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**Author**

Trosper, Ronald L.

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# Traditional American Indian Economic Policy

RONALD L. TROSPER

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Many have observed that Indian and mainstream values differ, but few have spelled out the implications of these differences for economic development policy. This paper presents a characterization of Indian values, derives some implications for traditional Indian economic policy, and provides two examples of Indian communities that have adopted policies consistent with its analysis. As tribes continue to assert their sovereign powers to control their own communities, a consideration of the connections between traditional American Indian worldviews and economic development policy can assist tribes and others in examining and selecting among current development alternatives.

Those studying economic policy in Indian communities recognize that Indians have different goals from those of the dominant society.<sup>1</sup> What are these goals and do they help explain why economic policy has been different in Indian communities? This paper begins by listing a set of assumptions that many Indian communities share. It then proceeds to explore the implications of these assumptions for economic development activities and institutions. Not surprisingly, the implications describe rules profoundly different from what *economic development* usually means. For example, traditional Indian economic policy would place an upper limit on consumption.

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Ronald L. Trosper is a professor of forestry and director of the Native American Forestry Program, Northern Arizona University. An earlier version of this paper, "Indian-Centered Economic Development," was presented at the University of Tulsa Centennial celebration on 16 April 1994.

High grading of renewable resources would not be allowed. Pure private property institutions for land management would be rejected. If economic development means mere growth in the production of goods and services, one might say that traditional Indian economic policy is not economic development at all. Recently, *development* has acquired adjectives in many applications: community development, human development, sustainable development. Traditional American Indian economic policy is a type of *development*, if the term is allowed to cover a wide field. This paper analyzes the connections between a major worldview and the types of economic policies that worldview requires. Whether these policies constitute development depends on one's definition of development.

The label *traditional Indian* can attract criticism for being too general, because Indian tribes and cultures vary significantly in time and space. Detailed application of the concepts described below will vary from community to community. People do use *traditional Indian* to describe a viewpoint—not necessarily held by all—represented in many Indian communities.

This paper defines and generalizes “traditional” American Indian views with the purpose of deriving some clear implications for policy. It begins with a characterization of traditional Indian views. It then derives policy prescriptions following from those views; the prescriptions are a matter of deductions from assumptions rather than from a description of actual policies. No claim is made that the policies described in the second section of the paper or the institutions described in the third actually drive all business and economic decisions on reservations today. Such decisions are motivated by a variety of viewpoints; in fact, because of the dependency of tribes on the federal government, fully independent economic policy-making is hard to find. The fourth and fifth sections of the paper examine several examples of policies in contemporary Indian communities as a way to assess the usefulness and applicability of the analysis. The final section addresses areas of future research required to extend the analysis to challenges created by current advanced capitalist markets.

#### RESPECT DEFINES THE TRADITIONAL INDIAN VIEWPOINT

In order to describe traditional Indian economic policy, we must define the term *traditional Indian*. The recent literature on Ameri-

can Indian worldviews demonstrates that American Indian cultures share an attitude of respect toward the world around us.<sup>2</sup> Since *respect* can have many interpretations, one needs to specify its meaning further. To summarize traditional worldviews, this paper offers the following four basic components as a way to characterize the American Indian definition of respect:

1. **Community:** Men and women are members of a community that includes all beings. Each has its proper role, and each has obligations to others. The sacred aspect of this assumption is that all beings have spirit. The political aspect of this assumption is that human-to-human relationships are similar to human-to-animal and human-to-plant relationships. The economic aspect is that reciprocity in exchange must exist.
2. **Connectedness:** Everything is connected. While the idea of community provides a source of obligation and a guide to proper behavior, the idea of connectedness is a description of how the world is.
3. **Seventh Generation:** Past human generations left us a legacy, and we have a duty to pass that legacy to our great-grandchildren and beyond, as far as to the seventh generation.
4. **Humility:** In taking action, humanity should be humble. The natural world is powerful and well able to cause trouble if not treated properly.

These four components are distinct; while other worldviews share parts of them, the traditional Indian view includes them all. The first provides a way to derive ethical statements (what ought to be) about what policies should be selected, with a focus on today. The second furnishes a way to generate descriptions or models of the world (what is) in order to describe the consequences of policies. The third states the time dimension; although it is also an ethical position, it has such enormous implications for policy that separation from the first category is useful. The fourth, humility, can be presented as an aspect of the connectedness assumption as well, but humility involves more than just assuming that everything is connected; it is a statement about humanity's ability to understand the connections. The following describes each of these four components in more detail:

## 1. Community

J. Baird Callicott, a philosophy professor who studies land ethics, summarizes the views of Ojibwa and other Algonquian sources as follows:

Nonhuman natural entities are personal beings, socially organized into families, clans, and nations not unlike the traditional Algonquins themselves. Relations with these other-than-human persons are, accordingly, socially structured. They are courteous, cautious, muted, reciprocal, deferential, diplomatic—forms of conduct that must be maintained to sustain the interspecies social structure and, so to speak, international balance of power.<sup>3</sup>

Indian discussions of what ought to be begin with the whole natural world included in the analysis. This is useful, because theories about how humans should treat humans are extensive in the literature of anthropology, sociology, political science, and philosophy. Each of the human-focused approaches should have implications when animals and all of nature are included.<sup>4</sup> Since community social structure can vary, this assumption that other beings are part of the same community as humans does not say much about the structure of the community. Callicott notes that the Sioux idea of community is closest to that of an extended family, while the Algonquian view is broader in extending to nations.<sup>5</sup> The stories about animals that act as humans demonstrate the ubiquity of the community concept. Coyote, Beaver, Blue Jay, and Buffalo are a few of the characters who provide examples and advice.<sup>6</sup> Often the lessons in the stories illustrate the importance of fulfilling one's social obligations, as well as the importance of connectedness and humility.

Further exploration of the community concept requires examination of community ideas common among Indian tribes. Many tribes reach community decisions by developing consensus. Successful individuals share their wealth with others, often through give-aways. Reciprocation among individuals cements personal relationships. Since animals and plants are community members, their interests must be represented in all activities. Each entity, including men and women, has a proper role. American Indians believe men and women should live in harmony with nonhuman beings.

