# The Environment, Future Generations, and John Rawls

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#### I. Introduction

The environment provides valuable and essential resources for human well-being. The consequences of a present society directly influence future generations. It is a frightening possibility that present generations could exhaust certain natural resources and deplete ecosystems to a point where future generations do not have the same environmental opportunities or well-being as those in the present. Justice as fairness ensures equal freedoms and fair situations among all people, including future people. All people inherit the earth and its resources equally. If present generations are to sustain equality and ensure well-being of future generations, they must preserve the environment and ensure its existence for the future of society. Justice requires it.

When a moderate scarcity of desirable resources exists, a conflict of interests arises. If all people decide to pursue their interests and use all the resources in a free-for-all manner, undoubtedly a chaotic state would result. Thus in order to avoid a chaotic state, a principle of regulation is needed.

The environment exists as a desirable resource under moderate scarcity. All humans desire it in one form or another and it is not unlimited. Its fair use depends on a just principle regulating both human freedom and environmental resources to ensure a fair distribution. If this regulation is to be just, then it must be one that emphasizes equality and fairness for all.

Webster's Dictionary defines "justice" as: "the quality or act of being fair." John Rawls adopts this definition of justice to form his theory of "justice as fairness." For Rawls, a fair society is one is agreed upon by all and emphasizes the equal basic liberties for all citizens. He relies on the basic intuition and reasoning capability of all human

beings for judging what is fair. Therefore, logical and reasonable beings who are seeking to construct a fair society would undoubtedly choose Rawls's theory of justice.

In *A Theory of Justice*, Rawls examines how the basic structure of society and its institutions handle these circumstances of justice. He states, "The concept of justice I take to be defined, then, by the role of its principles in assigning rights and duties and in defining the appropriate division of social advantages. A conception of justice is an interpretation of this role" (TJ 9). Rawls focuses on justice within the institutions governing society and their principles, also known as distributive justice, which is the primary topic of this thesis.

He defines justice as "a characteristic set of principles for assigning basic rights and duties [in a society] and for determining what they take to be the proper distribution of the benefits and burdens of social cooperation" (TJ 5). Justice, in this social sense, is the first virtue of social institutions and should seek to preserve, never violate, those natural rights equal among all humans. Rawls extends his theory to include future generations and their rights, liberties, and interests, and how a society's policies are to justly distribute those goods essential to everyone's interests across time. He asserts that the basic structure of society should reflect a fair system of cooperation not only within a particular generation, but between generations as well.

To summarize, Rawls proposes that if mutually self-interested individuals are placed in an initial situation where they are ignorant of personal characteristics or arbitrary preferences, they will choose principles emphasizing equality and liberty and a method of distribution of goods that is fair for all. Since time placement is an arbitrary preference, the individuals in the initial position are ignorant of their time placement and

therefore will choose a principle of intergenerational justice, ensuring that justice as maintained by the just basic structure will exist in the future.

Rawls seeks to distribute those primary resources not only within the present generation, but between generations as well. His theory implies that a principle achieving justice for future generations has four objectives. These are: to preserve the just basic structure, its institutions, and the basic liberties within it over time; to ensure that everyone in the society has a sustainable living situation for a healthy well-being; to ensure that the expectations of the least-advantaged group in each generation will continually increase; and to preserve the culture. He invents the just savings principle to achieve these goals. This theory of intergenerational justice, with these four objectives, requires preservation of the environment. In order for the objectives to be met, a policy that regulates present generations' use of the environment (in order to ensure that the environment is preserved for future generations) must be implemented.

Though his theory requires preservation of the environment, the just savings principle as Rawls states it is inadequate for its preservation – it is too ambiguous. The just savings principle is a principle designed to "save," yet depending on one's definition "save," the principle could have several meanings.

Justice is needed for the sake of regulating human behaviors in order to ensure that scarce resources exist in the future. An adequate principle of intergenerational justice for the environment must account for negative and positive environmental actions and reflect the notion of sustainable development. The latter sections of this paper discuss this point in more detail.

I conclude this thesis by introducing a revised and more specific principle of intergenerational justice into Rawls' theory: a principle that complies with his notion of intergenerational justice. This principle is directed solely towards environmental preservation. I call this the "just 'environmental savings' principle." This is not to say that the just savings principle is completely superfluous — on the contrary, the just environmental savings principle seeks to revise this principle to more specific environmental terms. As a principle within Rawls's overall theory, this just environmental savings principle (JESP) seeks to preserve the environment for future generations in a way that emphasizes equality of liberty for both present and future generations.

I would like to note that my thesis's main point is not to present an entirely new and complete argument as to why we should preserve the environment, and more importantly, I do not argue that the only reason we should preserve the environment is for the good of humanity. Personally, I do believe that we should preserve the environment for a number of reasons, such as the intrinsic value of nature. However, this is not the focus of the paper. I focus on one particular theory of justice, that of John Rawls in *A Theory of Justice*, and argue that it must incorporate the environment to achieve justice between generations. Rawls, for example, does not address the intrinsic value of nature and thus neither does this paper. The main point of the thesis is to argue that justice requires preservation of the environment. Future generations need the environment and it is unjust for those preceding generations to deplete it. As Rawls argues, humans have an obligation to ensure the well-being of future generations. This thesis is an exploration into Rawls's theory of intergenerational justice and whether this method is applicable to

the environment and whether it does, indeed, satisfies the well-being of future generations.

#### II. A Theory of Justice

Fair principles must be chosen in a fair situation. Since all the members of a society are completely equal citizens, equally possessing basic liberties and natural rights, the fairest situation is one where individuals choose principles based on reflective, logical judgment and not on those particular individual attributes that could favor one's own position above the other citizens. According to Rawls, the fairest situation for the people of a society to determine their principles is a situation known as the "original position." This is a hypothetical situation where all members of society are present and together agree to the particular principles to form a social contract. It is only fair that all members of the society are present and agree unanimously to the principles governing their society.

To ensure complete equality in the original position, not only do all members have an equal voice in the decision, but also those arbitrary factors that allow one to benefit from a particular situation not related to merit are completely absent. For Rawls, these factors are "deep inequalities" and should never play a role in the assignment of basic rights and duties or in deciding principles to govern a society (TJ 4-5). "It seems reasonable and generally acceptable that no one should be advantaged or disadvantaged by natural fortune or social circumstances in the choice of principles" (TJ 16).

