

*Culture Loss and Sense of Place in
Resource Valuation:
Economics, Anthropology and Indigenous Cultures*

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I. Introduction

The Exxon-Valdez oil tanker ran aground on Bligh Reef outside the Valdez Arm of Prince William Sound, Alaska on March 24th 1989. Aside from attracting enormous media attention, this disaster focused a great deal of research and analysis on the ecological (Brown et al. 1993), political (Piper 1997), economic (Cohen 1993), and social (Jorgensen 1995; Gill and Picou 1997) impacts of the spill. With an eye toward likely litigation over damages, much of this research quickly centered on assessing the economic costs of the spill to affected industries and economies both local and global. Our aim in this chapter is to reflect on some of the particular difficulties associated with assessing the “culture losses” of indigenous peoples impacted by the spill. That such problems were encountered should not be surprising given the fact that economic impacts are generally assessed using concepts (e.g., cost, compensation, and property) designed to function within western economic and judicial systems.²

This chapter builds on disciplined and interdisciplinary perspectives on culture loss that have emerged during various attempts to assess natural resource damage. The term culture loss addresses two broad but interrelated categories of loss, loss of possession and loss of kinship or belonging (Kirsch 2001). In the former category culture loss includes the loss of possessions such as natural resources and customs such as livelihood practices for which one might claim rights or ownership. As such these losses imply value and property relations

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² We use the phrase “western economic and judicial systems” loosely recognizing that it problematically reifies very diverse moral and ethical principles.

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that are alienable or more or less amenable to economic compensation in some form. In the latter category, however, relationship to land or resource involves an intimate bond or sense of place, that take on the characteristics of kinship ties and belongingness, which are inalienable. Both possession and belonging, when applied to property, are grounded in the assumption that property is a manifestation of social relations (Rose 1994:227 cf Kirsch 2001:168). Simply put, property does not exist without people to make it meaningful. If the acquisition of property is a social manifestation then so is loss. For example many people possess land by rights given by the state and simultaneously through kinship or as members of a particular group. Thus, assessment and remuneration in cases of culture loss are also socially mediated. The possibility that disparate groups will need to resolve conflicts over resource damage increases as more people are connected across the globe by resource interdependencies.

Efforts to determine appropriate compensation for losses suffered by indigenous peoples practicing traditional subsistence lifestyles test the limits of current social science and institutional arrangements to identify and deliver an equitable solution to resource damages that result in culture loss. Our intention is to illuminate new spaces for dialogue between the various interest groups involved in assessing and mitigating these losses. We begin by highlighting some of the positive and negative outcomes of past attempts to engage this monumental task within economics and then anthropology. Throughout, we show that the beginnings of a solution may reside in the work being done around the issues of culture loss and sense of place. Concluding, we review how the natural resource valuation process has been tested and transformed by sustained challenges from indigenous and Western perspectives and suggest that an equitable solution may reside in an interdisciplinary synthesis of the knowledges at hand.

To give but one concrete illustration of what we mean by the challenges encountered in assessing resource damage and culture loss, one esteemed economist serving on an advisory panel organized after the oil spill suggested that the way to determine the value of damage suffered by a particular village was to estimate the cost of relocating that village to a similar undamaged site. At that point, one of the authors (Peterson)³ objected noting that such an estimate would have to make the very untenable assumption that the two locations are substitutable. Further, such an estimate would have to ignore the value of what might be characterized as the sense of place that millennia of cultural development had created. The very concept of a culture -- its ways of life and subsistence practices, systems of meaning, social organization, and identity -- cannot, as modern economic concepts presume, easily be separated from its geographic

³ Peterson represented the United States Department of Agriculture on the Economic Steering Committee for the Exxon-Valdez damage assessment.

location.⁴ Because so much of what constitutes a culture is woven into spatial patterns and localized meanings, to move a culture would be tantamount to destroying it. Much of what is valuable to the culture is embedded in the place. Though this economist wasn't suggesting the village actually be moved, only that the value of its loss could be equated to the cost of relocating, the suggestion demonstrates that economic compensation would have little meaning to such a culture. Monetary compensation might allow villagers to enter into the western economy and purchase goods to replace those goods traditionally extracted from the local environment, but money could in no way compensate for the culture loss.⁵ And in fact, money might well do additional harm to the culture by modifying social relationships that were not monetized previous to the oil spill.

