values, some objective and others that further require human subjectivity su­
perimposed on objective nature.

This evaluation is not scientific description; hence it is not ecology per se but metaecology. No amount of research can verify that, environmentally, the right is the optimum biotic community. Yet ecological description generates this valuing of nature, endorsing the systemic rightness. The transition from is to good and thence to ought occurs here; we leave science to enter the domain of evaluation, from which an ethics follows.

What is ethically puzzling and exciting is that an ought is not so much derived from an is as discovered simultaneously with it. As we progress from descriptions of fauna and flora, of cycles and pyramids, of autotrophs coordinated with heterotrophs, of stability and dynamism, on to intricacy, planetary opulence and interdependence, unity and harmony with oppositions in counterpoint and synthesis, organisms evolved within and satisfactorily fitting their communities, and we arrive at length at beauty and goodness, we find that it is difficult to say where the natural facts leave off and where the natural values appear. For some people at least, the sharp is—ought dichotomy is gone; the values seem to be there as soon as the facts are fully in, and both values and facts seem to be alike properties of the system.

There is something overspecialized about an ethic, held by the dominant class of Homo sapiens, that regards the welfare of only one of several million species as an object and beneficiary of duty. If the remedy requires a paradigm change about the sorts of things to which duty can attach, so much the worse for those humanistic ethics no longer functioning in, or suited to, their changing environment. The anthropocentrism associated with them was fiction anyway. There is something Newtonian, not yet Einsteinian, besides something morally naive, about living in a reference frame in which one species takes itself as absolute and values everything else relative to its utility. If true to its specific epithet, which means wise, ought not Homo sapiens value this host of life as something that lays on us a claim to care for life in its own right?

Only the human species contains moral agents, but perhaps conscience on such an Earth ought not to be used to exempt every other form of life from consideration, with the resulting paradox that the sole moral species acts only in its collective self-interest toward all the rest. Is not the ultimate philosophical task the discovery of a whole great ethic that knows the human place under the sun?

Notes

Justice.

Noninterference, (3) the Rule of Fidelity, and (4) the Rule of Restitutive

and give it point. Right actions are always actions that express the attitude of

nature and the biocentric outlook that together underlie the system as a whole

actions which we can approve of in the light of the various components of thebiocentric outlook.

They must also be actions which we can approve of in the light of the various components of the

biocentric outlook.

The Basic Rules of Conduct

... I shall now set out and examine four rules of duty in the domain of

human life and to conceive of the relation between human and other forms of

life in a certain way. Given this world view, the attitude of respect is then seen
to be the only suitable, fitting, or appropriate moral attitude to take toward the

natural world and its living inhabitants.

The Rule of Nonmaleficence. This is the duty not to do harm to any entity

in the natural environment that has a good of its own. It includes the duty not
to kill an organism and not to destroy a species-population or biotic commu-
nity, as well as the duty to refrain from any action that would be seriously
detrimental to the good of an organism, species-population, or life community.
Perhaps the most fundamental wrong in the ethics of respect for nature is to

harm something that does not harm us.

The concept of nonmaleficence is here understood to cover only nonperfor-
mances or intentional abstentions. The rule defines a negative duty, requiring
that moral agents refrain from certain kinds of actions. It does not require the
doing of any actions, such as those that prevent harm from coming to an entity
or those that help to alleviate its suffering. Actions of these sorts more properly
fall under the heading of benefiting an entity by protecting or promoting its
good. (They will be discussed in connection with the Rule of Restorative
Justice.)