Therefore in this original position, all individuals are deprived of those contingencies that set people at odds, since they are deep factors of inequality. For this reason, the members are placed under a "veil of ignorance" to ensure that no one is advantaged or disadvantaged in an unfair way. The veil's purpose is to "nullify the

effects of specific contingencies which put men at odds and tempt them to exploit social and natural circumstances to their own advantage" (TJ 118).

To fully portray the situation, I present the following metaphor. A group of people is gathered together in a conference room in order to establish a just social institution for their new society. They are all mutually disinterested, yet desire the best possible situation for their own interests. These interests, however, are limited under a "veil of ignorance." In other words, the people in the room know nothing about their own individual lives: they are ignorant of their family situation, place in society, personal characteristics, capabilities, talents, income, prejudices and passions. They are ignorant of any knowledge that would permit one person to choose principles that would benefit her personal situation and not others. In this sense, all are completely equal. The veil leaves "aside those aspects of the social world that seem arbitrary from a moral point of view" (TJ 14).

Under the veil of ignorance, it is impossible for one to design principles of justice in favor of his particular, personal condition. Because the members are ignorant of personal traits, they are also mutually disinterested in other people. In other words, Joe does not care about Sue or anyone else in the society. Though the individuals are mutually disinterested and ignorant of self-attributes, they do and will act rationally as self-interested beings, as any human being would act in a state of nature, desiring to further their own personal situation. So Joe, though he has no concern for Sue's personal condition, cares much about his own.

<sup>&</sup>lt;sup>1</sup> This presentation of the original position was based on Russ Manning's article "Environmental Ethics and John Rawls' Theory of Justice."

The original position creates a situation where all people are completely equal, yet act self-interestedly. "Given the circumstances of the original position, the symmetry of everyone's relations to each other, this initial situation is fair between individuals...as rational beings" (TJ 11). If in this scenario, the members unanimously agree upon certain principles to regulate their society, then it necessarily follows that those principles are ones of fairness and equality. This explains "justice as fairness:" it conveys the idea that the principles of justice are agreed to in a social contract situation that is fair based on reason and not on natural endowment or social circumstance.

The principles chosen in this original position ensure that whatever social institutions follow will be just, so long as they embody the principles chosen in the original position, since the individuals are cooperating as free and equal persons in a fair situation. "A society satisfying the principles of justice as fairness comes as close as a society can to being a voluntary scheme, for it meets the principles which free and equal persons would assent to under circumstances that are fair" (TJ 12).

Rawls asserts that in this original position, individuals will choose his Two

Principles. They are integral to Rawls's theory, meant to distribute primary goods in a

just fashion. Primary goods are refer to those goods necessary for living and desirable by
all. They include the goods that any rational person would want, despite his personal
interests or plan of life, and would want more of rather than less. They refer to the goods
that contribute directly to one's well-being. They are further divided into two categories:
basic liberties and economic/social gains.

The first principle chosen in the original position states: "Each person is to have an equal right to the most extensive scheme of equal basic liberties compatible with a similar scheme of liberties for others." Thus, it distributes basic liberties: political liberty and freedom of speech and assembly; liberty of conscience and freedom of thought; freedom of the person, freedom from psychological oppression and physical assault and dismemberment; the right to hold personal property and freedom from arbitrary arrest and seizure (TJ 53-55). The first principle takes precedence over the second principle because it is unjust and irrational to exchange anything economic for one's basic liberties. The first principle protects one's basic liberties. Since the basic liberties are equal among all beings, the first principle equally distributes these liberties among all citizens.

The second principle, also known as the difference principle, states: "Social and economic inequalities are to be arranged so that they are both a. reasonably expected to be to everyone's advantage and b. attached to positions and offices open to all." It seeks to justly (not necessarily equally) distribute the economic and social goods, such as power, opportunities, income, and wealth within the society. This distribution, even if unequal, is just if the least advantaged still has a reasonable and sustainable living situation. So, while the basic liberties are distributed equally among all citizens, the economic/social gains could vary in distribution to ensure that even the least advantaged members of society attain the proper amount of these goods for a healthy well-being (TJ 79-81).

Together the two principles characterize justice as follows, "All social values [all primary goods] are to be distributed equally unless an unequal distribution of any, or all, of these values is to everyone's advantage" (TJ 54). Since the original position is a situation of pure equality where all agree to certain principles, it follows that human beings – once in society – have a "natural duty to justice." "Natural duties" are not

necessarily connected with the rules of institutions, but hold as duties between all persons, because all persons are born as equal beings of moral value. He gives the following examples of natural duties: "the duty of helping another when he is in need or jeopardy, provided that one can do so without excessive risk or loss to oneself; the duty not to harm or injure another; and the duty not to cause unnecessary suffering." Thus, from the standpoint of justice as fairness, all people have a fundamental natural duty to justice that "requires us to support and to comply with just institutions that exist and apply to us. It also constrains us to further just arrangements not yet established, at least when this can be done without too much cost to ourselves" (TJ 98-99). For Rawls, a just society is a fair system of cooperation between beings of equal moral value, regulated by these just institutions. It is a system agreed upon by all and, for this reason, all have a natural duty to uphold the system, just institutions, and the principles embodied within them.

Intergenerational Justice<sup>2</sup>

One important factor of inequality that should be kept hidden under the veil of ignorance is one's time placement within the society. According to Rawls's theory of justice as fairness, it is unfair for one generation to benefit from certain social circumstances simply because of their time placement in the society. Time placement is not merit and the benefits of time placement are not benefits of desert. "In the case of society, pure time preference is unjust: it means...that the living take advantage of their position in time to favor their own interests" (TJ 260). Time preference has no ethical

<sup>&</sup>lt;sup>2</sup> The principle of intergenerational justice is a principle that any member of society of any generation would want the preceding generations to have followed. "Rather than imagine a direct agreement between all generations, the parties can be required to agree to a savings principle subject to the further condition that they must want previous generations to have followed it" (PL 274).

value and is arbitrary with regard to determining what is fair. Therefore, if in the original position members are ignorant of their generation placement, then it follows that they would adopt a principle of intergenerational justice.

Rawls assumes that all present in the original position are ignorant of which point in time they will exist in the society. They know that there is a possibility that they could exist in a later generation, a hundred years after the implementation of the society, or in the initial generation. Therefore, they would adopt a principle to ensure that justice, equality, and the preservation of one's basic liberties and rights will still exist, even one hundred years later.