## **2. Connectedness**

The idea of connectedness is related to but different from the idea of community. While community creates obligations, connectedness is a way to describe how the world works. Richard Nelson, who has lived extensively with the Koyukon Indians of Alaska, reports an opinion from a Koyukon elder:

“The country knows,” an elder told me. “If you do wrong things to it, the whole country knows. It feels what’s happening to it. I guess everything is connected together somehow, under the ground.”<sup>7</sup>

Many have described the native worldview as “holistic.”<sup>8</sup> The idea of a whole, however, requires definition of the edge of an entity, which can be difficult to do. Connectedness is more flexible, while still emphasizing a danger in treating any one entity or phenomenon in isolation.<sup>9</sup>

## **3. Seventh Generation**

Because other traditions share the concern for future generations, the Iroquois statement of concern for the seventh generation has been popular among many tribes. Oren Lyons, an Iroquois leader and college professor, provides a statement from the Iroquois culture that underlies long-term resource use:

We are looking ahead, as is one of the first mandates given to us as chiefs, to make sure and to make every decision that we make relate to the welfare and well-being of the seventh generation to come, and that is the basis by which we make decisions in council. We consider: will this be to the benefit of the seventh generation?<sup>10</sup>

He goes on to criticize contemporary shopping mall culture of shortsightedness. Nelson reports that the Koyukon manage their world for sustained yield, which is an immediate consequence of concern for distant generations.<sup>11</sup>

Part of the concern for the seventh generation is an assumption that today’s resources have limited capacity. There is a zero-sum aspect to ecosystem management, an assumption that seems to deny the reality of rapid technological change. This assumption of limited capacity will be used in what follows; the final section of

the paper addresses the impact of technological change on economic policy from a traditional Indian viewpoint.

#### **4. Humility**

The fourth component of respect is an attitude of humility. Actions to modify the world must be undertaken with care. Nelson provides this example from the Koyukon:

When the river ice breaks up each spring, people speak to it, respectfully and acknowledging its power. Elders make short prayers, both Christian and traditional Koyukon, asking the ice to drift downstream without jamming and causing floods. By contrast, some years ago, the U.S. Air Force bombed an ice jam on the Yukon River to prevent inundation of communities. Far from approving some villagers blamed subsequent floods on this arrogant use of physical force. In the end, nature will assert the greater power. The proper role for humans is to move gently, humbly, pleading or coercing, but always avoiding belligerence.<sup>12</sup>

The reason for humility is recognition of nature's power. Acting with caution is a matter of prudence; since humanity does not understand how nature is put together, massive interventions are dangerous.

One basis for this attitude is the experience of large change in the natural world. Native oral tradition, stretching back over generations, conveys images of a world in great change. The creation stories of the Navajo, Hopi, and Zuni have people journeying from world to world.<sup>13</sup> The Koyukon and Algonquin traditions have humans turning into animals and animals into humans.<sup>14</sup> The character of Coyote, in particular, stirs up great trouble with his recklessness. These stories of transformation support the idea that nature's power is so great that cataclysmic change has been experienced—and hence is always a real possibility.

#### **5. Must Respect Have This Shape?**

The answer is no. If one starts simply with respect for nature as a philosophical position, one needs to add some further cultural assumptions in order to provide specific components. Two examples are ecologist Aldo Leopold's early analysis and a recent book by philosopher Paul Taylor.

Aldo Leopold's land ethic often is summarized with the following quotation: "Quit thinking about land-use as solely an economic problem . . . . A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community."<sup>15</sup> This standard arises, for Leopold, in the context of treating land (or nature) as a community. As Callicott has explored in several essays, Leopold's concept of community and Native American land ethics are related.<sup>16</sup> Both contain the idea that humans and their environment are part of a community; and the interrelatedness, or connectedness, of all things is part of that idea. Leopold does not stress humility; nor does he stress long-term considerations directly. Following Leopold, Callicott does not stress humility (it is not an entry in his book's index), but he does defend Leopold's views against charges that they are "presumptuous" or "condescending."<sup>17</sup> Leopold says, "A land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it."<sup>18</sup> It implies respect for his fellow-members and also respect for the community as such.

In *Respect for Nature: A Theory of Environmental Ethics* Paul Taylor emphasizes community and connectedness as part of respect, which he calls a "biocentric outlook on nature." He omits discussion of long-term considerations as required by concern for the seventh generation. Neither does he clearly advocate humility, although he does advocate the "belief that humans are not inherently superior to other living things."<sup>19</sup>

Both Leopold and Taylor promote an ethic that reduces man from superiority over nature to equality with nature. This is close to the Native American view that humility, not hubris, is the proper attitude. Neither Leopold nor Taylor emphasizes concern for the seventh generation, although neither advocates short-term analysis of ecosystem management. Their ideas about respect for nature are more narrow than the traditional American Indian view as defined in this paper. Because of this, implications for economic policy derived from American Indian views may well differ from the implications drawn from analysis such as theirs.

## 6. Omission of Sacred Dimensions

The above presentation of the four components of respect omits discussion of sacred or spiritual dimensions. In contrast to many expositions of native views, this essay examines the analytical and ethical assumptions that accompany the sacred views. Of course,



religious beliefs and definitions of the sacred provide meaning and force to a worldview. Unfortunately, to emphasize the sacred aspects in the secular field of economic policy would reduce the plausibility of the underlying argument. To limit analysis to the secular assumptions may appear to remove the adjective *traditional*, but the nonspiritual parts of a traditional Indian worldview often remain active in the opinions of Christian and other nontraditional Indians. Fundamental worldview assumptions survive loss of language and religion, although they are stronger among people who retain the support of language and religion.

### IMPLICATIONS OF RESPECT FOR DEVELOPMENT ACTIVITIES

The four components of respect provide implications for both the type of economic development undertaken—the activities—and the methods of organizing for development—the institutions. This part of the paper addresses activities, and the next section addresses institutions. At least six types of constraints on economic development activities are consistent with respect:

1. High grading is not allowed.
2. Consumption has an upper bound.
3. Ecosystem health should be maintained.
4. Nuclear or other hazardous waste disposal should be avoided.
5. Although modern market niches such as gambling and reduced-tax sales can be used, savings from profits should be very high.
6. A community's population levels should remain within the carrying capacity of a community's resources.

Although there are other topics that could be addressed, these six provide good illustrations of the ways in which traditional Indian economic policy might be identified.

#### **1. Don't high grade**

To high grade is to take the best products first. In a forest, high grading means to harvest all the large old trees first, or to take all of the valuable species first. In resource extraction, high grade means taking the oil closest to the surface or taking the best grade

ores. Both community and connectedness oppose high grading. Since high grading involves possible elimination of a species or an age class, it means removing one whole part of a community. Since every entity is part of the community, none should be fully eliminated. Because everything is connected, extraction measures such as elimination of one component could have unintended consequences. Concern for the seventh generation requires leaving some of the best for use by great-grandchildren and their grandchildren.

## **2. Consumption has an upper limit**

Both the community obligations of people and the connectedness of humanity's activities to the rest of the world suggest that there are limits to human use of community resources. In a community that includes plants and animals, humanity has a place with boundaries that should not be crossed. Connectedness and humility imply that extreme actions will lead to extreme responses: People should be moderate in extracting resources. The seventh generation assumption of limits to the world's productiveness supports this reasoning. Since savings constitute the difference between production and consumption of useful goods and services, consuming less than is produced yields savings for use by later generations.