The Rule of Nonmaleficence prohibits harmful and destructive acts done by
moral agents. It does not apply to the behavior of a nonhuman animal or the
activity of a plant that might bring harm to another living thing or cause its
death. Suppose, for example, that a Rough-legged Hawk pounces on a field
mouse, killing it. Nothing morally wrong has occurred. Although the hawk's
behavior can be thought of as something it does intentionally, it is not the
action of a moral agent. Thus it does not fall within the range of the Rule of
Nonmaleficence. The hawk does not violate any duty because it has no duties.
Consider, next, a vine which over the years gradually covers a tree and finally
kills it. The activity of the vine, which involves goal-oriented movements but
not, of course, intentional actions, is not a moral wrongdoing. The vine's
killing the tree has no moral properties at all, since it is not the conduct of a
moral agent.

Let us now, by way of contrast, consider the following case. A Peregrine
Falcon has been taken from the wild by a falconer, who then trains it to hunt,
seize, and kill wild birds under his direction. Here there occurs human con-
duct aimed at controlling and manipulating an organism for the enjoyment of a
sport that involves harm to other wild organisms. A wrong is being done but
not by the falcon, even though it is the falcon which does the actual killing and
even though the birds it kills are its natural prey. The wrong that is done to
those birds is a wrong done by the falconer. It is not the action of the Peregrine
that breaks the rule of duty but the actions of the one who originally captured
it, trained it, and who now uses it for his own amusement. These actions, it
might be added, are also violations of the Rule of Noninterference, since the
falcon was removed from its wild state. Let us now turn our attention to this
second rule of duty.

2. The Rule of Noninterference. Under this rule fall two sorts of negative
duties, one requiring us to refrain from placing restrictions on the freedom of
individual organisms, the other requiring a general "hands-off" policy with

we do grasp it and shape our world outlook in accordance with it, we immedi-
ately understand how and why a person would adopt that attitude as the only
appropriate one to have toward nature. Thus the biocentric outlook provides
the explanatory and justificatory background that makes sense of and gives
point to a person's taking the attitude.

The beliefs that form the core of the biocentric outlook are four in number:

1. The belief that humans are members of the Earth's Community of
Life in the same sense and on the same terms in which other living
things are members of that Community.
2. The belief that the human species, along with all other species, are
integral elements in a system of interdependence such that the sur-

vival of each living thing, as well as its chances of faring well or
poorly, is determined not only by the physical conditions of its envi-
ronment but also by its relations to other living things.
3. The belief that all organisms are teleological centers of life in the
sense that each is a unique individual pursuing its own good in its
own way.
4. The belief that humans are not inherently superior to other living
things.

To accept all four of these beliefs is to have a coherent outlook on the natural
world and the place of humans in it. It is to take a certain perspective on
human life and to conceive of the relation between human and other forms of
life in a certain way. Given this world view, the attitude of respect is then seen
to be the only suitable, fitting, or appropriate moral attitude to take toward the
natural world and its living inhabitants.

The four rules will be named (1) the Rule of Nonmaleficence, (2) the Rule of
Noninterference, (3) the Rule of Fidelity, and (4) the Rule of Restitutive
Justice.
regard to whole ecosystems and biotic communities, as well as to individual organisms.

Concerning the first sort of duty, the idea of the freedom of individual organisms... freedom is absence of constraint, and a constraint is any condition that prevents or hinders the normal activity and healthy development of an animal or plant. A being is free in this sense when any of four types of constraints that could weaken, impair, or destroy its ability to adapt successfully to its environment are absent from its existence and circumstances. To be free is to be free from these constraints and to be free to pursue the realization of one's good according to the laws of one's nature. The four types of constraints, with some examples of each, are:

1. Positive external constraints (ages; traps).
2. Negative external constraints (no water or food available).
3. Positive internal constraints (diseases; ingested poison or absorbed toxic chemicals).
4. Negative internal constraints (weaknesses and incapacities due to injured organs or tissues).

We humans can restrict the freedom of animals and plants by either directly imposing some of these constraints upon them or by producing changes in their environments which then act as constraints upon them. Either way, if we do these things knowingly we are guilty of violating the Rule of Noninterference.