The original position, then, requires one to perceive the just basic structure of a society as existing through time, concerning the social system as a whole. It requires one to perceive society as on a path over time in which all generations along the path should be treated justly and should live a healthy well-being as long as the society exists. Rawls states that "the life of a people is conceived as a scheme of cooperation spread out in historical time. It is to be governed by the same conception of justice that regulates the cooperation of contemporaries...no generation has stronger claims than any other" (TJ 257).

Natural duties are also applied to intergenerational justice as well. Once out of the original position, members of the society have the natural duty to uphold the just basic structure and all its principles – including the principle of intergenerational justice. Once in the society, they have the natural duty to ensure justice, equality, and basic liberties for

the future as prescribed in the principle, despite their personal conditions or interests, since they chose the principle in a situation of fairness.<sup>3</sup>

This explains Rawls's notion of justice as extended over time to include future generations. Those in the original position would choose principles to extend justice to future generations, since they know that they could be in a future generation. In order to attain justice in future, there are certain objectives a principle of intergenerational justice must fulfill. The following section presents these objectives in a "framework" for a principle of justice over time and how a principle is to fulfill the objectives outlined in Rawls's notion of justice.

The Framework for a Principle<sup>4</sup>

In general, a principle achieving intergenerational justice is one that accounts for the well-being of future generations. It requires that present generations save a little of their own well-being to give to later generations, 'just in case' the present state of society may not provide them with a healthy well-being. To achieve intergenerational justice, Rawls states four objectives must be met by the particular principle adopted.

First and perhaps most importantly, it must preserve the just basic structure and just institutions over time. In doing so, the principle ensures the basic liberties of future generations. "The parties must throughout keep in mind the objective of [the intergenerational principle of justice], namely, a state of society with a material base sufficient to establish just institutions within which the basic liberties can all be realized" (256). Rawls includes in the basic structure of society all the major institutions

<sup>&</sup>lt;sup>3</sup> The motivation for choosing a principle in the original position is that the generation is ignorant of time placement, and the motivation for abiding by the principle chosen once outside the original position is this natural duty. For once individuals are outside the original position, it may be assumed that their rationality upon recognizing the principle as one of fairness overcomes their sense of self-interestedness, which is more predominant in original position than in reality.

<sup>&</sup>lt;sup>4</sup> The idea of a "framework" for a principle of intergenerational I derived from Visser t'Hooft's book.

(institutions meaning "a public system of rules") of a society that distribute rights, duties, and economic and social arrangements (TJ 6). He defines the "just basic structure" as a system that "is to secure citizens' freedom and independence, and continually to moderate tendencies that lead, over time, to greater inequalities" (JF 159). The basic structure of society is the primary subject of justice for Rawls, and therefore an intergenerational principle must ensure that this basic structure and the institutions within it are just for future generations. Extended across time, a principle that preserves the basic structure is one that ensures freedom, independence, and equality over time. It guarantees that the system of society, throughout its existence, provide all its citizens, whether in the present or in fifty years, the same extent of freedom, independence, and equality.

Second, the principle must ensure that the "least advantaged" group in every generation has a healthy, sustainable living situation. The principle should serve as a method "designed to improve the standard of life of later generations of the least advantaged, thereby abstaining from the immediate gains which are available" (TJ 258). Rawls states "improves" in order to make possible "the more or less steady improvement in the general standard of living of everyone" (TJ 263). A principle of intergenerational justice focuses on improving the standard of life and preserving those goods necessary for the well-being of the least advantaged in the later generations. In some cases, the least well-off could be living in conditions that do not support a healthy well-being. These conditions could refer to unhealthy conditions such as poverty, inability for a child to receive an education, or a neighborhood with a polluted water source. A principle of intergenerational justice prevents such circumstances.

Also in regard to the least advantaged over time, a third objective arises. "The appropriate expectation in applying the difference principle [over time] is that of the long-term prospects of the least favored extending over future generations" (TJ 252).<sup>5</sup> Within the present generation, the difference principle distributes goods according to the maximum expectations of the least-advantaged group. In this sense, the prospects of the current least-favored will always improve. By extending this principle to future generations, the present must take into consideration the long-term prospects of that least-advantaged group over time. In other words, the members of the least-advantaged group of each generation all have expectations to live a little better life and improve the condition of their lives. A principle should be certain that this expectation exists in every generation for every least-advantaged group.<sup>6</sup>

And lastly, as a matter of intergenerational justice, Rawls states that each generation should seek to "preserve the gains of culture and civilization" (TJ 252).

Though he does not elaborate on this objective, it may be assumed that Rawls considers it necessary for present generations to preserve those things that influence culture and comprise human history. Music is a good example: a society should provide funds for symphonies, support the local concerts, ensure that the young are knowledgeable about instruments, and maintain concert halls and music museums, for example.

<sup>5</sup> Rawls states "The relevant expectation of the least advantaged is their long-term expectation extending over all generations; and hence over any period of time the economy must put aside the appropriate amount of real capital accumulation" (JF 145).

<sup>&</sup>lt;sup>6</sup> Rawls makes this claim with the idea that an "end stage" of society will exist – to save until reaching the "end stage." This "end stage" is not a stage of the end of humanity, but rather, it refers to the point at which justice is secure. With regards to the environment, saving is a continual process where the "end stage" is the end of humanity. In other words, the environment will always exist, humans will always depend on it in one form or another, and it will always need to be preserved so long as humans exist. Rawls's concept of saving implies that a society stop saving when it reaches the "end stage." With regards to the environment, however, saving will always be necessary so long as humanity exists. Thus, the "end stage" does not necessarily present a problem when applying this objective to the environment in the next section.

These are the four objectives a principle of intergenerational justice seeks to achieve. It should preserve the basic structure and institutions of society, so long as they are just, should ensure a healthy standard of living for future persons, should continuously raise the living expectations of the least advantaged, and should seek to preserve the culture, civilization, and history. If this interpretation of Rawls's notion of how to achieve justice between generations is accurate, then it follows that a principle designed to achieve justice between generations requires preservation of the environment. This is the framework for a principle that achieves justice between generations. With this framework, a policy of environmental preservation is necessary, because the objectives outlined by Rawls cannot be fully attained without taking regard for the environment.

### III. Applying the Framework to the Environment

In general, with this framework, Rawls aims to ensure the well-being of future generations - yet the well-being of any human being depends in part on the existence of the environment. Before applying Rawls's framework for a principle, the definition of the environment and its importance to the human well-being is briefly discussed in the following paragraph.