A key point of departure to frame this inquiry is to recognize, at least in part, how modern society interprets its relationship to nature and how this interpretation is woven into its science of valuation and legal and economic institutions in comparison to traditional subsistence cultures. The concept of "sense of place" is increasingly being employed as both an academic and popular way to represent the idea that there are aspects of human relationships to nature that legal, political, and market institutions under-represent in economic and other social transactions (Kirsch, 2001; Torgerson, 1999). In particular we draw on this concept to characterize the idea that individuals and communities possess some "endowment" of natural, cultural, and economic goods. In modern market economies a large portion of this endowment can be accounted in monetary terms and calculated as net worth, thus making economic approaches to environmental valuation a reasonable, though still incomplete, method for assessing

⁴ Implicit in anthropology has been a conceptualization of the human world as a mosaic of separate cultures located in specific places or regions (Gupta and Ferguson 1997). Traditional cultures, even nomadic ones, have some territory that defines and contains subsistence practices and carries meaning and identity to its occupants. While some anthropologists have begun to criticize the idea that cultures are necessarily bounded by geographic territory (see Gupta and Ferguson 1997; Olwig and Hastrup 1997), it is also very much the case that de-territorialization of cultures is intensified by modernization and globalization (see Appadurai 1991 and Clifford 1992). Thus, many cultures are no longer as territorially bounded as they once were, but the process of disembedding cultural practices and social relations from place has profound implications for cultures that experience this transformation as the anthropologists cited above examine. Much the same can be said of any society undergoing modernization as evidenced by the large literature on the sociology of modernity (cf. Giddens 1991; Urry 2000).

⁵ The concept of culture loss is problematic within western property rights (Kirsch, 2001:168). If the government decides it needs someone's land to build a highway that landowner is only entitled to fair market value. One's sense of place tied to the family homestead is not generally recognized as a property right. But this is part of the problem; things of salient value in an indigenous culture may not be recognized as things of monetary value within western culture and legal systems.

damage. Still, as individuals, we recognize that much of what we own -- our property, possessions, natural gifts and talents, and our relationships to family and community -- is not entirely represented in such accounts. Possessions have sentimental value unique to their owner. And more to the point, nature, natural resources, and local place as repositories of memories, relationships and the daily routines have meaning and significance in our personal and collective lives that cannot be reduced adequately to monetary value.

In contrast, one way to characterize traditional subsistence societies is to note that much of their endowment is not circumscribed within market transactions or recognized as property rights. Thus, the difference of concern here between subsistence cultures and modern economies is a matter of the degree to which economic transactions account for the value of one's total endowment or "sense of place". Moreover, much of what constitutes a subsistence culture's natural endowment is linked to specific knowledge of place that allows it to effectively produce and distribute goods of both a subsistence and symbolic nature (Kirsch, 2001:175). In a subsistence society meaning and relevance of much of a culture's knowledge and practices are specific to geographic places, for example, the knowledge of the particular location and timing of harvestable plants and game. Similarly complex social relations are also spatially organized. Harvesting locations, for example, may be allocated to families or other social units in such a way as to maintain certain hierarchies of status and power and even familial ties and obligations. Take the culture out of its place and such knowledge and practice may lose meaning, and change and disrupt social organization.

II. What Monetary Valuation Misses

From a western economic perspective the key problem created by the Exxon-Valdez oil spill is assessing the monetary damage. But environmental resource damage assessment encounters serious obstacles when the question is damage to indigenous subsistence-based cultures, what Kirsch (2001) describes as "culture loss." Following a brief review of the economics of non-market valuation, this section identifies those obstacles and explains why we must seek out alternative legal theories and valuation methods.

A Brief Review of The Economics of Non-market Valuation

Economic value is the amount of money one is willing to trade for the thing in question.⁶ In a market economy, equilibrium between supply and demand assigns monetary marginal market prices, which individual producers and con-

⁶ Although we generally think of economic value in terms of money, it need not be measured by a monetary metric. Money is simply a parameter of exchange in a monetary market economy that simplifies exchange relationships. In a barter economy specific exchange rates among goods and services define economic value.

sumers then decide whether to accept, based on the economic value to them. Market prices effectively measure economic value (are economically efficient) only for marginal transactions under perfect competition.