The second kind of duty that comes under this rule is the duty to let wild creatures live out their lives in freedom. Here freedom means not the absence of constraints but simply being allowed to carry on one's existence in a wild state. With regard to individual organisms, this duty requires us to refrain from capturing them and removing them from their natural habitats, no matter how well we might then treat them. We have violated the duty of noninterference even if we “save” them by taking them out of a natural danger or by restoring their health after they have become ill in the wild. (The duty is not violated, however, if we do such things with the intention of returning the creature to the wild as soon as possible, and we fully carry out this intention.) When we take young trees or wildflowers from a natural ecosystem, for example, and transplant them in landscaped grounds, we break the Rule of Noninterference whether or not we then take good care of them and so enable them to live longer, healthier lives than they would have enjoyed in the wild. We have done a wrong by not letting them live out their lives in freedom. In all situations like these we intrude into the domain of the natural world and terminate an organism's existence as a wild creature. It does not matter that our treatment of them may improve their strength, promote their growth, and increase their chances for a long, healthy life. By destroying their status as wild animals or plants, our interference in their lives amounts to an absolute negation of their natural freedom. Thus, however “benign” our actions may seem, we are doing what the Rule of Noninterference forbids us to do.

Of still deeper significance, perhaps, is the duty of noninterference as it applies to the freedom of whole species-populations and communities of life. The prohibition against interfering with these entities means that we must not try to manipulate, control, modify, or “manage” natural ecosystems or otherwise intervene in their normal functioning. For any given species-population, freedom is the absence of human intervention of any kind in the natural lawlike processes by which the population preserves itself from generation to generation. Freedom for a whole biotic community is the absence of human intervention in the natural lawlike processes by which all its constituent species-populations undergo changing ecological relationships with one another over time. The duty not to interfere is the duty to respect the freedom of biologically and ecologically organized groups of wild organisms by refraining from those sorts of intervention. Again, this duty holds even if such intervention is motivated by a desire to “help” a species-population survive or a desire to “correct natural imbalances” in a biotic community. (Attempts to save endangered species which have almost been exterminated by past human intrusions into nature, and attempts to restore ecological stability and balance to an ecosystem that has been damaged by past human activity are cases that fall under the Rule of Restitutive Justice and may be ethically right. These cases will be considered in connection with that rule.)

The duty of noninterference, like that of nonmaleficence, is a purely negative duty. It does not require us to perform any actions regarding either individual organisms or groups of organisms. We are only required to respect their wild freedom by letting them alone. In this way we allow them, as it were, to fulfill their own destinies. Of course some of them will lose out in their struggle with natural competitors and others will suffer harm from natural causes. But as far as our proper role as moral agents is concerned, we must keep “hands off.” By strictly adhering to the Rule of Noninterference, our conduct manifests a profound regard for the integrity of the system of nature. Even when a whole ecosystem has been seriously disturbed by a natural disaster (earthquake, lightning-caused fire, volcanic eruption, flood, prolonged drought, or the like) we are duty-bound not to intervene to try to repair the damage. After all, throughout the long history of life on our planet natural disasters (“disasters,” that is, from the standpoint of some particular organism or group of organisms) have always taken their toll in the death of many creatures. Indeed, the very process of natural selection continually leads to the extinction of whole species. After such disasters a gradual readjustment always takes place so that a new-set of relations among species-populations emerges. To abstain from intervening in this order of things is a way of expressing our attitude of respect for nature, for we thereby give due recognition to the process of evolutionary change that has been the “story” of life on Earth since its very beginnings.

This general policy of nonintervention is a matter of disinterested principle. We may want to help certain species-populations because we like them or because they are beneficial to us. But the Rule of Noninterference requires that
we put aside our personal likes and our human interests with reference to how we treat them. Our respect for nature means that we acknowledge the sufficiency of the natural world to sustain its own proper order throughout the whole domain of life. This is diametrically opposed to the human-centered view of nature as a vast piece of property which we can use as we see fit.