## **3. Ecosystem health should be maintained**

Closely related to the existence of an upper bound on consumption is maintenance of ecosystem health. Since any economic development strategy uses a reservation's land, respect for the land requires supporting ecosystem health to some extent. Ecologist Robert Constanza's summary chapter of the recently published book *Ecosystem Health* provides the following recently developed ecological definition:

To be healthy and sustainable, a system must maintain its metabolic activity level as well as its internal structure and organization (a diversity of processes effectively linked to one another) and must be resilient to outside stresses over a time and space frame relevant to that system.<sup>20</sup>

Constanza proposes that a health index be defined as the product of three separate indices: vigor, organization, and resil-

ience. Vigor is measured by productivity, the output of food or other measure of biomass.<sup>21</sup> Organization is measured by the complexity of the structures—the connections between species and the abiotic environment—and by the diversity of the species present. Resilience is hard to measure, because it describes the response of a system to disturbance. When long-time frames are involved, as is the case with ecosystems, a simulation model is needed to predict results; such models are hard to construct. The failure of resilience, such as when an ecosystem declines badly in its function, can be observed only after the decline has occurred. But even in these cases—a lake that has atrophied, a stream bed and banks that have eroded away, or a forest that has suffered a catastrophic fire after a hundred years of fire suppression—some modeling as well as historical research is needed to estimate how much time would be required to reconstruct the damaged system, if the source of the damage were to cease.

This three-part definition of ecosystem health embodies the basic components of respect. The ecosystem idea of vigor describes a characteristic of community. If all members of a community are accorded respect for their right to a livelihood, then each member will perform his or her role in the production of useful products for others, thereby contributing to the community. Respect for community means respect for diversity, which is part of the ecosystem health concept of organization. Connectedness is also related to organization; while the term *connectedness* is vague about the type of connections, *organization* suggests a structure. A healthy ecosystem will have resilience, which will help it survive until the seventh generation. The difficulty in constructing adequate simulation models for measuring resilience is consistent with humanity's need for humility. If the residents of a reservation want to use their ecosystems in a manner consistent with respect, they will preserve or promote ecosystem health. In greatly disturbed ecosystems, however, identifying the proper policies may be difficult.

#### **4. Nuclear or other hazardous waste disposal should be avoided**

All four components of respect argue against hazardous waste disposal. Community with all other entities dictates that nothing be done to harm them; hazardous waste, while ostensibly controlled in landfills, has great potential to affect other community members. The connectedness assumption, combined with humility, denies the assumption that hazardous waste will, in fact,

remain contained in whatever structure is provided for it. The seventh generation perspective reinforces the doubts generated by humility; if containment of the hazardous waste should fail, its negative effects will be felt by the seventh generation.

**5. Although modern market niches such as gambling and reduced-tax sales can be used, savings and investment from profits should be very high**

The prescription for high savings rates derives from the assumption of duty to the seventh generation. If there is a belief in ultimate limitations in any one source of income, the generation that receives an influx of financial capital resulting from the profits in gambling will not assume that those profits are going to continue forever. Humility would suggest caution in believing the gambling niche will last forever; contemporary political opposition to the niche reinforces this worry. Concern for future generations will lead to a high savings rate.<sup>22</sup> The two other principles, community and connectedness, seem less relevant to this example. A casino can be set up as a border enclave that has little impact on reservation lands, with the exception of waste products. The greater concern, generated by connectedness assumptions, may be about the character of the Indian community rather than transformation of its land directly by the casino.

**6. A community's population levels should remain within the carrying capacity of a community's resources**

The need to control population growth follows from all four of the components of respect. Community ethics require that humanity's role may limit an individual's right to dominate the community by expanding his own participation at the expense of other members. Because of connectedness, there will be unintended feedback consequences if human population increases out of proportion to its place in the system. In any one generation, increases in total numbers would mean that the average impact of each individual on the ecosystem would have to be less. Consideration of the rights of the seventh generation means that the current generation should restrain use of the ecosystem so that it retains capacity to provide adequately for the seventh generation. Humility also requires that humanity not expand its own population to unusually high levels.

## 7. Summary of development activities

These examples of the implications, for economic development activities, of an attitude of respect suggest that traditional Indian economic policy should be very different from what historically has been called economic development, namely high rates of increase in per capita income, combined with population growth and structural transformation.<sup>23</sup> Rates of resource exploitation should be adequate for subsistence but should be limited, and consumption levels should rise to a limit. The depth of the differences may explain the deep divisions that have occurred in many communities over proper economic development strategies. To the extent that one accepts the premises of traditional Indian values, one may approve of "nondevelopment" of the sort some Indian communities have chosen. Not developing, in the sense of increases in levels of consumption of goods, may be development from the viewpoint of the policies described above. As recent publications by the United Nations suggest, the old notion of economic development has come to be questioned by other societies as well.<sup>24</sup>

### IMPLICATIONS FOR DEVELOPMENT INSTITUTIONS

Many advocate the selection of appropriate institutions as a way to have the right development activities emerge from the decisions of people in the institutional framework.<sup>25</sup> Private property and corporate ownership are two institutions that have been advocated for Indians to manage land. An examination of their inconsistencies with the four components of respect shows why many Indian tribes have refused to accept private property or corporate ownership as land management institutions. In the past, Indian tribes have used institutions of generosity, usufruct property rights, and tribal territorial boundaries; these institutions are consistent with respect.

#### 1. Private Property

The institution of private property in land assigns an owner to each parcel of land. A landowner has full rights to manage it, sell commodities on it, and dispose of the property, including bequest to the landowner's children. He or she can exclude other persons

from the land and sue in cases of trespass. The owner also has the right to sue others who cause damage to the land. The role of government is to enforce these rights and enforce any contracts mutually agreed to by a landowner and other persons.<sup>26</sup> When resources such as water or migratory animals affect the productivity of land, the private property institution is extended to include these resources, to assure that everything of importance has an owner.<sup>27</sup>

Considering the first component of respect, community and private property are not consistent. An owner is placed in a position of dominance over other beings; if a man or woman can own land and everything on it, reciprocal symmetry does not apply. For example, an animal cannot own people in the same way. In a community, with its families, clans, towns, and nations, each participant has obligations. These requirements are enforced by the community's imposition of constraints on individual behavior. For a property owner, there are no such constraints. Obligations to other community members, particularly the nonhuman ones, cannot be enforced by other human members. The idea that a man or woman has a set of reciprocal relationships, a place in the food web, is undermined by the institution of private property. By ignoring community between humans and nonhumans, private property removes ethical obligations to nonhumans and humans without property.

The drawing of clear boundaries denies connectedness. If the parts of an ecosystem are subdivided into private property parcels, the owners must relate to each other through market exchanges such as leases, contracts, sales, and purchases of goods. In this way, self-interest overrides connectedness while ecosystem function is not disturbed and individual parcel productivity will be maintained. As owners use their land for their own purposes, however, connections will be broken and productivity will fall. To maintain parcel productivity, each owner will have to import resources.

