, all give their approval to our conduct.

Let me return briefly to the ocean radioactive waste dumping hypothetical with which I began this essay. While those future persons born several centuries from now may well suffer very significant burdens from a decision made today to dump high-level radioactive wastes into the ocean in barrels that do not provide effective long-term containment, the substantial resource reallocations that such a policy would allow would have cascading person-altering consequences that would quickly be genetically significant and universal in their impact. Those potential persons who as a result of those consequences would now not be born would be nonexistent beings who would thus have no rights or interests that might be implicated by that decision to dump those wastes in the ocean. These future persons who will be born as a consequence of that ocean dumping policy would owe their very existence to it. They would of course much prefer existence without the need to grapple with a potentially serious radioactive waste problem, were that an option that they could choose, but the central insight of the problem of person-altering consequences is that this is not possible. The only choice that those future persons would be hypothetically be presented with is the bundled Hobson's Choice of life with the radioactive waste problem or nonexistence. If they would all choose life then we will not have injured the rights or interests of any specific person with our ocean waste dumping, and would of course have benefited existing persons with the resources saved. So why not do so?

It is thus clear that if a policy that has person-altering consequences is to be criticized on the basis of conventional ethical premises, criticism will have to be on some basis other than the argument that its long-term impacts would violate the rights or interests of future persons. The challenge is to identify such an alternative basis of a secular, consequentialist character for justifying ethical obligations to distant future generations.

B. Is There an Impersonal Basis for Ethical Obligations to Distant Future Generations?

Do we have any ethical obligations of an impersonal sort that are not related to the rights or interests of specific persons and that can be grounded upon conventional ethical premises? The question is only made difficult because the right answer – no – conflicts with a widely shared intuition. As discussed above, those future persons born as a consequence of whatever set of policies that we pursue would likely wholeheartedly endorse those policies because they are necessary conditions for their existence. It would make no sense to posit an impersonal ethical principle

that would give weight to any postulated discontent of those future persons who will be born with some particular features of their world that we have bequeathed to them, when any measures that existing persons could take to change those adverse features would, because of its person-altering consequences, eliminate those particular future persons' existence altogether. The only impersonal ethical principle that could be even a remotely plausible candidate for grounding a duty to future persons would be a principle that gave some weight to the postulated consequences for those potential persons who will not now be born, but who would have been born if that purported impersonal duty to leave to distant future generations a better world had been discharged.

Such an ethical principle would also have absurd implications. First, as previously discussed, those potential persons who will now not be born would be nonexistent beings without rights or interests. This impersonal principle would thus have to be based upon the results of a policy for potential persons other than impacts on their rights or interests. No obvious criteria come to mind. Second, to avoid giving inconsistent directives, the selected ethical principle would have to privilege one particular group of potential persons who would be born as the consequence of one policy over the immense, if not infinite, multitude of potential persons who would have been born as a result of one or another of the numerous other possible policy options. It is unclear how this ethical principle would apply to select this privileged group.

Third, to have any significance for decision-making, the ethical principle would have to accord sufficient weight to the interests of the chosen group of potential persons that it privileges so as to outweigh the massive adverse impact on the rights and interests of the very many future persons who would have been born if this purported impersonal duty was not discharged, but whose existence would be precluded by its discharge. Broad statements to the effect that such a duty runs to the human race, future generations, society, posterity, or other impersonal abstraction should not be allowed to obscure the fact that such a duty would in substance be an obligation to an arbitrarily designated group of potential persons, chosen from the vast multitudes of potential future persons who are all without rights or interests, and one that would be privileged over the rights and interests of those future persons who would actually be born were this so-called duty not discharged. This is all absurd; the obvious conclusion is that there are also no impersonal ethical duties that can be grounded upon conventional ethical premises.

This simple and seemingly unavoidable conclusion is in sharp tension with the widely shared intuition that we do have some sort of ethical obligations to distant future generations. We nevertheless must recognize the pervasiveness of person-altering consequences and that they completely undercut the idea of there being any ethical obligations to future generations that can be grounded on conventional ethical

premises. We must recognize that the choice that we face is either to continue to assess long-term policy consequences in conventional fashion, but now solely in terms of their impacts upon the rights or interests of existing persons, or else to depart from conventional ethical premises and conduct these assessments in accordance with religious or secular but non-consequential ethical criteria which may impose ethical obligations to distant future generations.