In one sense to have the attitude of respect toward natural ecosystems, toward wild living things, and toward the whole process of evolution is to believe that nothing goes wrong in nature. Even the destruction of an entire biotic community or the extinction of a species is not evidence that something is amiss. If the causes for such events arose within the system of nature itself, nothing improper has happened. In particular, the fact that organisms suffer and die does not itself call for corrective action on the part of humans when humans have had nothing to do with the cause of that suffering and death. Suffering and death are integral aspects of the order of nature. So if it is ever the case in our contemporary world that the imminent extinction of a whole species is due to entirely natural causes, we should not try to stop the natural sequence of events from taking place in order to save the species. That sequence of events is governed by the operation of laws that have made the biotic Community of our planet what it is. To respect that Community is to respect the laws that gave rise to it.

In addition to this respect for the sufficiency and integrity of the natural order, a second ethical principle is implicit in the Rule of Noninterference. This is the principle of species-impartiality, which serves as a counterweight to the dispositions of people who favor certain species over others and to want to intervene in behalf of their favorites. These dispositions show themselves in a number of ways. First, consider the reactions of many people to predator-prey relations among wildlife. Watching the wild dogs of the African plains bring down the Wildebeest and begin devouring its underparts while it is still alive, they feel sympathy for the prey and antipathy for the predator. There is a tendency to make moral judgments, to think of the dogs as vicious and cruel, and to consider the Wildebeest an innocent victim. Or take the situation in which a snake is about to kill a baby bird in its nest. The snake is perceived as wicked and the nestling is seen as not deserving such a fate. Even plant life is which a snake is about to kill a baby bird in its nest. The snake is perceived as

...
animal. Thus when the hunting of shorebirds used to be legally permitted, a
hunter would injure a single bird and leave it out to attract hundreds of its
fellows, which would fly in and gather around it. This way the hunter could
easily "harvest" vast numbers of shorebirds. Even to this day a similar kind of
trickery is used to deceive birds. Crow hunters play recordings of a crow's
distress calls out in the field. The recording attracts crows, who are then easy
targets to shoot. This aspect of hunting, it should be repeated, is not some
peripheral aberration. Much of the excitement and enjoyment of hunting as a
sport is the challenge to one's skills in getting animals to be trusting and unsus­
pecting. The cleverer the deception, the better the skill of the hunter . . .

It is not a question here of whether the animal being hunted, trapped, or
fished has a right to expect not to be deceived. The animal is being deceived
in order to bring advantage to the deceiver and this itself is the sign that the
deceiver considers the animal as either having no inherent worth or as having a
lower degree of inherent worth than the deceiver himself. Either way of look­
ing at it is incompatible with the attitude of respect for nature . . .

Besides breaking the Rule of Fidelity, hunting, trapping, and fishing also, of
course, involve gross violations of the Rules of Nonmaleficence and Noninter­
ference. It may be the case that in circumstances where the only means for
obtaining food or clothing essential to human survival is by hunting, trapping,
or fishing, these actions are morally permissible. The ethical principles that
justify them could stem from a system of human ethics based on respect for
persons plus a priority principle that makes the duty to provide for human
survival outweigh those duties of nonmaleficence, noninterference, and fidelity
that are owed to nonhumans. But when hunting and fishing are done for sport
or recreation, they cannot be justified on the same grounds.

There are cases of deceiving and breaking faith with an animal, however,
which can be justified within the system of environmental ethics. These cases
occur when deception and betrayal must (reluctantly) be done as a necessary
step in a wider action of furthering an animal's good, this wider action being
the fulfillment of a duty of restitutive justice. If breaking faith is a temporary
measure absolutely needed to alleviate great suffering or to prevent serious
harm coming to an animal, such an act may be required as an instance of
restitutive justice. Putting aside for the moment a consideration of the idea of
restitutive justice as it applies to environmental ethics, it may be helpful to look
at some examples.

