

SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL PROBLEM: A PHILOSOPHICAL ANALYSIS

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ABSTRACT

Different forms of inequality, resulting from anthropogenic environmental changes, constitute a large part of the environmental problems. Environmental benefits and harms are not distributed equally across and within national boundaries. Such benefits and harms are unevenly distributed within and between generations. The environmental harms are caused by our current practices and will afflict our future generations, while benefits are enjoyed by the present generations alone. The concepts of “sustainability” and “sustainable development” have been developed to address such problems of inter-generational equality. The concept of sustainability began its career in the context of sustainable agriculture and sustainable ecological system. Any account of sustainability must answer questions about what should be sustained, for whom it is to be sustained and why. In the mainstream economic literature, the answer to the first questions is a certain level of human welfare which is understood as preference satisfaction. This definition leads to the further questions as to what is required for such maintenance of this level of human welfare over time. The main aim of this article is to discuss these entire problems and provide some possible solutions to overcome this challenge positively.

Keywords: *contextualism, economic system, holistic, integrity, realistic, sustainability*

INTRODUCTION

The dictionary meaning of the word “sustainability” is “keep going continuously”, “involving the natural products and energy in a way that does not harm the environment”. Thus, sustainable development would mean continuous development in harmony with nature. The concepts of “sustainability” and “sustainable development” have become centrally important in environmental

discourse. These concepts were mainly used in the context of sustainable economic development. In 1987, the world Commission on Environment and Development, chaired by Gro Harlem Brundtland, said: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their needs” [1]. In spite of its emphasis on the problems of inter-generational equity, two crucial notions arose out of this report:

- a) the essential needs of the world's poor and
- b) the idea of limitation imposed by the state of technology and social organization on environment's ability to meet present and future needs.

The main objectives of the study are to discuss the concept of sustainability in the context of sustainable agriculture and sustainable ecological system. Any account of sustainability must answer questions about what should be sustained, for whom it is to be sustained and why. In the mainstream economic literature, the answer to the first question is a certain level of human welfare which is understood as preference satisfaction. This definition leads to the further questions as to what is required for such maintenance of this level of human welfare over time. The main aim of this article is to discuss these entire problems and provide some possible solutions to overcome this challenge positively.

DISCUSSION

The terms "sustainability" and "sustainable development" are used regularly in environmental discourse like the policy documents of governmental agencies and business corporations. Such usage of the terms has generated suspicion in the sense that by juxtaposing "development" or "growth" with "sustainability" one can very well hide the possibilities of conflicts between continued economic growth and environmental goals. However, the term "sustainable" has led many thinkers to ask questions about what it is supposed to mean: the sustainability of what, for whom and why? Welfarist tradition of economic sustainable development claims a particular economic and social development that maintains minimum level of human welfare. Thus, sustainable development "becomes equivalent to some requirement that well-being does not decline through time" [2].

There are some assumptions involved in this characterization of sustainable development as a domain concept of human well-being:

1. The first one highlights what is required for the maintenance of a certain level of human welfare over time. Welfare economists assume that well-being consists in the satisfaction of preferences.
2. The second assumption concerns as to what is required for the maintenance of a certain level of human welfare which is formulated in the language of capital. It holds that the maintenance of a certain level of human welfare across generations requires each generation to leave a stock of capital assets which should be no less than it receives. In other words, the capital wealth or the productive potential should be constant or at least should not decline over time. This is known as the criterion of the constancy of total capital.

Wilfrid Beckerman criticizes the concept of sustainable development. He points out that if sustainability is defined in terms of equitable distribution at a point of time and also, over time, then the concept scarcely adds any new dimension to the distributional considerations entertained in welfare economics. Moreover, the important question is: how is this concept relevant to environment and environmental sustainability? [3]. In response to such objections supporters of sustainable development maintain that this concept is required in economics since it insists on the important role of particular states of the natural world for the welfare of future generation, and this position is stated in terms of capital. Thus, a distinction has been made between natural and manmade capital which is the source of two types of sustainability requirements:

1. Weak sustainability: the requirement that overall capital, consisting of both natural and manmade capital, should not decline (this is known as the constant total capital view), or
2. Strong sustainability: that natural capital should not decline (this is known as the constant natural capital view) [4].

Examples of manmade capital are physical items like cement, roads, building and machines. Human capital like knowledge,

capabilities and skills are also regarded as manmade capital. Natural capital is taken to comprise physical items like naturally generated organic and inorganic resources as well as biodiversity, eco-systemic functions, genetic information and waste assimilation capacity. Natural resources are divided into renewables and non-renewables. Of particular importance is non-renewable natural capital since non-renewables like fossil fuels will become unavailable if we use it for a long time. Such identification and itemization of natural capital or resources, for A. Holland, is a clear indication that this approach to sustainability is mainly based on the needs of human society. Alan Holland, following Bryan Norton terms it as the “social scientific” approach [5]. Presently, we shall consider, first, whether these two versions of sustainability, the “social scientific” view, can provide independent justifications for the protection of nature and secondly, how could we provide such justification by providing a different interpretation of the Brundtland definition of sustainability.

