



“Summary of article by Brian Barry: Intergenerational Justice in Energy Policy” in Frontier Issues in Economic Thought, Volume 1: A Survey of Ecological Economics. Island Press: Washington DC, 1995. pp. 353-356

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## **“Summary of article by Brian Barry: Intergenerational Justice in Energy Policy”**

This article proposes a criterion for compensation of future generations by the present generation for the consumption of exhaustible natural resources.

### **THE NATURE OF THE PROBLEM**

All mineral resources raise problems of intergenerational justice due to their finite quantities, but fossil fuels raise two special problems. First, unlike other mineral resources, fossil fuels cannot be reused. Secondly, much of the known stock of fossil fuels is difficult and expensive to obtain and deliver to the point of use, so we can expect steadily increasing costs. In addition, in spite of the limited information on oil reserves, it is reasonable to suggest that the world cannot continue its consumption of oil at present rates.

Problems of fairness do not arise if any generation can use as much of a resource as it feels is necessary and still pass on adequate quantities to succeeding generations. However, by definition the problem with nonrenewable resources is that the more one generation consumes, the less future generations will have. More importantly, they will have fewer options as well, other things being equal. Therefore we need just criteria for the use of nonrenewable resources.

### **A SOLUTION AND ITS DEFENSE**

One solution for the problem posed above is for the present generation to compensate future generations with improved technology and increased capital investments to offset the effects of resource depletion. This "offsetting" could either be in terms of utility - i.e., ensuring that future generations can attain the same utility level as they would have if resource depletion had not occurred - or in terms of the "replacement of the productive opportunities we have destroyed by the creation of alternative ones."<sup>(17)</sup> The second approach suggests that resource depletion reduces the productive potential of future generations, and they should be compensated for this loss.

This paper argues that the opportunities criterion should be adopted rather than the utility criterion. The basis for this position is valid for all contexts in which questions of justice arise; its application to intergenerational issues is only a special case. To see this, we should first consider the case for using the utility criterion in more detail.

The argument for using utility as a criterion stems from the general belief that, in the final analysis, what really matters is the level of satisfaction, happiness or utility that individuals experience. A generally recognized problem with this criterion is that it is difficult to define objectively a measure of happiness that is suitable for public policy purposes. However, there are additional objections to using utility as a criterion even if an objective measure of happiness does exist. Consider the case of two people who do the same work, at the same level, equally well. Justice demands that they be paid the same amount, irrespective of the level of happiness that each derives from his income. The fact that one of them gets more satisfaction from his income than the other would not be justification for transferring income from one to the other. Based on their work, these individuals have a claim to resources, not to a utility level. When applied to future generations, this line of reasoning suggests that we should be concerned with the choices available to future generations - in terms of productive potential - rather than the level of happiness they will achieve. Thus the opportunities criterion is more relevant than the utility criterion.

This analysis leads to two questions:

- 1) Why should future generations not be left worse off than they would be if we did not deplete natural resources?
- 2) How do we establish what the opportunities of future generations would be if natural resources were not depleted?

The answer to the first question is simply that there is no powerful counter argument; there is no compelling justification for the present generation to claim a larger share of natural resources than future generations, so justice demands that every generation should get an equal share.

The answer to the second question is both important and difficult. It is important because if we want to compensate future generations for the loss of opportunities caused by our use of natural resources, then we must know what their opportunities would have been had we not used the resources. One extreme solution suggests that if we leave future generations with a few picks and shovels to compensate for the resources we have consumed, then we have increased their productive potential, since "they would then be in a better position to exploit natural resources than if they had to use their bare hands."<sup>(22)</sup> This extreme suggests that the capital stock bequeathed to future generations is compensation enough. The problem with this approach is that the present generation did not create all existing capital and technology, but inherited a large part of it from past generations. Inherited capital and technology are similar to natural resources in that all are passed down from previous generations. Therefore, in addressing the problem of natural resource depletion and compensation, we must consider how weights can be assigned both to the capital stock inherited by a generation, and to the capital stock it passes on. While these questions need further thought and investigation, the basic principle for determining compensation should be to maintain the productive potential of future generations.

## **PRACTICAL PROBLEMS**

There are three practical problems associated with the abstract discussion outlined above:

- 1) **How can the compensation criterion be made workable?** For some resources we can compensate directly for our use. For example, if we use 10% of oil reserves, then we can compensate future generations by developing technologies that make it possible to extract 10% more oil, leaving them with as much exploitable oil as the present generation has. When direct compensation is not possible, other avenues for resource substitution must be developed.
- 2) **Where do issues of intragenerational distribution fit in?** Some people have raised objections to worrying about future generations when there is widespread poverty in this generation. This objection would be valid if intergenerational and intragenerational justice were incompatible, but they are not. However, we are still left with the problem of how to deal with issues of intragenerational justice. If we apply the arguments made for intergenerational transfers to intragenerational issues, then it is clear that natural resources and technology inherited from the past are the "common heritage of mankind." Poor countries therefore have a claim on rich countries.
- 3) **How does one deal with issues related to uncertainty in relation to policies which have results in the future?** In some cases, the risks and benefits for future generations associated with alternative actions in the present are uncertain. Standard techniques of decision making under uncertainty cannot be used to determine whether the actions should be undertaken, since the probabilities associated with different outcomes are unknown. The only just solution to this problem is not to undertake the actions if the risks might include widespread and disastrous consequences in the future.