#### The Environment

The concept of "environment" refers to influences, processes, conditions, and relationships. For the purpose of this paper, "environment" is not used in the context of built environments, urban environments, or social environments, but rather natural environments. Scientists refer to the natural environment as a "system of ecosystems," and in this sense, the environment is not a single object (such as a single tree or chipmunk), but instead a system of relationships existing as a "whole" (De-Shalit 42).

Defining the environment as a "whole composed of ecosystems" includes the individual, whole ecosystems and the ecological services/goods that they provide. These services/goods vary between ecosystems. One example of an ecosystem's service is a coastal ecosystem's ability to moderate storm impacts; another example is a grassland ecosystem's ability to generate soil. The goods of an ecosystem include the natural resources found within it, such as game or wood, as well as those resources not found within the system but still having a relationship to the system – such as air or water.

This definition as the "aggregate of systems, relationships, and processes" implies the existence of ecosystems as nature or wilderness - as an entity whose existence is independent of human intervention or influence. Thus, "environment" does not refer to parks within a city, processed food as natural resources, Camp Mystic in west Texas, Becker vineyards, agro-systems converted from wilderness, or anything created, influenced, or maintained by human hands. It is not dependent on human influence and controls its own functions and overall stability.

Rawls states that primary goods are those goods that any rational man would desire to have in order to further improve his well-being. These are goods that are able to be distributed by society and fall into one of two categories: basic liberties and economic/social gains. The environment is a primary good, in the sense that is a good any rational man would desire in order to further improve his well-being. For this reason, it is included under the difference principle. At the same time, its preservation acts as a condition for the first principle which ensures basic liberties. Whether it takes the form of an ecological good, such as a natural resource, or its existence as a whole ecosystem in

which one can find morality in nature, the environment is something that all rational people would desire in order to further their own well-being.

Thus, if it is a primary good, it must be either a basic liberty, to be distributed equally by the first principle, or an economic/social good to be distributed by variably, but fairly, by the second principle. It is not a liberty; therefore it must take the form of a social/economic good, distributed by the difference principle. And because it is distributed by the difference principle, it follows that it is also applied to Rawls's notion of intergenerational justice.

The Four Objectives and the Environment

The first objective of Rawls's intergenerational justice theory states that the principle "acts as a condition of bringing about the full realization of just institutions and the equal liberties" over time (TJ 257). This can only be done by jointly preserving the environment. One of the primary functions of the just basic structure and its institutions is to secure the people's basic liberties of freedom and independence. The availability of environmental resources maintains equal liberty across time. A future person's liberty to clean air and water, for example, should be equal to anyone living in the present generation. A principle should ensure this equality of liberties. Undoubtedly, the supply of natural resources contributes to the "material base" needed for social institutions, which then provides the satisfaction of basic liberties, which cannot exist in the future if present generations exhaust natural resources and deplete the environment during their lives. For if they do so, there will be no environment to exist for future generations, and

future generations will not be able to exercise their freedom to use the environment as present generations did.<sup>7</sup>

If no principle were established to regulate the behaviors of citizens with regard to the environment, a Tragedy of the Commons<sup>8</sup> would result, depletion of the environment would occur, and the freedom of future generations to use the environment would be constricted by the behaviors of those in the present. Therefore, preserving the environment is essential for ensuring that both present and future citizens have equal freedom and access to the environment and natural resources. By restricting the behaviors and actions of present people in order to ensure equal and fair accessibility of the environment for future generations, one ensures the "equality of liberty" over time — without such a principle, the exercise of unlimited freedom for limited resources would lead to an inequality. In this sense, preserving the environment indirectly preserves the "just basic structure" for future generations.

The second objective, which states that the principle must ensure a sustainable well-being of the least advantaged in all generations, cannot be achieved without preservation of the environment and the availability of natural resources. As Rawls states,

<sup>&</sup>lt;sup>7</sup> Singer, Brent. "An Extension of Rawls' Theory of Justice." Environmental Ethics Vol. 10, Spring 1998, No. 1. Athens, GA: Environmental Philosophy, Inc., 1998. Brent Singer argues that the "material base" for the social institutions of some religions (such as deep ecology and other natural religions) is the environment, and therefore assumes that the basic liberty of conscience, interpreted as "perfection of the human spirit," is dependent on the presence of the environment. This furthers the argument in assuming that if those people who believe the environment satisfies the "perfection of the human spirit," then if they depend on the environment for the liberty of conscience, the environment must exist for them. <sup>8</sup> Garrett Hardin illustrated the destruction of an unregulated environment with his example of Tragedy of the Commons. It presents a situation where rational, self-interested human beings all desire a common resource, such as a large grassland commons with sheep herders. The shepherds recognize that they will enjoy individual benefits (more sheep to sell) by grazing more sheep, yet at the cost of all shepherds using the grassland. Eventually, overgrazing will destroy the grasslands. "Ruin is the destination to which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all" (Hardin 1997). The environment is a commons and therefore in order to avoid its destruction, its use should be controlled by a principle of distributive justice. The tragedy of the commons extends to the environment in regards to air, water, forests, and all public lands. Lacking external controls, rational, self-interested users will deplete such resources.

a principle of intergenerational justice focuses on preserving a part of those goods so as to ensure the well-being of the least advantaged in the later generations. A person's wellbeing depends on environment biologically, economically, socially, and culturally.

As whole ecosystems, the environment provides a myriad of ecological services and natural resources necessary to sustain the human life as a species. Human existence cannot be denied without fresh water, clean air, natural foods, and a healthy place to live, to name a few. Unpolluted freshwater systems provide drinking and irrigation water and fish. Forest ecosystems help to reduce pollution by removing air pollutants and providing oxygen, while also providing honey, mushrooms, game, fruit, and other edible goods.

And many water ecosystems, aside from providing fish and natural foods, help to dilute and treat wastes, making the environment a habitable place to live. These ecological services/goods create a habitable biosphere. They are the basic necessities for the existence of any species, and the existence of the human being as a species within the biosphere is not one to be excluded from this category.

All ecosystems are the source of rich biodiversity, which is also the key factor in sustaining the existence of the ecosystem. But as for direct human benefits, biodiversity is a crucial aspect of medicinal research. When a human is sick, medicines aid and often cure the disease, improving the well-being of the person. Pharmaceuticals derive from wild species and about 40% of all prescriptions in America depend on wild species (Wilson, "What is Nature Worth"). Ecosystems rich in biodiversity and wild species carry much potential for medicines and drugs that could not merely serve as antibiotics, but also as a cure for such fatal diseases as cancer or AIDS. Without ecosystem biodiversity, these antibiotics and the search for cures would be severely limited.