Lack of large-scale coordination increases the probability that owners will experience catastrophic loss. In ecosystems where fire is common, control of fire on a parcel basis, through a general increase in fuels, can generate periodic catastrophes. An example is fire in forests protected for a hundred years. In a watershed in which periodic floods contribute to repairing ecosystem function by setting succession back and renewing soil nutrients, control of water through diversions, dams, and levees can have unintended

systemwide consequences. In ecosystems where large migrating animals are significant, fences and other characteristics of private property can remove species whose contribution to system productivity may be important.<sup>28</sup>

If private property rights are fully defined and if all participants understand the connections within an ecosystem, then each owner will have an interest in purchasing the needed ecosystem inputs from other owners. But private property systems rarely assign ownership rights to everything. Rights are defined as particular goods become scarce; enforcing rights to nonvaluable components is not cost-effective. In addition, owners of parcels learn about their own land exclusively; information also becomes private. Under a private property system, there is little incentive to share knowledge about connections. If one owner hurts the resources of another, recourse is to a court system.

Concern for the seventh generation emerges from a view that assumes a community of humans will persist into the far future. A full private property system assumes that owners can sell to outsiders as well as members of the community. An Indian private property system would, in consideration of the seventh generation, allow sales of land only between tribal members. Since the institution of private property allows sales to anyone, it is not consistent with concern for the seventh generation.

The attitude of humility suggests the following question: If people do not understand the connections in the natural world, can they know which resources should be placed in private ownership, and who the owner should be? Also, can they know that the pattern of ownership among people will lead to the right levels of knowledge and the right private agreements to share resources? Because the answer to both these questions is no, private property is not consistent with humility.

## **2. Corporations Owning Land**

The private property system has many inconsistencies with the four components of respect. One institution used within the private property system is the ownership of land by a fictitious person, a corporation owned by shareholders. When the Indian Reorganization Act of 1934 authorized creation of tribal corporations, some tribes adopted corporate charters. A corporation was imposed on the Menominee in 1963, when termination created Menominee Tribal Enterprises. In 1971, the Alaskan Native Claims

Settlement Act imposed corporate structures in Alaska. Both the Menominee and Alaska Natives have had problems with corporations.<sup>29</sup>

Since corporations are part of private property systems, all of the objections raised about private property also apply to corporations. Corporations raise three additional problems: First, they are governed by majority rule, through a vote of the board of directors. Community consensus is not a requirement, which would violate most Indian notions of community action. Second, the financial accounts of a corporation are maintained using generally accepted accounting rules. Only products with market values that can be observed today are entered into these accounts. This limits recognition of connections between things and beings with and without market value. Third, standards of corporate profitability conflict with concern for the seventh generation. In the United States, corporate profitability is judged against rates of return in capital markets, which emphasize earning as much as possible in the short term. To earn rapid rates of return, both renewable and nonrenewable resources are consumed quickly.<sup>30</sup> Given all this, one would expect that American Indian and Alaska Native communities using corporate management would have difficulty implementing traditional Indian policies.

### **3. Alternative Institutions**

Historically, neither private property nor corporate ownership of land was popular with Indians. What institutions are consistent with the four principles of respect? One is direct control of land by a governing body that makes land use decisions through community consensus. Another is the granting of specific, limited use rights to individual members of the community, with the provision that rights can be removed if misused.

Common property ownership, when defined as community control rather than simply open access, provides examples. Economists finally have realized that common property institutions can be successfully implemented for sustained use.<sup>31</sup> In the presence of economies of scale in the management of migratory animals, Nugent and Sanchez have shown the advantages of tribal chiefs in coordinating the allocation of land between cultivation and grazing.<sup>32</sup>

To look for alternative institutions, we can examine the traditional institutions that were in place when Europeans arrived.



Across North America, three institutions coexisted: generosity, usufruct tenure for individuals, and tribal or band territorial division.<sup>33</sup> The institution of generosity is a rule that all members of a community must share goods and property. In societies with hierarchy, such as in the Pacific Northwest, the rich conducted potlatches in which they gave away many goods. In more level societies, such as in New England, everyone shared their possessions. Usufruct tenure is the principle that one has exclusive rights to the products of land one is using, but that ultimate ownership will revert back to the community upon relinquishment of use. Territorial division of land among bands of Indians accompanies a migratory lifestyle; at different times of the year, a band resides in different parts of its territory; lines between band territories are recognized and subject to conflict.

Fundamental in this constellation of institutions is the requirement to be generous. If each individual or family is required to share its bounty with others, then everyone in a community has an interest in the productivity of his neighbor. Generosity creates connectedness in consumption, which complements the reality of connectedness in production. Just as selfishness is an institution that accompanies private property in land, generosity is an institution that accompanies communal land ownership.

In New England, Cronon provides the following quotation from Le Clerc, an observer of the time:

The Micmac of Nova Scotia . . . were "so generous and liberal towards one another that they seem not to have any attachment to the little they possess, for they deprive themselves thereof very willingly and in very good spirit the very moment when they know that their friends have need of it."<sup>34</sup>

In the South, the Choctaw situation was as follows:

Choctaw chiefs . . . were primarily redistributors. They maintained power not by hoarding goods but rather by giving them away. As it operated aboriginally, redistribution was coupled with another concept: reciprocity, or the obligation eventually to return certain gifts of goods, labor, service, and favors. Together, redistribution and reciprocity governed the exchange of goods in Choctaw society.<sup>35</sup>

Thus, the Choctaw chiefs were similar to leaders in the Northwest, who competed with one another through potlatches.<sup>36</sup> These three

examples, spanning the continent, are a small taste of the extent to which generosity was fundamental in traditional Indian societies.

Property ownership also existed in these traditional societies, but it was not private property ownership. Cronon provides the following description for New England:

Property rights . . . shifted with ecological use . . . . Hunting grounds are the most interesting case of this shifting, nonagricultural land tenure. The ecological habits of different animals were so various that their hunting required a wide range of techniques, and rights to land use had to differ accordingly.

What the Indians owned—or, more precisely, what their villages gave them claim to—was not the land but the things that were on the land during the various seasons of the year.<sup>37</sup>

In this interpretation, the rights to use things on the land were allocated to individuals, as part of the private property institution is supposed to hold. But the right was one of use, not ownership in the sense of exclusive control, including buying and selling. Other uses may overlap in the same geographical area. Ultimate ownership remained with the village as a whole.

With ownership dependent on use, exclusivity is determined by the territorial extent of each community of Indians. In the Pacific Northwest,

Indians were very much aware of the region's character as a great watershed. Anthropologist Marian Smith observes that Indians from southeastern Puget Sound derived their major concept of social unity from the geographical concept of the drainage system.