Even in the hypothetical perfect market, prices do not measure the economic value of non-marginal quantities, i.e., quantities large enough to change the market price. Market prices also fail to include the value of goods for which markets are imperfect or do not exist, such as goods that are non-rival and/or non-excludable in consumption (e.g., public goods) or are non-priced for other reasons, such as government policy or cultural tradition (Randall 1983), values not based on legal property rights, and derived values removed from the consumer's awareness and market exchange by ignorance and externality (Loomis et al. 1984; Peterson et al. 1987; Peterson et al. 1992).

The domain of things that fall into the non-priced account is large. For example, Rolston III (1981) and Driver et al. (1996) identify a complex spectrum of hard-to-define values that motivate human feelings and behaviors toward the natural environment. Many of the benefits and costs tied to the natural world, including the benefits of global biodiversity, forest health, wilderness, outdoor recreation, scenic beauty, and sense of place, are non-priced.

When measured and applied correctly, economic value answers important questions. Cost and revenue accounting helps individuals and private firms evaluate financial efficiency. Benefit-cost analysis (BCA) with non-market values included addresses the broader concept of economic efficiency as seen from the perspective of social welfare. Economic impact analysis addresses the equity objective by showing how an action distributes costs and benefits among people.

There are also many important questions that economic value cannot answer (Peterson and Brown 1999). Some of these questions lie outside the economic domain. Others may be within the theoretical boundaries, but the economic answers may be incomplete or biased because the state of the art is not perfect or because resources are insufficient to allow valid measurement.⁷ The problems identified below arise because monetary economic valuation theories and methods presume that the value of all goods and services can be measured as a monetary exchange value, that is, that there is some amount of money that can substitute for the good or service in question.

Inability to Measure Some Values in Economic Terms

Valid and credible economic valuation of all the important non-market costs and benefits generally is not achievable for three reasons: (1) The monetary

⁷ This discussion of the limitations of economic value in capturing the value of biodiversity views the topic primarily from the microeconomic perspective (Henderson and Quandt 1980; Silberberg 1978). Other problems exist at the macroeconomic level (Daly and Cobb 1989; Daly 1980; and Korten 1992).

economic paradigm is not appropriate for some things; (2) where monetary economic valuation is appropriate, the state of the art is often inadequate; and (3) application of available methods to meet reasonable standards of quality is often too expensive. For these reasons, monetary economic analyses in situations where the non-market components are significant tend to be biased toward private goods with market prices. That bias is especially severe for subsistence and barter-based cultures where a substantial portion of an individual's total endowment or "net worth" is not easily measured in monetary terms. The bias is, of course, not a difference of kind, but a difference of degree.

Each of us, whether wheeling and dealing in a Western market economy or living a subsistence life style in a barter-based indigenous culture, values aspects of our environment, experiences, possessions, and associations with others that don't appear on ledgers and can't be converted to cash. Those of us in a market economy can, however, account for a substantial amount of what we consider to be our "net worth" as privately owned real estate, bank accounts, income, cash on hand, and personal property. We also have a lot of experience trading such things in markets. But, we also hold and enjoy sentimental and spiritual values, memories, feelings, and traditions associated with sense of place and personal associations, and other important aspects of quality of life that are difficult or impossible to measure in terms of money. The cultural difference occurs because when people in subsistence and barter-based cultures add up their net worth, a much smaller proportion appears in monetary accounts. Their interests in situations like natural resource damage assessment will therefore be represented poorly unless we can find more effective ways to involve them in the process.

Things for Which Money Cannot Compensate: To explain this point, we must differentiate among three types of economic value: the value a person assigns, the value the market assigns, and value assigned by institutional fiat. From the personal point of view, there may be things for which there are no acceptable substitutes that money can buy, for example, the value of the life of a loved one or the sentimental value of a home that has been in the family for generations but is now condemned by eminent domain.

The market generally does not recognize the portion of such values not defendable as legally defined property rights.⁸ From the market point of view, there will be many substitutes for the loved one in the work force, so that aspect of the person will have a market value. The family home will also have a market price. These prices will generally fall short, however, of the value assigned

⁸ Kirsch (2001:172), however, cites the case of *Eisenring v. Kansis Turnpike Authority* in which the court held that where the usual means of assessing market value were lacking it was proper to assess the market value of a property by considering its intrinsic value and its value to the owners for their special purposes.

by an individual to whom the life or the house has unique personal value. Given free choice, the individual might not be willing to sell at any price.