<sup>&</sup>lt;sup>9</sup> World Resources presents a more detailed description of these ecological resources.

For this reason, the goods that are to be preserved for future generations must include these ecological goods. A principle of intergenerational justice prevents circumstances where the least well-off in a particular generation could be living in unhealthy conditions. A clean, healthy environment provides these healthy conditions. In order for a principle to ensure a sustainable well-being for all people in all generations, each generation must preserve the environment. Only then will the least-advantaged in future generations still have enough resources to live a healthy life.

Thirdly, as stated earlier, the appropriate principle should ensure that the long-term prospects of the least-advantaged group living in the present should never decline. No long-term prospects could exist, however, if there was no principle of intergenerational justice, for then the current generation would be free to act unsustainably towards the environment. If the current generation depleted all the resources inherited from past generations, thereby preventing future generations to attain their share, then the least-advantaged groups in all future generations would have hardly any prospects for living a better life. <sup>10</sup>

And lastly, the environment has a profound influence on human history, culture, and civilization. In order to "preserve the gains of culture and civilization," present generations must preserve the environment. Painters such as Claude Monet, Thomas Doughty, Thomas Cole, or John Constable and writers such as Henry David Thoreau, John Muir, or Edward Abbey use nature as the primary subject for their art. These artists and writers perceived the environment as a higher order beyond the control of human intelligence – some found spirituality and morality. Their naturalist writings and art

<sup>&</sup>lt;sup>10</sup> This argument is derived from Visser t'Hooft's book <u>Justice to Future Generations and the Environment</u>. P. 89.

works constitute an aspect of art history and literature and influenced people in the past and continue to influence people today. Their works exemplify a self-expression and identity with nature. They used their art and its representation of nature in response to a growing industrial society, where the depletion of the environment became an everyday activity (Smith 10). They portrayed the effects of nature on their own lives and also influenced later artists and writers with their work. They made a profound influence on the history of fine art and continue to do so today for all their viewers. Artists will always portray nature in their work, and nature will always play a role in the development of culture.

A principle of intergenerational justice reflects the "natural duties" of citizens, which requires them to support the just basic structure and to assist in the establishment of just arrangements when it is at little cost to them. This requires people in the present to assist in the establishment of just environmental arrangements when it is at little cost. In other words, if it is at little cost to walk a block to class instead of driving, or if it is at little cost to turn the water off while brushing one's teeth instead of wasting the water supply, or if it is at little cost to throw away one's gum instead of littering on the ground, then it is one's natural duty to do so. It is the natural duty, then, of present generations to support a principle of intergenerational justice because it establishes just environmental arrangements between generations.

Rawls develops the "just savings principle" to satisfy these four objectives of intergenerational justice. This principle, however, is vague and open to several interpretations, depending on the definition of "save." Some of these interpretations are applicable to the environment while some are inadequate. The following section

discusses some of these interpretations, their applicability to the environment, and concludes that Raws's just saving principle, as he defines it, is too ambiguous to apply to environmental preservation.

The Just Savings Principle<sup>11</sup>

Rawls proposes the just savings principle as the principle designed to fulfill the four objectives of intergenerational justice. His definition and explanation of the principle, however, is extremely vague, ambiguous, and obscure. Even Rawls asserts that it may take various forms (TJ 252). It can be interpreted in several ways, depending on one's interpretation of "saving."

According to A Theory of Justice, Rawls states the just savings principle to be

"a rule that assigns an appropriate rate of saving to each level of advance...a rule that determines a schedule of rates...it applies to what a society is to save as a matter of justice...it must also put aside in each period of time a suitable amount of real capital accumulation...each passes on to the next a fair equivalent of real capital" (TJ 252-258).

The following paragraphs present several interpretations of the just savings principle, in correlation with a particular definition of "saving," and how the environment applies to them. I focus intently on the literal interpretation and discuss in detail how it does and does not apply to environmental preservation.

The primary definition of "save" is "to put aside as a store or reserve: to accumulate; to gather or pile up" (Websters). This applies to the literal interpretation of the just savings principle, when he states, "it must also put aside in each period of time a suitable amount of real capital accumulation" (TJ 252). This literal interpretation of

<sup>12</sup> These other forms range from "net investment in machinery and other means of production to investment in learning and education."

<sup>&</sup>lt;sup>11</sup> One could argue that there is no distinction between the just savings principle and the theory of intergenerational justice. In this sense, "saving" has a myriad of possible interpretations. This still does not rid Rawls, however, of his ambiguous explanation. And if one interprets the principle and the concept of intergenerational justice in this sense, then one could still accept my JESP (explained in the conclusion) as an environmental interpretation of Rawls's concept of intergenerational justice.

"save" refers to the actual, physical act of "putting aside" a certain good to be accumulated.

If "real capital" is applied to the environment or natural resources, I find this literal interpretation to be inappropriate. An environmental ethic of preservation does not imply that society merely accumulates the natural resources, or "saves" a suitable amount. For example, it is quite impossible to "accumulate" or "save" clean air.

Likewise, if present generations save a rare plant used in medicines, this plant may die before future generations arrive, or if not, may not be able to reproduce as it would in its natural environment. And also, the ecological services that an ecosystem provides depend on the relationships within the system. The literal interpretation of "save" implies the accumulation of something tangible that can be physically accumulated for the future. The environment cannot be included in such a savings category.

One could interpret this "saving" to take the form of investments for future projects. According to Webster's Dictionary, "saving" can refer to "the money put aside as a store or reserve to accumulate: to spend less by" (Websters). In this sense, one could interpret "saving" to take the form of financial investments for future purposes. In this sense, present generations would "spend less" of their incomes and place this money in a bank to accumulate for future people.

In *Collected Papers*, Rawls refers specifically to income and wages in reference to the difference principle and its arrangement with the just savings principle. "Taking wages into account," the difference principle "maximizes the expectations of the lowest *income* class," and their expectations extending over time as maintained by the just savings principle (CP 145).

In his article, Roger Paden adopts this interpretation. He interprets "investment" as entirely financial, meaning "money that is diverted from immediate consumption (specifically from the funds that a just society would otherwise reserve to raise the income level of the least well-off) to support the creation and long-term stability of a just social structure." Though this money may be invested in any particular structure or institution of society, such as military preparedness, "saving" does take the form of investment for future projects within society (Paden 8-9).