The theory of sustainability, according to the first version, says that the total capital should not decline and also that we should avoid irreversible loss. This last prescription is thought to provide reasons for the protection of natural assets since natural capital is most subject to irreversible loss. The question is: why should irreversible loss be a problem when overall capital does not decline? No additional justification is forthcoming from this version.

The second version of sustainability has two variant forms. One form understands capital in simple physical sense and so stipulates that the physical stock of natural capital should not decline over time. This version faces certain problems like determining the level of physical stock in the area of living things since they are dynamically related [5]. This version might also be taken as prohibiting any use of non-renewable resources. However, the most important aspect of this version is that one of the major results of following its prescriptions is the protection of nature: even if it fails to provide explicit reasons for protecting those

aspects of nature which are not useful to humans. Thinkers like Holland try to retain this version after providing these reasons. We shall discuss some of these reasons and try to add some. The other form stipulates that what has to be kept constant is not the natural capital themselves but their economic value. This form requires that there should be no decline in the flow of services yielded by the stock of natural capital. This approach is known as “constant natural capital approach” which is now favoured by David Pearce and many other economists.

However, the important debate between these two versions of sustainability centres on the extent of substitutability between natural and manmade capital. Generally weak sustainability takes it that manmade and natural capitals are basically substitutable whereas strong substitutability assumes that these two are mutually complementary. In his reply to the objection that weak sustainability claims infinite substitutability Wilfrid Beckerman affirms that weak sustainability allows for substitutability between different forms of natural and manmade capital, provided that, on balance, there is no decline in welfare. It does not assert total substitutability of natural and manmade capital.

Holland thinks that both versions of the theory of sustainability are primarily based on the ideal of securing justice for present and future generations and hence, its prescriptions do not necessarily coincide with the prescription for the protection of nature. Holland identifies four arguments which attempt to show that the focus on preserving natural capital is implied by the considerations internal to a theory of justice espoused by the “social scientific” view of sustainability [5]. The advocates of this version argue that if we preserve assets for which no substitute can be found, we shall secure justice for future people. Similarly, if in the face of uncertainty we take the course of minimizing risks, if we eschew irreversible developments and if we take effective steps to reduce inequities, we shall secure justice for future people. Holland thinks that the last concern alone seems effective since natural

resources are vitally linked with the livelihoods of the poor. As to the first argument it can be said that merely preserving the non-substitutable will not result in the preservation of natural capital since much natural capital is substitutable. Moreover, there are some, non-substitutable items for which no human interest is found. Indifference towards such items, hence, will not provide any reason for the protection of those items in nature.

The second argument emphasizes the wisdom of preserving those features of natural environment about whose importance we are not sure. But this piece of reasoning does not provide any justification for the protection of those natural substances whose properties we understand and for which we have manmade substitutes. The third argument concerning irreversibility leads to an extreme form of non-substitutability because we cannot completely avoid using non-renewable items. Thus, the prescriptions for actions to secure justice for all people do not necessarily involve actions required to secure the environmental interest in nature. Our environmental interest in nature is not fully explicable in terms of economic interest.

Attempts have been made by economists to provide justification for the theory of strong sustainability within the framework of welfarist tradition. This tradition espouses a particular theory of human welfare which is based on preference utilitarianism. In this view, preference satisfaction is constitutive of human welfare or human well-being: the stronger the preference satisfaction, the greater the human welfare. In the sphere of preference, trade-offs are not essentially constrained. Substitutability between preferred goods is a common phenomenon.

At this point a few words about substitutability and its acceptability are in order. Economists make a distinction between technical and economic substitutability. Any good "A" can be a technical substitute for another good "B" if "A" performs the job that "B" does. In this sense only a specific good alone can a substitute for another. However, even if a substitute performs the same function as the

original good, it does not guarantee its acceptability. Again, a very general concept of economic substitutability is used in the theory of consumption in economics. In this sense two goods, for a person, are said to be economically substitutable if the replacement of one by the other does not change overall welfare of the person concerned. Here two goods are substitutable not in the sense that they do the same job but in the sense that the job done by the one is as good as the job done by the other. This creates the possibility of a wider range of substitutability. However, it can be asked: why one alternative is as good for a person as another? The answer to this question depends on what account of well-being or welfare one subscribes to [6].

The mainstream economic literature assumes a preference satisfaction account of well-being. According to this view, welfare or well-being consists in the satisfaction of preference. If two goods are equally preferred by a person, then one is as good as each other for that person. This paves the way for a wide range of substitutability between different goods because the person concerned remains indifferent between them. The economic interpretation of strong sustainability, thus, cannot provide reasons for the protection of natural assets or for the non-substitution spoken of in the "physical stock" interpretation of strong sustainability. Since the economic interpretation accepts the preference satisfaction mode of well-being, or welfare, it assumes that welfare is the only value in which all values can be measured and also that whatever contributes to welfare is exchangeable [6].