Some economic values are assigned by institutional fiat, such as the value of an eye or of an arm, as specified by accident insurance contracts. These are economic values, but they do not necessarily compensate the victim for the full personal value of the loss. The individual might not be willing to sell the eye or the arm at any price, but the "price" assigned by the insurance convention is better than no compensation at all.

Likewise, money cannot compensate for the total value of critical factors that enable human life to exist, and it cannot compensate either for many religious, spiritual, cultural, political, and symbolic values (Driver et al. 1996).

Even where money might compensate in theory, measurement of economic value might not be possible, because it requires people to be willing and able to see them in the context of exchange with money as the numeraire. Such a context may be impossible for people to conceive in some situations. Or, they may view the question as a violation of the values in question. For example, in a focus group conducted to test alternative ways to estimate willingness to accept compensation for the environmental damage caused by the Exxon-Valdez oil spill, a young women leaped to her feet and angrily shouted, "You mean to say I've been raped and you think there is some amount of money that will make me feel it didn't happen?" Subsistence and barter-based indigenous peoples might well shout the same lamentation.

Things for Which the State of the Art is Inadequate: The validity of non-market valuation methods, especially the contingent valuation (CV) method, has not yet been demonstrated sufficiently to satisfy many economists (Mitchell and Carson 1989; Cambridge Economics 1992; Arrow et al. 1993; Portney 1994), but CV is the only option available for monetary valuation of many environmental values.

Inability to measure the economic value of damage to subsistence users of natural resources in the case of the Exxon-Valdez oil spill demonstrates failure of the economic approach to valuation. From a Western economic perspective the indigenous peoples of Alaska who depend on natural resources for direct subsistence have made a life style choice that limits their monetary income. The damaged natural resources constitute a major portion of their total endowment. The appropriate measure in such a case is willingness to accept compensation (WTA), but the present state-of-the-art is not capable of valid measurement of WTA for non-priced environmental goods. In such cases, the only option, willingness to pay (WTP) to avoid the loss, severely underestimates economic value because what one is willing to pay is, of course, constrained by one's income or ability to pay. And because of cultural barriers, the individuals in question may not be willing or able to play the CV "game."

Consider, for example, an original painting by Renoir being sold at a public auction. You want to buy the painting but you are broke and have only five dollars in your pocket. Your bid of \$5.00 evokes only laughter, and you go away in shame and disappointment as the wealthy high rollers bid huge sums of money for the painting you covet. As you leave, an official adds to your injury by saying, "You have insulted this establishment by implying that the value of that priceless art treasure is only \$5.00!". On the other hand, assume that you already own the painting and have decided to sell it. Would you be willing to accept the \$5.00 bid by the shabbily dressed person in the back of the room?

CV also requires people to visualize a thing as a commodity they would exchange for money in a market or in a political referendum. That requirement is a challenge for anyone when the thing is an environmental resource or sentimental value, but subsistence-based indigenous populations who have little or no experience either with money-based markets or with environmental resource referenda will have great difficulty even understanding the "game." If there are cultural barriers based on different styles of communication and negotiation, or if the subculture views the "establishment" with distrust, as is often the case, CV simply will not work. And, the very idea of exchanging traditional life style, sacred places, cultural symbols, and sense of place for money may be non sequitur. Again, the suggestion to measure the economic value of damage to a village affected by the oil spill as the cost of moving the village to an undamaged location with similar environmental characteristics is naive, because it fails to include the religious and cultural significance of attachment to place and knowledge of place resulting from hundreds and perhaps thousands of years of occupation. The new location would be an inferior substitute at best, and may be no substitute at all.⁹ It is, perhaps, nothing but the lesser of two unacceptable evils. As explained by Hall (1966): "... People from different cultures not only speak different languages but, what is possibly more important, inhabit different sensory worlds."