Often the names of a village site and the area that fed its river were the same. For example, the Puyallup River above its fork with the Carbon River was called "ts'uwa," as was the village at that spot. The Indians living there called themselves "the people of ts'uwa": "ts'uwadiabc."<sup>38</sup>

Cohen summarizes the evidence that shows that Indians in Puget Sound had clear property concepts about which villages owned rights to fish at particular sites, and individuals or groups of individuals owned weirs, dams, and traps that they constructed.<sup>39</sup> Cronon and White report that villages had boundaries in New England and among the Choctaw in the South.<sup>40</sup>

Fundamental for understanding the ability of these institutions to assure respect for the land is attention to generosity. Even if individual members of a community control particular resources, the rest of the community has an immediate interest in the management of that resource. The richer the owner, the more he has to share with everyone else. Thus, connectedness is addressed directly. That only use rights can be owned means that the community retains a sanction over misuse. In addition, use rights leave ownership of the land in the community, which can preserve it for the seventh generation. Because the community retains control, the limits on a person's use rights provide ways for the members of a group of Indians to insist that an individual obey the principles of proper behavior toward nonhuman entities and that management be undertaken with a spirit of humility.

#### THE APPLICABILITY OF THE ANALYSIS

This essay has provided proposals for economic development policy guided by Indian values. Respect imposes constraints on the shape of economic policy by barring excessive high grading, placing an upper limit on consumption, and maintaining ecosystem health. Institutions that encourage violation of these constraints, such as private property and corporate land ownership, are not consistent with respect. Do we observe any contemporary Indian communities pursuing traditional Indian economic policy? The answer is yes, but rarely. Most Indian tribes are not truly in control of selecting their economic policy institutions or the resulting activities, and they must be in control in order for this analysis to be tested.

Control of Indian economies from outside takes several forms. The most direct form is the explicit authority of the federal government to coerce tribal governments to sell the products of Indian land.<sup>41</sup> All of this authority, ultimately, is based on the plenary (absolute) authority of Congress as recognized by the Supreme Court throughout this century.

In addition to the authority to coerce tribal governments, the historical legacy of treaties has created dependency that assists in the coercion. The general pattern was for Indian tribes to exchange land for promises of a continuing supply of commodities and tools. These promises have evolved into a system of federal support systems: the Bureau of Indian Affairs' programs to man-

age timber and other renewable resources; education programs; the Indian Health Service; and so on. These programs are part of the federal trust responsibility, and they derive from the legitimate source of the treaties. Because Indians now receive services paid for by the federal government, the threat of withholding services is always available. Because interest was not paid in the Indian Claims Commission process for land taken in the nineteenth century, Indians can show that they still have not been paid fair value for the land cessions.<sup>42</sup> They also know that current Indian resources are often utilized by non-Indians at prices that are unfairly low.<sup>43</sup> Since they have not been fully compensated, Indians retain the sense that federal support is owed to them. The perpetuation of support keeps in place the potential threat to remove the support.

A third form of federal control is the imposition of governing structures. Examples are the promulgation of constitutions under the Indian Reorganization Act by bare majorities in elections with few Indians voting; the governing structures imposed under termination; and the corporate structures imposed by the Alaska Native Claims Settlement Act.

The three forms of federal control were neither universal in scope nor fully successful. Through their own insistence on self-government, combined with good luck, some tribes have been able to preserve traditional governing structures or to create new ones. To determine if Indian tribes select traditional Indian development strategies when they can, we must study the choices made by the few tribes that have been able to retain or obtain some independence. Two tribes that have done so are the Menominee and the Taos Indians.

### **1. The Menominee Tribe**

The Menominee's independence today is the result of political struggle. Because of the tribe's efforts and the help of Senator Robert LaFollette in the first decade of this century, the Menominee were able to build tribal institutions during the allotment era, when most tribal governments were being ignored or dismantled.<sup>44</sup> In 1909, when the Menominee established a tribal lumber mill to utilize their forest resource, the federal government was dividing the commonly held resources of other tribes among their members. Although the BIA asserted its authority over timber management, the tribe, through a series of lawsuits, was able to force the

bureau to adhere to the tribe's standards for sustained-yield management.

In the early 1950s, a combination of factors made the tribe temporarily vulnerable to extreme federal coercion under the termination policy. The Menominee had won a judgment against the federal government, giving leverage to an aggressively anti-Indian senator, Arthur Watkins of Utah. There was no senator or governor helping them, as was the case with the Salish and Kootenai tribes in Montana. In Montana, both the Republican governor and Senator Mansfield opposed termination. As a result of their weak position, the reservation status of the Menominee tribe was terminated. A county government and a corporation replaced the tribal government and the BIA.

The decisions of the corporation to create artificial lakes, sell land in a housing development, and change the cutting practices in the forest met great opposition, leading to a movement within the tribe to restore reservation status and change the governing structure. The short-term outlook and the sale of land to outsiders by Menominee Tribal Enterprises, contrary to the consensus of the tribal members, was a major factor leading to the restoration of the Menominee reservation.

The new tribal structure has two governing boards, which serve as a check on each other. Major land-use decisions, especially regarding the tribal forest, require approval by both bodies. With its current governing structure, the Menominee tribe manages its forest in a manner consistent with maintaining ecosystem health. They do not high-grade the old growth, and they maintain species and structural diversity in the forest.

To achieve these goals, the Menominee employ principles of forest management that illustrate respect. They have given their forest manager the following management guidelines:

1. Produce trees with both quality and quantity.
2. Don't put all the eggs in one basket.
3. Remember that we are borrowing the forest from our grandchildren.<sup>45</sup>

The first two principles illustrate community and connectedness. Production of quality and quantity requires growing trees to large size for quality, which compromises quantity production. The large stock of older trees indicates that they are not high-graded, which cuts out all of the high-quality trees at once. All

species are supported under the principle of keeping the eggs (forest productivity) in different baskets (species). The idea that the forest is borrowed from future generations expresses the seventh-generation principle. Although none of these three principles clearly states the idea of humility, keeping all of the species present in the forest is an example of cautious management consistent with humility.

## **2. Taos Pueblo**

From 1906 to 1970, the leadership of the pueblo of Taos Indians fought to preserve the ecosystem health of the drainage of the Rio Pueblo de Taos. The land was taken from them in 1906 and placed under the management of the U.S. Forest Service as part of the Carson National Forest in northern New Mexico. As explained by Paul Bernal, one of the leaders in the struggle to regain control of the land,

In all of its programs the Forest Service proclaims the supremacy of man over nature; we find this viewpoint contrary to the realities of the natural world and to the nature of conservation. Our tradition and our religion require our people to adapt their lives and activities to our natural surroundings so that men and nature mutually support the life common to both. The idea that man must subdue nature and bend its processes to his purposes is repugnant to our people.<sup>46</sup>

He went on to complain about Forest Service logging plans:

These plans tell us that the Forest Service will always be seeking ways to interfere with the natural ecology of the Rio Pueblo watershed and that it will claim the legal right to do so despite Indian rights under the 1933 act. Our religion is based upon the unity of man with nature in the Rio Pueblo watershed. Any outside interference with natural conditions of the watershed interferes with our religion.<sup>47</sup>

Pueblo governor John C. Reyna explained the religious importance as follows:

The lake is as blue as turquoise. It is surrounded by evergreens. In the summer there are millions of wild flowers. Springs are all around. We have no buildings there, no

steeple. There is nothing the human hand has made. The lake is our church. The mountain is our tabernacle. The evergreen trees are our living saints. They are with us perpetually. We pray to the water, the sun, the clouds, the sky, the deer. Without them we could not exist. They give us food, drink, physical power, knowledge.<sup>48</sup>