Suppose a grizzly bear has wandered into an area close to human habitation.
In order to prevent harm coming not only to people but also to the bear (when
people demand that it be killed), the bear may be deceived so that it can be shot
with harmless tranquilizer darts and then, while it is unconscious, removed to
a remote wilderness area. Another example would be the live-trapping of a sick
or injured animal so that it can be brought to an animal hospital, treated, and
then returned to the wild when it is fully recovered. Still another kind of case
occurs when a few birds of an endangered species are captured in order to have
them raise young in captivity. The young would then be released in natural
habitat areas in an effort to prevent the species from becoming extinct.

These human encroachments upon the wild state of mammals and birds
violate both the rule of Noninterference and the Rule of Fidelity. But the whole
treatment of these creatures is consistent with the attitude of respect for them.
They are not being taken advantage of but rather are being given the opportu­
nity to maintain their existence as wild living things . . .

. . . Hunters and fishermen often argue that they show true respect for
nature because they advocate (and pay for) the preservation of natural areas
which benefit wild species-populations and life communities. And it is quite
true that the setting aside of many "wildlife refuges," both public and private,
has resulted from their efforts. Wild animals and plants have benefited from
this. What is being overlooked in this argument is the difference between
doing something to benefit oneself which happens also to benefit others, and
doing something with the purpose of benefiting others as one's ultimate end of
action. Hunters and fishermen want only those areas of the natural environ­
ment protected that will provide for them a constant supply of fish, birds, and
mammals as game. Indeed, sportsmen will often urge the killing of nongame
animals that prey on "their" (the sportsmen's) animals. In Alaska, for example,
hunters have persuaded state officials to "manage" wolves—the method used
is to shoot them from helicopters—so as to ensure that a large population of
moose is available for hunting. The argument that hunters and fishermen are
true conservationists of wildlife will stand up only when we sharply distinguish
conservation (saving in the present for future consumption) from preservation
(protection from both present and future consumption). And if the ultimate
purpose of conservation programs is future exploitation of wildlife for the
enjoyment of outdoor sports and recreation, such conservation activities are
not consistent with respect for nature, whatever may be the benefits incidentally
brought to some wild creatures. Actions that bring about good consequences
for wildlife do not express the attitude of respect unless those actions are
motivated in a certain way. It must be the case that the actions are done
with the intention of promoting or protecting the good of wild creatures as an
end in itself and for the sake of those creatures themselves. Such motivation is
precisely what is absent from the conservation activities of sportsmen.

4. The Rule of Restitutive Justice. In its most general terms this rule imposes
the duty to restore the balance of justice between a moral agent and a moral
subject when the subject has been wronged by the agent. Common to all
instances in which a duty of restitutive justice arises, an agent has broken a
valid moral rule and by doing so has upset the balance of justice between
himself or herself and a moral subject. To hold oneself accountable for having
done such an act is to acknowledge a special duty one has taken upon oneself
by that wrongdoing. This special duty is the duty of restitutive justice. It

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requires that one make amends to the moral subject by some form of compensation or reparation. This is the way one restores the balance of justice that had held between oneself and the subject before a rule of duty was transgressed.

The set of rules that makes up a valid system of ethics defines the true moral relations that hold between agents and subjects. When every agent carries out the duties owed to each subject and each subject accordingly receives its proper treatment, no one is wronged or unjustly dealt with. As soon as a rule is willfully violated, the balance of justice is tilted against the agent and in favor of the subject; that is, the agent now has a special burden to bear and the victim is entitled to a special benefit, since the doing of the wrong act gave an undeserved benefit to the agent and placed an unfair burden on the subject. In order to bring the tilted scale of justice back into balance, the agent must make reparation or pay some form of compensation to the subject.