When the Cost is too High: A basic principle of economics is that the cost of the analysis should not exceed the cost of being wrong. Many land management decisions simply do not justify the cost of rigorous monetary valuation of non-market factors. Meeting the standards prescribed by Arrow et al. (1993) in application of contingent valuation, for example, can be extremely expensive. Overcoming the obstacles described above is a major research challenge. The Federal Economic Steering Committee spent in excess of a million dollars de-

⁹ This argument assumes, of course, that the villagers have rights to the values excluded by the cost of moving them to another location. If no such rights exist, the economist may have been correct in the eyes of the law, but the villagers' felt loss would be no less real (Kirsch 2001, Strathern 1999).

veloping a CV protocol for use with the general population.¹⁰ It is probable that the indigenous subsistence-based population problem has no solution in the domain of traditional economic theory and method, but if there is a solution, finding it will require a very expensive research effort.

To their credit, the Economic Steering Committee recognized the inadequacy of the monetary economic approach and embarked upon an ethnographic solution. They convened a small task force of sociologists and anthropologists to attack the problem but an out-of-court settlement aborted the effort. The question remains, however, whether the need is to understand and more effectively represent the values held by indigenous peoples in the processes and institutions in which they are not able to participate effectively or to create new processes and institutions in which they can more effectively represent their own interests.

III. Anthropological Contributions

Anthropologists, like economists, ask how we can account for more of a group's total sense of place when valuing natural resource damage and culture loss. However, the ways that each discipline formulates questions of valuation and the methods used to answer the questions can be quite different. Anthropologists generally work to identify the complex ways that places are made meaningful within and between groups of people. Questions of where culture resides become highly contentious here. On the one hand anthropologists may argue that culture resides in the mind as Paul Bohannon did while testifying on behalf of Exxon in the Exxon Valdez hearings (Kirsch 2001:171). When used in testimony, the consequence of this conception of culture is that remuneration for lost cultural resources becomes a moot point. On the other hand anthropologists may argue that culture resides in material objects (see Weiner 1992), in which case compensation for damage to land, religious sites, etc. should be required. According to Kirsch (2001), the theoretical ambiguity surrounding the ways that culture functions in relation to place is to blame for some of the problems encountered in instances of culture loss due to natural resource damage.

Recent attempts by anthropologists to theorize the crossroads of culture and place in the context of resource valuation focus on the process of negotiation that takes place as networks of actors with varying degrees of power vie to protect their interests. Here, culture informs negotiation, creating a cultural politics of place, which is simultaneously material and ideological, thus steeped in power and history. In other words, places become meaningful to people because of the historically sedimented discourses and material practices that con-

¹⁰ The figure cited is approximate and based on memory, not hard facts, but the development of the CV protocol was a major and very expensive undertaking.

stitute the politics of a place (Moore 1998, Raffles 1999). The significance of power and discourse in shaping resource assessments is taken up below.

Anthropological contributions to the discussion of culture loss and resource assessment can be grouped along two trajectories, each aimed at contributing to a more holistic understanding of indigenous peoples' total endowment or sense of place. First, anthropologists emphasize the various interconnections between culture loss and natural resources. Second, anthropologists are increasingly interested in identifying the local and global players in the resource valuation process and the discourses that influence their choices.

Linking Culture Loss and Natural Resource Damage: Anthropologists draw on a variety of tools to learn about the relationship between subsistence based communities and the natural resources they manage. Joseph Jorgensen (1995) produced one of the most widely cited studies of the Exxon-Valdez oil spill utilizing a social indicator study to demonstrate the link between native people's and natural resources. Jorgenson worked in 30 villages near the communities affected by the Exxon-Valdez before, during, and after the oil spill. Conducting research to help the Alaskan and Federal government better understand the impacts of the Alaska Native Claims Settlement Act (ANCSA) of 1971, he asked questions about household economics, subsistence activities, social organization, ethics, and political activities.

Social indicator approaches are successful in so far as they can reveal significant relationships between people and their environment. For instance, Jorgensen (1995) demonstrated that the Exxon-Valdez oil spill caused job market fluctuations, changes in household visiting patterns, a greater reliance on monetary exchange, and changes in the variety of foods drawn on to subsist. These findings may sound obvious in light of such extensive natural resource damage. Nevertheless they are significant because they show that any natural resource valuation must include cultural values such as visiting patterns and consumption habits, highlighting the need to address culture loss.