If one interprets "saving" to mean a financial investment as Paden does, which is a very plausible interpretation of the just savings principle, it could apply to environmental preservation if this money was invested for safe, environmental uses of an ecosystem, for example. Money is applicable to environmental projects designed to better the state of ecosystems – it could even be as simple as using money to organize a highway clean-up day.

Yet at the same time, money will not always apply to environmental preservation. Certain behaviors by present generations are seen as economically irreversible, despite the amount of savings. For example, a factory pollutes mercury into the bottom of a lake. The mercury sinks to the bottom and does not mix with the other sediments in the lake. The mercury, then, can be physically removed from the bottom of the lake. Yet the cost to perform such an activity is so high that no realistic amount of money could bring the environment back to its previous state. It is an economically irreversible action (Kahn 391).

Other environmental concerns include: the rapidity of global temperature changes, fragmentation of natural vegetation, damaging of the ozone layer, soil erosion, and the

loss of several species. All these concerns are primarily due to human impacts and are most likely beyond a point of economic reversibility (Kahn 397).

A third definition of "save" states, "to avoid unnecessary waste or expense: to economize" and "saving" is "the act of economizing" (Websters). Rawls states the just savings principle to be a "rule that assigns an appropriate rate of saving." In this sense, this interpretation does not require any actual accumulation of something tangible, but rather applies to the action of a person: "the regulation of how one should avoid unnecessary waste or expense." If one interprets "save" and "saving" in this regard, and "waste" and "expense" in terms of the environment, then this definition proves to be very applicable to environmental preservation.

This highlights an important feature of environmental preservation: that present generations only use what is needed in order to survive with a healthy well-being. This notion of "saving" implies that a regulation exists to ensure that the least-advantaged in both the present and the future have a sustainable living situation. For example, a lumber company enters into an Amazon-sized forest ecosystem. If the lumber workers were not restricted by any principle of environmental preservation, they might cut down all the trees, thereby destroying the ecosystem. The wood would then be distributed entirely among the present generation and the members would have a surplus of wood resource. They would be acting in a wasteful manner, since they did not necessarily need to chop all the wood to satisfy their well-being.

However, if the lumber workers were restricted by a principle that "regulated the actions of people so as to not be wasteful," then the workers would only cultivate a tiny portion, as demanded by the expectation of the least-advantaged. They would leave the

rest of the ecosystem in a stable state so that it could recuperate. In this sense, the ecosystem would live and provide wood resources for future generations to come. The lumber workers "saved" for future generations.

"Saving" in this sense does not imply that present generations not use the environment at all – this is too extreme. Rather, present generations should use and develop the environment in such a way that the ecosystems are stable and able to recover from the human impact. They should develop the environment in a sustainable manner, by way of sustainable development. Sustainable development merely requires that present generations develop their society in ways that still ensure the stability of ecosystems for future generations.

This definition of "save" and Rawls's definition form what is considered "sustainable development," an essential feature of environmental preservation. The United Nations Conference on Environment and Development define this term as, "A sustainable condition for this planet...in which there is stability for both social and physical systems, achieved through meeting the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability implies "that nature's capital should be used no more rapidly than it can be replenished" (Gray and Green, Wright). Broadly speaking, sustainable development means that current industrial development should not endanger the environment or the well-being of future generations to use the environment. In this sense, "each passes on to the next a fair equivalent of real capital" (TJ 255).

"To avoid unnecessary waste" is applicable to negative actions, such as polluting.

Sustainable development also implies a control over negative actions. Negative action

refers to the unfavorable consequences of a particular human action on the environment. These include, but are not limited to, emission of pollutants into the air and over-extraction of water (World Resources 19). Likewise, the environment also includes air and water. Though they cannot be preserved as a forest is preserved, they still fall in the category of environmental preservation and polluting them is often "unnecessary waste."

Negative actions and a restriction on behaviors that negatively affect the environment should be included in environmental preservation. However, there are also other negative actions that do not fall under the category of "unnecessary waste," such as introducing nonnative species into an area, over-extraction of water, or induced grassland fires (World Resources 19). Thus, a principle accounting for environmental preservation should not be limited solely to the "regulation of unnecessary waste."

The final definition of "save" is: "to maintain; to preserve or guard from injury, destruction, or loss;" and "saving" is "the preservation from danger or destruction" (Websters). This is an important definition, serving as the proper definition of "save" and "saving" for environmental preservation. This is the purpose of environmental preservation: to preserve ecosystems from reaching a point of irreversibility, preventing their destruction so that future people will have the opportunity to use them as well.

Does Rawls's definition of just savings principle imply this notion of "save" and can the environment be applicable to it? The phrase "it applies to what a society is to save as a matter of justice" could be applicable. Reinterpreting with the "environment" in mind, the principle reads "justice requires the society to maintain the environment."

It seems as though the literal and specific concepts of the "just savings principle," are inadequate for serving the whole meaning of the term, while a broad interpretation

seems to lead to the mere notion that "justice requires the society to maintain the environment." Justice does require the society to maintain the environment, as explained in the four objectives of intergenerational justice. Because Rawls's definition is extremely vague, it is difficult to determine specifics or how this should be done by way of justice. However, the fact that "savings" can imply environmental preservation in some instances sheds light on the principle. For this reason, I create a new principle – more specific and geared towards the environment - to be incorporated under the just savings principle. It is a specific reinterpretation of the just savings principle in environmental terms.

## IV. The Just Environmental Savings Principle<sup>13</sup>

The most important aspect of a principle of environmental preservation is to prevent present generations from impacting ecosystems to a point of irreversibility. For once this point is reached, the ecosystem is destroyed and the liberty of future people to use and experience the ecosystem is unequal to present generations. The actions that could bring about the point within an ecosystem are unjust.

A healthy environment is one that is stable – it can cope with change. Change is common in nature – species become extinct and global temperatures naturally rise each year. Life in nature adjusts with time; however, the rapidity of change due to human influences within an ecosystem can be so drastic at times that an ecosystem is unable to recover. The point at which this occurs is known as the point of irreversibility.

<sup>&</sup>lt;sup>13</sup> The reality of irreversibility prevents the argument that the environment is an unlimited resource. Humans of the past held such a claim, ignorant of today's scientific knowledge, and therefore it would be wrong for present generations to still maintain this perspective. The environment is not "unlimited" and humans could easily exhaust all the natural resources and existing environments. If present generations do not act sustainably and seek to preserve the environment, a continuously depleted ecosystem could reach a point of irreversibility.