The three rules of duty so far discussed in this section can be understood as defining a moral relationship of justice between humans and wild living things in the Earth’s natural ecosystems. This relationship is maintained as long as humans do not harm wild creatures, destroy their habitats, or degrade their environments; as long as humans do not interfere with an animal’s or plant’s freedom or with the overall workings of ecological interdependence; and as long as humans do not betray a wild animal’s trust to take advantage of it. Since these are all ways in which humans can express in their conduct the attitude of respect for nature, they are at the same time ways in which each living thing is given due recognition as an entity possessing inherent worth. The principles of species-impartiality and of equal consideration are adhered to, so that every moral subject is treated as an end in itself, never as a means only.

Now, if moral agents violate any of the three rules, they do an injustice to something in the natural world. The act destroys the balance of justice between humanity and nature, and a special duty is incurred by the agents involved. This is the duty laid down by the fourth rule of environmental ethics, the Rule of Restitutive Justice.

What specific requirements make up the duty in particular cases? Although the detailed facts of each situation of an agent’s wrongdoing would have to be known to make a final judgment about what sorts of restitutive acts are called for, we can nevertheless formulate some middle-range principles of justice that generally apply. These principles are to be understood as specifying requirements of restitution for transgressions of any of the three rules. In all cases the restitutive measures will take the form of promoting or protecting in one way or another the good of living things in natural ecosystems.

In working out these middle-range principles it will be convenient to distinguish cases according to what type of moral subject has been wronged. We have three possibilities. An action that broke the Rule of Nonmaleficence, of Noninterference, or of Fidelity might have wronged an individual organism, a species-population as a whole, or an entire community. Violations of the Rules in all cases are ultimately wrongs done to individuals, since we can do harm to a population or community only by harming the individual organisms in it (thereby lowering the median level of well-being for the population or community as a whole). The first possibility, however, focuses on the harmed individuals taken separately.

If the organism has been harmed but have not been killed, then the principle of restitutive justice requires that the agent make reparation by returning those organisms to a condition in which they can pursue their good as well as they did before the injustice was done to them. If this cannot wholly be accomplished, then the agent must further the good of the organisms in some other way, perhaps by making their physical environment more favorable to their continued well-being. Suppose, on the other hand, that an organism has been killed. Then the principle of restitutive justice states that the agent owes some form of compensation to the species-population and/or the life community of which the organism was a member. This would be a natural extension of respect from the individual to its genetic relatives and ecological associates. The compensation would consist in promoting or protecting the good of the species-population or life community in question.

Consider as a second possibility that a whole species-population has been wrongly treated by a violation of either nonmaleficence or noninterference. A typical situation would be one where most of the animals of a “target” species have been killed by excessive hunting, fishing, or trapping in a limited area. As a way of making some effort to right the wrongs that have been committed, it would seem appropriate that the agents at fault be required to ensure that permanent protection be given to all the remaining members of the population. Perhaps the agents could contribute to a special fund for the acquisition of land and themselves take on the responsibility of patrolling the area to prevent further human intrusion.

Finally, let us consider those circumstances where an entire biotic community has been destroyed by humans. We have two sorts of cases here, both requiring some form of restitution. The first sort of case occurs when the destructive actions are not only wrong in themselves because they violate duties of nonmaleficence and noninterference but are wrong, all things considered. They are not justified by a rule of either environmental ethics or of human ethics. The second sort of case is one in which the actions are required by a valid rule of human ethics though they are contrary to valid rules of environmental ethics. Even when greater moral weight is given to the rule of human ethics, so that the actions are justified, all things considered, they still call for some form of restitution on grounds of justice to all beings having inherent worth. This idea holds also within the domain of human ethics.

A duty of restitutive justice (as a corollary of the Rule of Reciprocity) arises whenever one of the other valid rules of human ethics is broken. Even if the
action was required by a more stringent duty, a human person has been un­
justly treated and therefore some compensation is due her or him. That the
action was morally justified, all things considered, does not license our over­
looking the fact that someone has been wronged. Hence the propriety of
demanding restitution. So in our present concerns, even if the destruction of a
justly treated and therefore some compensation is due her or him. That the
of environmental ethics, an act of restitutive justice is called for in recognition
of the inherent worth of what has been destroyed.