Although the watershed is sacred, it is not unused. One major source of conflict was different harvesting rules for deer. The Taos Indians kill deer at times different from those allowed under federal and state wildlife policies.<sup>49</sup>

In their struggle to obtain title to Blue Lake and the Rio Pueblo de Taos watershed, the Taos Indians had to confirm their religious devotion to the area by accepting limitations on development. The law that returned their land restricts use of the watershed to wilderness. The Taos Indians accepted this restriction with little complaint.<sup>50</sup>

In convincing President Nixon, the House of Representatives and the Senate to transfer land title to them, the Taos Indians emphasized the religious significance of the land. To avoid the argument that returning the land to them would set a precedent, they and their supporters argued that the Taos Indians were unique: No other Indians had such strong religious ties to particular land areas.<sup>51</sup> Of course, the claim was false, although politically convenient at the time. Connectedness assumes all humans are tied to their roots, and the connectedness assumption is widespread among Indians.

Both the Menominee and the Taos Indians illustrate Indian-centered economic policy. Although their forest management practices differ from each other, both manage forests that non-Indians regard as wilderness. The Menominee Forest is roaded, with stumps as well as very large trees. The large trees and species diversity suggest forests as they were before non-Indian settlement. The Taos forest is accessible only by foot, does not support a mill, and is closer to wilderness as currently defined by non-Indians. The principles of respect support a wide range of policies, while excluding others.

#### A POSSIBLE COUNTER-EXAMPLE

The examples of the Taos Pueblo and the Menominee tribe show that some Indian communities pursue policies consistent with

respect. There are apparent counter-examples, however; the case of the Navajo is examined below. Some other counter-examples can be dismissed as instances of imposed institutions leading to disrespectful policies; an example of this is the clearcutting of the cedar forests of the Quinault Reservation. The Quinault Indian Nation had no power to determine the harvest policy, because of the imposition of a private property system, combined with federal administration of forest policy.

The case of overgrazing on the Navajo Nation, however, is not so easily dismissed. The situation has been extensively analyzed and is a rather typical example of an open-access property rights system leading to overuse: the tragedy of the commons.<sup>52</sup> The situation was created by the federal government, by regulation of land-use policies. When the federal government attempted to reduce sheep herds in the 1930s, the undemocratic and harsh method used created political opposition to such policies. But in the years since, the Navajo Nation has attained sufficient self-governing powers to control grazing if the political will existed to do so. After all, the Menominee example shows that political will can overcome deleterious institutions. It appears that the political will does not exist in the Navajo Nation. Why is this so?

An answer is provided in John Farella's careful study of Navajo philosophy, entitled *The Main Stalk*.<sup>53</sup> Although Navajo belief stresses the importance of harmony with the external world, Navajo concepts of society and the community of humans does not include the assumption of resource limitation that underlies most Indian thought regarding the seventh generation. In fact, many Navajo resist planning for the future. Farella summarizes his presentation as follows:

First Man set about creating Navajo society so that, if man behaved selfishly, it would, at worst, harm no one, and at best benefit everyone. Further, his own actions are the model. Remember what Grey Mustache said, "What he did brought all these things into being that benefit mankind, the reason he did these things was for himself, for his own benefit . . . ."

The essential foundation block in this endeavor was to assure that the process would be non-zero sum. Or in terms of the Navajo gloss, "ever increasing, never decreasing." As we have already pointed out, the mechanism for that is gender, sexuality, and reproduction. The way the system was "designed" was to ensure that growth could occur and that anyone's gain would not be contingent on



another's loss. In fact, First Man did even better. He arranged it so that anyone's gain would, within limits, be of social benefit . . . .

There is a paradoxical imperative at the base of Navajo Society—"To be social, one must be selfish." The above discussion points to a second underlying maxim or basic premise, namely, "don't compete." Obviously, the two can co-exist only in the non-zero-sum or "increase with no decrease" context.<sup>54</sup>

Farella's analysis of Navajo philosophy shows the Navajo do not share all of the assumptions included in the traditional Indian definition of respect used in this paper. The missing component is the seventh generation assumption of resource limits. Proper behavior leads to increase without decrease, suggesting an unlimited future.

Navajo philosophy does not provide a basis for the political will to revise an open-access grazing system. Today's traditional Navajo will insist that the world will adjust and will provide what is needed, to those whose behavior is correct. Although these attitudes may have been influenced by early contacts with non-Indian culture, the Navajo example suggests caution in asserting that the idea of the traditional Indian used in this paper is a universal concept among native peoples in the Americas. Acceptance of the four components of respect is common among Indians; it is not universal.

### FUTURE RESEARCH

This paper has examined values that were probably developed in relatively closed communities, prior to contact with Europeans. In the five hundred years since the two halves of the earth began communicating with each other, the system of capitalism, with its high rate of technological change, has taken over the planet. How might this analysis be extended in relation to challenges posed by the current market situation? How might traditional Indian thought incorporate the following into the economic policy decisions: the exchange of species in ecosystems, major engineering events such as hydroelectric dams, and technological change? Another paper is needed to provide complete analysis of these examples. This paper concludes by suggesting an agenda for further work.

As Indian tribes attain control of their reservations, they will be faced with decisions about the management of ecosystems that have already been manipulated according to the engineering and management principles espoused by the federal government. Forests will have been clearcut, and fire will have been excluded; hydroelectric and irrigation dams will be in place. A return to a previous ecosystem may not be feasible. Are the policies advocated above a good, useful guide to management of resources and ecosystems after major disturbance?

The view that ecosystem health should be maintained provides fairly clear implications, given the above definition of ecosystem health.<sup>55</sup> It is worth noting, however, that there is no clear indication that the four components of respect tell one to return to a previous ecosystem: Respect applies to entities in existence today, and in the future.

Respect for natural systems is not consistent with one of the fundamental justifications for economic development under capitalism: the prospect of infinite growth of humanity's per capita income based on technological progress. Such rapid change denies one of the assumptions about duties to the seventh generation and is inconsistent with humility. The stories of man emerging through several worlds as well as the transformations of animals into men and women in traditional Indian stories suggest that the reality of change is part of the traditional worldview. But change that is continually an increase in man's share of natural productivity may not be part of such a worldview.

Technical progress in the modern industrial economy makes additional consumption appear feasible based on current resources. This possibility raises some key issues regarding an upper limit on consumption. One should distinguish between renewable and nonrenewable resources. When discussing both, technical change in the industrial economy has to be treated. Technical change has many components: (1) the ability to make an existing ecosystem more productive by applying improved knowledge of how the system works; (2) the addition of energy and resource inputs into an ecosystem, also making it more productive; and (3) the introduction of new commodities or new species. Future essays will consider what the four components of respect require regarding the use of new technology in economic policy.