In many cases, if pollution in the present continues into the future within a certain ecosystem, it may eventually destroy the entire ecosystem. Or if a lumber company decides to cultivate three-fourths of a forest environment, that environment has probably reached its point of irreversibility and will soon die off. In cases such as these, future generations would not only be unable to extract natural resources from the ecosystem, but they will suffer the unfavorable consequences resulting from the actions of previous generations and paying for the costs of actions not taken by them.

This is not just nor is it fair. Not only do the proceeding generations have to pay the external costs of the action, but they do not have the same opportunity as the preceding generations. For this reason, present generations should develop a principle of environmental preservation to ensure that the environment does not reach irreversibility in the future. In doing so, present generations ensure that future generations may use and enjoy the environment in an equal and much the same manner as humans in the present. <sup>14</sup> Particular features of the JSP applicable to the environment

Though Rawls is vague on the definition of the just savings principle, there are two features of it that are applicable and necessary for a principle of environmental preservation for future generations. I list these features in this section and proceed to use these features in designing a principle of environmental preservation in the following section.

One of these features ensures justice to present generations while saving for future generations. According to Rawls, "No generation has stronger claims than any

<sup>&</sup>lt;sup>14</sup> Rawls does assume, however, that when future generations have been deprived of a particular opportunity or equality, another must be created elsewhere to ensure equality. I accept this, though it has several conditions regarding the environment – such as population increase. Yet if a society feels as though it has the scientific knowledge to ensure that the opportunities are fair, then I do not object.

other...The just savings principle can be regarded as an understanding between generations to carry their fair share of the burden of realizing and preserving a just society" (TJ 257). In other words, saving does not require any generation to save much if it is a poorer society. The principle requires the saving to be "just enough" to ensure that the least advantaged in every generation has a sustainable well-being. The just savings principle requires that a society save as a matter of justice, both to future generations as well as the present generation, to guarantee that the least-advantaged group in every generation still have enough resources to maintain a healthy well-being (CP 145-147).

In this sense, the JSP preserves in a way that is just to the present generation as well. An environmental policy must seek to do the same. In other words, a policy should not restrict the liberties of the present generation in such a way that prevents them from having a sustainable well-being. It is not fair nor is it just. This aspect of the just savings principle is compatible with "sustainable development," which implies that present people will use natural resources and impact the environment. This is natural and realistic. Like Rawls's just savings principle, each society should carry with it an appropriate burden of saving in a manner that is still just to the present generation.

This leads to a second important and applicable feature of the JSP: the extent and implications of the policy are determined solely by the "existing" generation. The particular details, namely the rate of saving, of the JSP are to be determined solely by the currently existing generation affected by the principle. This can be reinterpreted to mean that the policy is capable of being amended from generation to generation through time. Rawls states that it is not possible for a present generation to determine this for a future generation, and should therefore be left to the current generation. "How the burden of

capital accumulation and of raising the standard of civilization and culture is to be shared between generations seems to admit of no definite answer" (TJ 253). The circumstances as they arise in time will determine the detailed aspects and will be solvable by the just savings principle at the time of occurrence. In terms of the environment, it is extremely important that the policy is capable of being amended from generation to generation through time. Lack of sufficient scientific knowledge and the inability to predict the future are reasons why the specifics for any environmental preservation principle should be determined within the appropriate generation.

Much is still unknown about the future. Lack of scientific knowledge causes the inability to predict the future state of ecosystems; populations cannot be determined; the exact amount of natural resources that future generations will use is unpredictable; and the role of technologies as a replacement for natural resources is unknown as well. Therefore, since the "existing" generation will know its societal and environmental state best, the specific regulations/conditions of the policy must be determined by this generation.

According to these two features, different rates are assigned to different communities over time and within the society, depending on the standard of living. The just savings principle applies to what a society is to save as a matter of justice. These features of saving help to create a strong environmental ethic of conservation.

In order to fulfill Rawls's objectives of intergenerational justice, it is necessary to incorporate a just environmental savings principle. This thesis concludes with such a task, proposing a principle of intergenerational justice that works in collaboration with Rawls's theory of justice as a whole.

The Just Environmental Savings Principle

The majority of my thesis was devoted to presenting a theory of distributive justice between generations, arguing that the objectives of the theory require present generations to preserve the environment. Justice requires preservation of the environment. I then focused on the extent that this preservation is carried out – by a means of "saving." This proved to be inadequate for a good environmental preservation principle. For this reason, I create a principle compatible with the theory of intergenerational justice and state why this is a good policy for environmental preservation.

Earlier in discussing the just savings principle, I made references to certain standards of environmental preservation. For clarity, I rephrase them here, incorporating aspects of Rawls's theory. They ensure the "equal value of liberty" and the existence of justice over time.

Environmental preservation does not imply that present generations should refrain from using ecosystems entirely. This is unrealistic and nearly impossible, at least for an entire society to do so. There is no reason why present generations should do so, for it is unfair and unjust to the present generation. "No generation has stronger claims than any other" and this applies to future generations as well. Rather, environmental preservation should assume that present generations inhabit, develop, and use ecosystems. All generations are to "carry their fair share," (TJ 257) but in such a manner that is still just to the present generation, as satisfying the four objectives of intergenerational justice.

Yet the present generation should develop sustainably, thereby ensuring that ecosystems are still stable. This is the second characteristic of environmental preservation

- that the present generation uses the environment in a sustainable manner. Present generations do use, develop, and inhabit ecosystems, yet they should impact the ecosystem so as to ensure its ability to recuperate from these inevitable human impacts.

It is the extremely negative actions that adversely affect an ecosystem that cause irreversibility. Sustainable development may imply a few mild negative actions, but the actions that cause an ecosystem to lose its stability are the actions that must be regulated by a preservation principle for the liberties of future generations.

For example, a particular industry in the 1960s decided to pollute all its wastes into the only lake within 200 miles. It is a beautiful lake and the people living in the area use it as the primary water source. At the time, the filtration machine ensures that the people living in the area still had clean water. After 40 years of accumulation, however, the pollution exceeded the filtration machine's capacities and the people living there can no longer use the lake for their water source, and must pay extra money to have clean water shipped from 200 miles away. The current generation must cope with the negative actions of the irresponsible company. And even aside from this, the current generation does not have the same equal liberty to use the lake as the industry.

Therefore, if negative actions are not regulated or restricted, the basic liberties are not distributed in an equal fashion over time. One generation, the generation in the 1960s, had more freedom than the current generation. Thus, it is only in regulating negative actions that equal liberties can be enacted.