Some thinkers have rightly pointed out that the true basis of non-substitution, and strong sustainability, can be provided by the ethical belief in "value pluralism". It is, as Michael Jacobs has put it "belief that human beings need a variety of different kinds of goods, services, experiences and relationships in order to achieve well-being" [7]. Thus "welfare function is multidimensional". "The environment, it is being claimed, provides humankind with goods (social and cultural as well as individual) which are necessary for

well-being: without them both individual lives and societies are impoverished, an impoverishment for which no substitution of human-made benefits can make up” [7]. Thus, what is required is a shift from the preference satisfaction model of well-being and sustainable development to a model that promotes multidimensional well-being. Multi-dimensional well-being is often identified as satisfaction of those needs which enable a person to have a minimally flourishing life. The ethical basis of sustainable development is to be found in such interpretation of the term “need” used in the Brundtland definition. It cannot be denied that to live well we need particular forms of personal relationships, autonomy, health, knowledge of the world, a good relation with the non-human world, aesthetic experience and many others. If our well-being is formed by these goods, then we cannot say that goods are substitutable across different dimensions of well-being - we do not remain indifferent between them.

Some mainstream economists, however, made attempts to defend natural capital by counting in its “existence value”. They have also acknowledged that we are highly averse to environmental losses. So, they have also counted loss aversion as an important requirement for sustainability. However, there are aversions and preferences which are considered by them as discreditable. Hence when they count in peoples’ aversion to environmental loss they can be taken as considering them as components of human welfare. This obviously involves a particular evaluative commitment that goes beyond the preference utilitarian interpretation of sustainability or sustainable development. In such counting Holland detects a “simple ascription of value to nature” [5]. Therefore, the non-substitution of natural capital can be accounted for if we consider the obvious fact that we have a special interest in natural environment for the direct benefits it brings to us. Expanding on this aspect, Holland observes that one of the fundamental concerns of sustainable development should be to maintain “enough of the particular historical forms of association and their historically particular components all the better if they have the mark

of nature on them” [5].

Thus, sustainable development must be based on environmental sustainability, which includes due consideration of our environmental interest in nature without which we shall detract from the aggregate of human welfare. As to what should be sustained for the safeguard of our interest in nature, Holland observes: “What is handed down and maintained does need to remain in the process, something of its original form and something of its identity: there need to be continuities of form, which constitute what may be called “units of significance” for us, as well as continuities of matter [5]. Clearly, such units of significance, like “irreversible natural capital”, are non-substitutable.

We cannot deny that Holland’s concept of “units of significance” does provide an important reason for the protection of natural assets. But this concept may attract the objection that it paves the way for the re-introduction of subjective preference. Considered from this aspect, Bryan Norton’s approach, which he terms as “scientific contextualism” is more realistic. He avers that Brundtland’s reference to obligation of the present generation to future generations should not be understood in terms of individual satisfactions and preferences alone. He proposes to interpret such obligations holistically. He thinks that the exact nature of these obligations should be decided on the basis of scientific understanding. We must, first, understand the impacts anthropogenic activities have on their larger context. Norton says: “if, following Aldo Leopold’s land ethics, we insist that this larger context can only be understood as a complex ecological system, sustainable activities are activities that do not destabilize the large-scale dynamic, biotic and a biotic system on which future generations will depend. Scientific contextualism applies a variety of moral rules, placing priority on different values in different situations” [8].

According to Norton, contextualism is organicism. The biota is viewed as “a living system, which has an internal, self-

perpetuating organization". Technology and population growth have increased human capability to affect adversely the systems of ecology or "the processes sustaining self-organizing systems through time". Norton's contextualist approach highlights the commitment to protect the health and integrity of ecological systems. It also acknowledges that the self-organization of large systems present the context in which we have evolved. These systems alter more slowly than our culture. On the basis these considerations Norton provides this definition: "Sustainability is a relationship between dynamic human economic systems and larger, dynamic but normally slower changing ecological systems, such that: (a) human life can continue indefinitely, (b) human individuals can flourish, (c) human cultures can develop, but in which (d) effects of human activities remain within bounds so as not to destroy the health/integrity of environmental context of human activities" [8]. This interpretation of sustainability prescribes balancing of short time economic and long-term ecological concerns. Economic activities should be viewed as one sort of ecological activity and occurs within the economic system of one species [8].

CONCLUSION

The holistic approach of "scientific contextualism" will be able to evaluate properly the place of subjective preferences of individuals. Hollands's concept of the "units of significance" requires to be strengthened understanding of the integrity of environmental context of human activities. The scientific understanding of the processes that sustain the self-organizing larger ecological systems can help us effectively to protect our environmental interest in nature.

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