## CONCLUSION

The fact that many non-Indians are becoming more interested in Native American worldviews may be a result of the fact that the consequences of modern economic growth have made several of the assumptions of traditional Indian people seem more relevant.<sup>56</sup> The ubiquity of problems generated by the disposal of waste products has made the assumption of connectedness seem important. The possibility of major catastrophe based on global warming has given the assumption of humility more appeal. Difficulties based on mistaken application of technology seem to have the potential to affect our lives in the near future. The basis of the fears, however, is still limited to the impact of unintended consequences on human livelihood and on this generation and the next.<sup>57</sup> Although concern for the seventh generation and for nonhuman entities has not been as great, the concept of sustainable development is gaining popularity.<sup>58</sup>

This essay provides examples of economic policies based on four components of respect that can be called part of a traditional Indian worldview. Resource exploitation should be limited, consumption should have an upper bound, ecosystem health should be supported, and population growth rates should be held to a low level. The author hopes that others will join in spelling out the implications in more detail. Although many people agree that traditional Indian values are relevant, the study of the implications of those values for contemporary management issues has just started.

## ACKNOWLEDGMENT

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## NOTES

1. David Vinje, "Cultural Values and Economic Development on Reservations," in *American Indian Policy in the Twentieth Century*, ed. Vine Deloria (Norman: University of Oklahoma Press, 1985), 155–75; Delores J. Huff, "The Tribal Ethic, the Protestant Ethic and American Indian Economic Development," in *American Indian Policy and Cultural Values: Conflict and Accommodation*,

ed. Jennie R. Joe (Los Angeles: American Indian Studies Center, 1986), 75–89; Stephen Cornell and Joseph Kalt, “Reloading the Dice: Improving the Chances for Economic Development on American Indian Reservations,” in *What Can Tribes Do? Strategies and Institutions in American Indian Economic Development*, ed. Stephen Cornell and Joseph Kalt (Los Angeles: American Indian Studies Center, 1992), 1–59; Ronald L. Trosper, “Mind Sets and Economic Development on Indian Reservations,” in Cornell and Kalt, *What Can Tribes Do?* 301–28.

2. Joseph Epes Brown, “Becoming Part of It,” in *I Become a Part of It: Sacred Dimensions in Native American Life*, ed. D.M. Dooling and Paul Jordan-Smith (New York: HarperCollins Publishers, 1989), 9–20; J. Baird Callicott, “American Indian Land Wisdom? Sorting out the Issues,” and “Traditional American Indian and Western European Attitudes toward Nature: An Overview,” in Callicott, *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany, NY: State University of New York Press, 1989), 177–201, 203–19; Richard K. Nelson, *Make Prayers to the Raven: A Koyukon View of the Northern Forest* (Chicago: University of Chicago Press, 1983); idem, “Searching for the Lost Arrow: Physical and Spiritual Ecology in the Hunter’s World,” in *The Biophilia Hypothesis*, ed. Stephen R. Kellert and Edward O. Wilson (Washington, DC: Island Press, 1993), 201–28.

3. Callicott, “American Indian Land Wisdom?” 216.

4. The work of John Rawls on justice as fairness is an example of the way that an assumption of constitution-building among humans leads to statements about what ought to be. His first book on the topic, *A Theory of Justice* (Cambridge, MA: Harvard University Press, 1971), reviews the types of analysis presented in Western European thought, especially pp. 22–53. His recent *Political Liberalism* (New York: Columbia University Press, 1993) clarifies his intent to focus on the structure of democratic societies. Because of this emphasis on democracy, his work is potentially very helpful in analyzing Indian assumptions about the proper order of society, which typically are very democratic. In *Political Liberalism*, pp. 21 and 244–46, Rawls recognizes that his theory has not been extended to the rest of nature and expresses some doubt that it can be, based on the assumption that a constitution is an agreement among humans. Most traditional Indian worldviews, it appears, would not make the same assumption. In spite of this difference, Rawls’s reflections on the political aspect of justice raise issues similar to those Callicott sees in traditional Indian societies.

5. Callicott, “American Indian Land Wisdom?” 216. Rawls distinguishes between a well-ordered democratic society, his object of study, and a community or an association (*Political Liberalism*, 40–43). In describing inclusion of nonhuman beings within a human social system, we must be careful to distinguish between different ideas. Rawls’s differentiation of society, community, and association is helpful in this regard. The word *community* is used broadly by Callicott and in the text of this essay, to include all three as possibilities.

6. Dooling and Jordan-Smith, Editors. *I Become a Part of It: Sacred Dimensions in Native American Life* (New York: HarperCollins Publishers, 1989); Barry Holstun Lopez, *Giving Birth to Thunder, Sleeping with His Daughter: Coyote Builds*

*North America* (New York: Avon Books, 1977); Ella E. Clark, *Indian Legends from the Northern Rockies* (Norman: University of Oklahoma Press, 1966); Mourning Dove, *Coyote Stories* (Lincoln: University of Nebraska Press, 1990).

7. Nelson, "Searching for the Lost Arrow", 220.
8. Brown, "Becoming Part of It," 19–20; Trosper, "Mind Sets," 310.
9. Marguerite Swift quotes her recent interview with Lacondon Indian leader Chan K'in: "The roots of all living things are tied together." See Swift, "Parallels Between Traditional Native American Land Ethics, the Emerging Western/Anglo Land Ethics, and Multiresource Management" (Master's thesis, Northern Arizona University, 1994), 24.
10. Oren Lyons, "An Iroquois Perspective," in *American Indian Environments: Ecological Issues in Native American History*, ed. Christopher Vecsey and Robert W. Venables (Syracuse, NY: Syracuse University Press, 1980), 173.
11. Nelson, "Searching for the Lost Arrow," 220.
12. *Ibid.*, 215.
13. Frank Waters, *Book of the Hopi* (New York: Penguin Books, 1977); Paul G. Zolbord, *Dine bahane': The Navajo Creation Story* (Albuquerque: University of New Mexico Press, 1984); Barbara Tedlock, *The Beautiful and the Dangerous* (New York: Viking, 1992).
14. Nelson, "Searching for the Lost Arrow," in *Clothed-In-Fur and Other Tales: An Introduction to an Ojibwa World View*, ed. Thomas W. Overholt and J. Baird Callicott (Lanham, MD: University Press of America, 1982).
15. Aldo Leopold, *A Sand County Almanac, with Essays on Conservation from Round River* (New York: Ballantine Books, 1970), 262.
16. Callicott, "American Indian Land Wisdom?" 197–98.
17. *Ibid.*, 198.
18. Leopold, *A Sand County Almanac*, 280.
19. Paul W. Taylor, *Respect for Nature: A Theory of Environmental Ethics* (Princeton, NJ: Princeton University Press, 1986), 99–100.
20. Robert Costanza, "Toward an Operational Definition of Ecosystem Health," in *Ecosystem Health: New Goals for Environmental Management*, ed. Robert Costanza, Bryan G. Norton, and Benjamin D. Haskell (Washington, DC: Island Press, 1992), 248.
21. Economists measure productivity as output per unit of input; in a closed ecological system, the input is energy from the sun, a constant, unless humans are supplying additional inputs.
22. Tietenberg provides a survey of economic models of sustainable development that also require high savings rates, usually 100 percent of the returns to exhaustible resources (which gambling might be). See Tom Tietenberg, *Environmental and Natural Resource Economics*, 3d ed. (New York: HarperCollins, 1992), 604–605. The literature on justice as fairness has started to consider an issue of just savings among many generations. See Jane English, "Justice Between Generations," *Philosophical Studies* 31 (1977): 91–104; and Rawls, *Political Liberalism*, 274.
23. Simon Kuznets, *Modern Economic Growth* (New Haven, CT: Yale University Press, 1972).