In his seminal work, Parfit has taken the position that there are still sufficient moral reasons for not doing acts that may predictably cause some future persons to be killed or injured, even when the person-altering consequences of those acts means that those adversely affected persons would otherwise never even exist. However, Parfit has candidly and repeatedly admitted that he was unable to formulate an acceptable theory that would justify this moral intuition. Numerous other scholars have also attempted to do so, but none of those efforts are successful in justifying an impersonal ethical principle that would anchor such obligations. Those writers generally claim that obligations to future persons exist and are grounded in an impersonal duty to the human race as a whole that should be viewed as an entity that meaningfully exists in a moral sense apart from the specific individuals that comprise it. They are, however, extraordinarily vague regarding the justifications for and contours of this claimed duty to the human race, and for the reasons I have discussed, I remain unconvinced.

C. Do We Have Ethical Obligations to the Members of Transitional Generations?

The person-altering consequences of a policy will obviously take a period of time to become universal. There will be a transitional period during which some but not all of the persons born will have genetic endowments that are different than what they would have been had the policy not been implemented, and during which some of the persons whose genetic endowments have been altered will be affected only in ways so insignificant that their fundamental personal identities are unaffected. What ethical obligations do current persons have to those future persons who will be born during this transitional period?

Those future persons born with significantly genetically altered identities due to the person-altering consequences of a policy should be regarded in the same manner as are the members of distant future generations discussed earlier, and are thus similarly not entitled to any ethical obligations on the part of current persons. On the other hand, those future persons who are born post-policy with the same (or almost the same, for practical purposes) genetic endowment they would have been born with absent the policy should have the same standing to have their rights and interests considered in deciding whether to implement

the policy as do current persons. The implementation of the policy would not be a necessary condition of their existence and identity, and there would thus be no absurdity involved in considering their probable desires in the decision-making criterion.

CONCLUSION

The pervasiveness of person-altering consequences has very significant implications for assessing whether our policy choices are constrained by ethical obligations to future generations. I have concluded that except for the rapidly diminishing number of future persons born during a relatively short transitional period following the implementation of a policy whose fundamental genetic identity will not be significantly altered by those consequences, we have no ethical obligations to future persons that can be grounded on conventional ethical premises of a secular, consequentialist sort.

This is a troubling conclusion, but a panicked reaction is unwarranted. To the extent that existing persons do wish to have the welfare of distant future generations taken into account in policymaking, whether on religious grounds, or as an act of charity, or on the basis of secular but non-consequentialist premises, or even on the basis of the (erroneous) view that ethical obligations to distant future generations can be derived from conventional ethical premises, my view is that under our current conventional, non-paternalistic decision-making criteria those preferences should be given the same weight in making those decisions as are those persons' other expressed preferences of comparable intensity. Such preferences are currently strong and pervasive. As a practical matter, therefore, the insight that ethical obligations to the members of distant future generations cannot be grounded in conventional ethical premises that is provided by contemplation of the problem of person-altering consequences will probably not have immediate impact upon our deliberations regarding policies with substantial long-term consequences such as ocean radioactive waste disposal or global warming mitigation decisions.

However, to the extent that the consensus that present generations should continue to make sacrifices to benefit distant future generations wanes in response to greater recognition of the ethical implications of the pervasiveness of person-altering consequences, our policymakers should accordingly adjust their decision-making criteria to reflect this changing attitude. Such adjustments obviously could have important consequences of one sort or another. They could result, as Parfit fears, in our having a much greater willingness to take measures that would enhance the welfare of existing persons without regard to the consequences for distant future generations. However, the adjustment could instead take the form of our more explicitly incorporating into our decision-making criteria

religious or secular but non-consequentialist ethical premises that would justify our continuing to make some sacrifices on behalf of distant future generations. Only time will tell.