There are many instances in which human practices bring about the total
obliteration of biotic communities in natural ecosystems. Whether or not these
practices are justified by valid rules of human ethics, they all come under the
Rule of Restitutive Justice. A northern conifer woodland is cut down to build a
vacation resort on the shore of a lake. A housing development is constructed in
what had been a pristine wilderness area of cactus desert. A marina and yacht
club replace a tidal wetland which had served as a feeding and breeding ground
for multitudes of mollusks, crustacea, insects, birds, fish, reptiles, and mam­
mals. A meadow full of wildflowers, both common and rare, is bull-dozen over
for a shopping mall. Strip mining takes away one side of a mountain. A prairie
is replaced by a wheat farm. In every one of these situations and in countless
others of the same kind, wholesale destruction of entire natural ecosystems
takes place. Unrestrained violence is done to whole communities of plants and
animals. Communities that may have been in existence for tens of thousands of
years are completely wiped out in a few weeks or a few days, in some cases in a
few hours. What form of restitution can then be made that will restore the
balance of justice between humanity and nature? No reparation for damages
can possibly be given to the community itself, which exists no more. As is true
of a single organism that has been killed, the impossibility of repairing the
damage does not get rid of the requirement to make some kind of compensa­
tion for having destroyed something of inherent worth.

If restitutive justice is to be done in instances of the foregoing kind, what
actions are called for and to whom are they due? Two possibilities suggest
themselves here. One is that compensation should be made to another biotic
community which occupies an ecosystem of the same type as the one destroyed. If
it is a northern conifer woodland, then the organizations or individuals who
were responsible for its destruction owe it to the life community of another
conifer woodland to help it in some way to further or maintain its well-being.
Perhaps a partially damaged area of woodland could be restored to ecological
health (removing trash that had been put there, cleaning up a polluted stream
flowing through the area, stopping any further contamination by acid rain or
other atmospheric pollution, and so on).

The other possible recipient of compensation would be any wild region of
nature that is being threatened by human exploitation or consumption. Com­
pensatory action would be taken in behalf of a biotic community somewhere on

Earth that might be damaged or destroyed unless special efforts are made to
protect it. Acquiring the land and giving it legal status as a nature preserve
would be suitable measures.

These suggested middle-range principles are all derived from the one broad
Rule of Restitutive Justice: that any agent which has caused an evil to some
natural entity that is a proper moral subject owes a duty to bring about a
countervailing good, either to the moral subject in question or to some other
moral subject. The perpetrating of a harm calls for the producing of a bene­
fit. The greater the harm, the larger the benefit needed to fulfill the moral
obligation.

It is worth adding here that all of us who live in modern industrialized
societies owe a duty of restitutive justice to the natural world and its wild
inhabitants. We have all benefited in countless ways from large-scale technol­
ogy and advanced modes of economic production. As consumers we not only
accept the benefits of industrialization willingly, but spend much of our lives
trying to increase those benefits for ourselves and those we love. We are part of
a civilization that can only exist by controlling nature and using its resources.
Even those who go out to a natural area to enjoy the wilderness experience
are recipients of the benefits of advanced technology. (What marvels of modern
chemistry went into the creation of plastics and synthetic fabrics in their back­
packs, tents, sleeping bags, and food containers!) None of us can evade the
responsibility that comes with our high standard of living; we all take advan­
tage of the amenities of civilized life in pursuing our individual values and
interests. Since it is modern commerce, industry, and technology that make
these amenities possible, each of us is a consumer and user of what the natural
world can yield for us. Our well-being is constantly being furthered at the
expense of the good of the Earth's nonhuman inhabitants. Thus we all should
share in the cost of preserving and restoring some areas of wild nature for the
sake of the plant and animal communities that live there. Only then can we
claim to have genuine respect for nature.