24. See United Nations Development Programme, *Human Development Report 1994* (New York: Oxford University Press, 1994).

25. Cornell and Kalt, "Reloading the Dice," Terry L. Anderson and Donald R. Leal, *Free Market Environmentalism* (Boulder, CO: Westview Press, 1991).

26. Edella Schlagger and Elinor Ostrom, "Property-Rights Regimes and Natural Resources," *Land Economics* 68:3 (1992), 249–62.

27. Anderson and Leal, *Free Market Environmentalism*, 161–65. In recent years, advocates of private property institutions generally have backed off urging them for Indians; see Jennifer Roback, "Exchange, Sovereignty, and Indian-Anglo Relations," in *Property Rights and Indian Economies*, ed. Terry L. Anderson (Lanham, MD: Rowman & Littlefield Publishers, 1992), 5–26.

28. Timothy F.H. Allen and Thomas W. Hoekstra, *Toward a Unified Ecology*. (New York: Columbia University Press, 1992), 256–81.

29. Gary C. Anders, "Social and Economic Consequences of Federal Indian Policy: A Case Study of the Alaska Natives," *Economic Development and Cultural Change* 37:2 (1989): 285–303.

30. To illustrate: If the real rate of interest is 3 percent and a generation is twenty-five years long, then the value today of one dollar's worth of consumption by the seventh generation, 175 years from now, is less than one cent. With such low value assigned, the consequences of today's action on the seventh generation will be ignored when principles of corporate profitability are applied to management decisions. The principle of maximizing the present value of a flow of income over time places very low weights on income in the far future.

31. Schlagger and Ostrom, "Property-Rights Regimes and Natural Resources," 249–62; Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge, England: Cambridge University Press, 1990); Terry L. Anderson and Randy T. Simmons. *The Political Economy of Customs and Culture: Informal Solutions to the Commons Problem* (Lanham, MD: Rowman and Littlefield, 1993).

32. Jeffrey B. Nugent and Nicolas Sanchez, "Tribes, Chiefs, and Transhumance: A Comparative Institutional Analysis," *Economic Development and Cultural Change* 42:1 (1993): 87–113.

33. Although the literature on traditional Indian systems is large, the text relies on three sources: William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); Richard White, *The Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983); and Fay G. Cohen, *Treaties on Trial: The Continuing Controversy over Northwest Indian Fishing Rights* (Seattle: University of Washington Press, 1986).

34. Cronon, *Changes in the Land*, 61–62.

35. White, *The Roots of Dependency*, 42.

36. Cohen, *Treaties on Trial*, 19.

37. Cronon, *Changes in the Land*, 62–64.

38. Cohen, *Treaties on Trial*, 21.

39. *Ibid.*, 22.

40. Cronon, *Changes in the Land*, 59; White, *The Roots of Dependency*, 37–38.
41. Russel Lawrence Barsh, "Indian Resources and the National Economy: Business Cycles and Policy Cycles," in *Native Americans and Public Policy*, ed. Fremont J. Lyden and Lyman H. Legters (Pittsburgh: Pittsburgh University Press, 1992), 193–221.
42. Leonard A. Carlson, "What Was It Worth? Economic and Historical Aspects of Determining Awards in Indian Land Claims Cases," in *Irredeemable America*, ed. Imre Sutton (Albuquerque: University of New Mexico Press, 1985), 87–109.
43. Trosper, "Who Is Subsidizing Whom?" in *American Indian Policy: Self-Governance and Economic Development*, ed. Lyman H. Legters and Fremont J. Lyden (Westport, CT: Greenwood Press, 1994), 175–189.
44. Brian C. Hosmer, "Creating Indian Entrepreneurs: Menominees, Neopit Mills and Timber Exploitation, 1890–1915," *American Indian Culture and Research Journal* 15:1 (1991), 1–28.
45. Marshall Pecore, "Menominee Sustained Yield Management: A Successful Land Ethic in Practice." *Journal of Forestry* 90:7 (July 1992): 12–16.
46. R.C. Gordon-McCutchan, *The Taos Indians and the Battle for Blue Lake* (Santa Fe, NM: Red Crane Books, 1991), 157.
47. *Ibid.*
48. *Ibid.*, 93.
49. *Ibid.*, 39.
50. *Ibid.*, 155.
51. *Ibid.*, 192–93.
52. Gary D. Libecap and Ronald N. Johnson, "Legislating Commons: The Navajo Tribal Council and the Navajo Tribe," *Economic Inquiry* 18:1 (January 1980): 69–85.
53. John R. Farella, *The Main Stalk: A Synthesis of Navajo Philosophy* (Tucson: University of Arizona Press, 1984).
54. *Ibid.*, 192–93.
55. In fact, the maintenance of ecosystem health may be an easier rule than implementation of management systems based on the net present value of private and social costs and benefits, which is the usual environmental economist's prescription. Calculation of true social value requires surveys and other techniques to estimate the public's valuation of natural phenomena. See Ronald G. Cummings, et al., editors, *Valuing Environmental Goods* (Totowa, NJ: Rowmand & Allanheld, 1986).
56. David Suzuki and Peter Knudtson, *Wisdom of the Elders: Sacred Native Stories of Nature* (New York: Bantam Books, 1992).
57. In his influential 1967 article, "Conservation Reconsidered" (*American Economic Review* 57:777–86), economist John Krutilla emphasizes the usefulness of genetic diversity and other characteristics of natural environments. Although he refers to the future in general terms, he relies on the bequest motive ("a desire to leave one's heirs an estate") for supporting his conclusions. The article is reprinted in V. Kerry Smith, *Environmental Resources and Applied Welfare Economics* (Washington, DC: Resources for the Future, 1988), 263–73.

58. The literature on sustainable development is large and growing. An early book was Herman Daly's *Steady-State Economics*, 2d ed. (Washington, DC: Island Press, 1991). Two critical overviews of the literature are provided by Michael Redclift, *Sustainable Development: Exploring the Contradictions* (London and New York: Routledge, 1987), and Tom Tietenberg, *Environmental and Natural Resource Economics*, 599–626. See also United Nations Development Programme, *Human Development Report 1994*. Four earlier reports, 1990–1993, also stress sustainable development.