The policy should also require present generations to "save" in terms of investments. Because present generations are ignorant of future circumstances and because money can be applied to some cases of environmental sustainability, it follows

that future generations will environmentally benefit from a financial source of saving.

Therefore, money could be applicable to the situation and aid in the process of ensuring the healthy well-being. Money as the only method of preservation is inadequate; however, in collaboration with other methods, it may ensure justice to future generations. One of these other methods includes enforcing present generations to take positive acts towards the environment and aid in its survival, such as environmental education.

As stated earlier, the environment implies the system of ecosystems and the relationships within it, and the services, goods, and processes derived from it.

Environmental preservation, as stated above, ensures that whole ecosystems exist for future generations. Sustainable development ensures that ecosystems exist in a stable state, able to recuperate and maintain themselves. Negative actions are the actions that bring ecosystems to their destruction, so by restricting these actions, the point of irreversibility by human impacts perhaps may never be reached (unless it resulted from some factor beyond human control). And investing in future environmental projects are reserved for those unforeseen consequences.

By ensuring the existence of the Amazon rainforest, for example, one is also simultaneously preserving the biodiversity in the area for medical research, the wood from trees used for paper, and the fruits for food. In preserving whole ecosystems, present generations also preserve the services and goods humans derive from it, as well as the existence of these goods and services for the well-being of future generations.

In abiding by the characteristics above, the present generation is able to use the environment but simultaneously ensure its existence for future generations. These restrictions and requirements on the present generation ensure that the ecosystems will

not reach a state where they are incapable of recovering, for this is the point where future liberties are lost.

The JESP's purpose is to maintain ecosystems and prevent them from destruction by regulating the negative behaviors and actions of present generations in a way that ensures "justice as fairness" and the "fair value of liberty." These particular points on environmental preservation are essential to creating a fair situation for future generations, and provide justice for future generations as well.

How this is to be determined, I leave up to the currently existing generation. This principle implies extensive scientific research. Yet it is only rational to assume that the current generation knows more about its circumstances than any previous generation, and therefore, it is appropriate for the current generation to determine the specific ways on how to regulate human action and preserve whole ecosystems. I agree with Rawls that "the burden…admits no definite answer" (TJ 253).

These characteristics form a policy that requires present generations to leave the environment to its descendents in much the same state as they received it. This policy ensures the equal existence of ecosystems and their resources and services. This is "justice as fairness." Future generations have the same basic liberties and freedoms as present generations, and that applies to how a society is to govern present actions as a matter of justice.

The JESP and A Theory of Justice

John Rawls defines justice as fairness. Fairness includes fair opportunities and equal liberties for all members within a society – all members including both present and future generations. Justice, then, ensures that fairness (fair opportunities, equal liberties)

exists between present and future generations. In other words, justice requires that future generations have similar opportunities and equal liberties as present generations.

Rawls states that fair opportunities and equal liberties may be guaranteed to future generations by preserving the just basic structure (which ensures basic liberties) over time, ensuring that future generations have a sustainable well-being, ensuring that the prospects of the least-advantaged will never decrease over time, and preserving the culture over time. Together, these four objectives will attain fair opportunities and equal liberty for future generations.

Preserving the environment is required for achieving these four objectives; thus preserving the environment is necessary to ensure fair opportunities and equal liberties of future generations. Rawls asserts that the just savings principle satisfies these four objectives. The just savings principle, however, is broad, vague, and ambiguous and it is difficult to determine whether or not the environment can be applied to it. The ambiguity is caused by the definition of "save." "Save" has several definitions and with regard to environmental preservation, some definitions of "save" apply, yet some do not.

Therefore, if one is to interpret Rawls's notion of intergenerational justice as a policy for environmental preservation, it follows that a more specific interpretation be made, focusing entirely on environmental preservation.

The environment consists of a series of ecosystems. Environmental preservation, then, may be applied to one definition of "save" as "preventing ecosystems from destruction." To prevent ecosystems from destruction requires restricting the behaviors of present generations that could lead an ecosystem to an irreversible collapse, developing and using the ecosystems in a sustainable manner, and investing a small sum of money

for future environmental preservation projects. The just savings principle, as Rawls states it, is so vague that restrictions and regulations on behaviors for intergenerational justice are never stated – they can only be implied, depending on one's definition of "save." Environmental preservation is only possible, however, by regulating and restricting the negative behaviors in the present that could lead to the irreversibility of ecosystems.

Irreversibility means that an ecosystem has reached a point where it is no longer able to sustain itself and recuperate from human impacts. When it reaches this point, it is no longer able to produce environmental goods/services, despite any human efforts to rescue it from destruction. When humans in the present destroy ecosystems, they are preventing future generations the liberty to use the ecosystem's services/goods. It will create an unfair situation for future generations who will then pay for the costs of previous generations' negative actions. Thus, by ensuring that ecosystems will exist in much the same state as they existed during their own life, present generations will guarantee future generations a fair situation and equal liberty to use the environment.

It is necessary to incorporate the requirements of environmental preservation into the just savings principle to form the "just 'environmental savings' principle." Rawls defines the just savings principle as

"a rule that assigns an appropriate rate of saving to each level of advance...a rule that determines a schedule of rates...it applies to what a society is to save as a matter of justice...it must also put aside in each period of time a suitable amount of real capital accumulation...each passes on to the next a fair equivalent of real capital" (TJ 252-258).

I redefine "a rule that assigns an appropriate rate of saving to each level of advance...a rule that determines a schedule of rates" to state, "An environmental preservation rule enacts appropriate regulations and restrictions on negative behaviors to each level of

advance to ensure that ecosystems will not be destroyed." The just savings principle continues, "it applies to what a society is to save as a matter of justice," which I state as "it applies to how a society govern the negative actions of its members to ensure a just amount of environment exists." It states that each generation "must put aside in each period of time a suitable amount of real capital accumulation" (TJ 252). I reinterpret this statement in environmental terms as "each generation will ensure that in each period of time a suitable [fair] amount of ecosystems will exist." And for the statement "each passes on to the next a fair equivalent of real capital," I conclude the JESP to state, "each passes on to the next a fair equivalent in environmental opportunities and equal environmental liberties."

"A savings principle insures that each generation receives its due from its predecessors and does its fair share for those to come" (TJ 254). Present generations are to ensure that they leave the environment in much the same state as they received it from their predecessors. Only then will they ensure that future generations have fair environmental opportunities and equal liberty to environmental resources.

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