Alternatively, the ethnographic method may be employed to assess the extent of culture loss. The ethnographic method combines interviewing techniques and observations (see Spradley 1979) to reveal a complex relationship between social and natural resource values (Dyer, 1993; Gill and Picou, 1997). Comparing transcriptions of interviews gathered in Cordova, Alaska, Dyer (1993) identifies four characteristics of the relationship between subsistence based peoples and natural resources: (1) Residents of subsistence-based cultures are linked strongly to their natural resource base by traditions that integrate them into the natural order; (2) to the extent that cultural activities may destroy renewable natural resources, subsistence based cultures manage their resources to maintain their sustainability; (3) because natural resources are utilized and renewable within bounded areas, they are viewed as limited and

limiting in the variety they provide their human stewards; and (4) progress is resisted to the extent it threatens core cultural traditions and the natural resource base on which they are constructed. With each ethnographic inquiry more of a groups total sense of place is revealed and a new understanding of how natural resources and native cultures are enmeshed is produced.

Discourse and Power in Resource Damage Assessment: The links between natural resources and culture loss are further complicated when groups of people with different value systems attempt to value each others' natural resources or, more typically, when powerful interests value the resources of less powerful others. Following the Exxon-Valdez Oil spill social anthropologists set out to analyze the way that power and social relations shaped the outcome of the hearings for the various parties involved. Indigenous and non-indigenous boat owners, crew, accountants, lawyers and Exxon employees ended up in many conflicts as a consequence of this oil spill (Rodin et al. 1997). Each of these groups of actors is positioned differently in relation to power, in this case the most significant power being the ability and/or culturally determined acceptability of operating within "the rules of the game" as dictated by western economic and legal institutions.

The anecdote about using the cost of relocation as a valuation estimate described earlier demonstrates that the aftermath of the Exxon-Valdez oil spill led to an institutional recognition of a cultural divide between subsistence-based and western liberal economies. The challenge of learning how this divide is perpetuated remains. Language and unrefined practices of valuing culture loss are significant contributors to these miscommunications. For instance, "compensation" is a concept that works quite well for people who have a more complete understanding of the way the market values natural resources. In the Exxon-Valdez case, boat owners with western accounting practices could easily document monetary losses. Meanwhile, indigenous peoples often lacked adequate records of their losses (Rodin et al. 1997).

Current research on mining conflicts in New Guinea provides further evidence that anthropologists are attempting to learn more about indigenous peoples' sense of place in order to reveal the rules and consequences of the resource valuation game to all interested parties. For instance, through development work "the term compensation entered popular usage in the Mount Hagan area of the Western Highlands Province only in the last few years as local practices became more and more enmeshed with the regulations and practices of the State and as local practices themselves altered" (Strathern 1997:2). For Strathern, problems of indigenous resource valuation emerge in the uneven power relations between the State and localities, and the local resistance to encompassment by the State. These problems could be alleviated with more transparent rules of engagement.

The discourse of development provides interesting insights into the ways that States and/or governments participate in the resource valuation relationships. States tend to monetize, bureaucratize, and politicize their relationships with indigenous others. This can be seen in development projects that perpetuate a need for indigenous others. For instance tourism is often promoted as *the* way of preserving "traditional" practices. The consequence is that indigenous peoples are left with few options other than performing their traditional songs, dances, etc. as the primary means of achieving modernity (Schein 2000). State led development plans in New Guinea tend to persist over time by redefining particular groups of people as "underdeveloped" or by promoting "preservation". By borrowing from these powerful discourses, the concept of compensation, for example, indigenous peoples can resist State domination of the valuation process.

An additional example of the power of discourse in the valuation process is highlighted by Burton (1997). Burton investigates the vocabulary of the New Guinea legal system and learns that the process of land valuation is vague to the point of being detrimental to indigenous peoples. For Burton, the question of "how much money?" is repositioned into a discussion of amelioration. Burton states, "there is an asymmetry of valuation in these matters: where there is a saleable or rentable value, the Valuer General has issued a valuation; where there is none, and no valuation has been issued, it is incorrect to assume a zero value and a consequently low level of liability for damage" (Burton 1997:128). Here, the inability of the legal system to value indigenous land creates opportunities for corporations to take advantage of indigenous resources.

Burton examines current methods of compensating indigenous people that often involve a "package of commodities, not one of them resembling the restricted exchange of tradition -- money, business advice, relocating housing, schools, clinics, roads" (Burton 1997:131). Furthermore he investigates the inalienability of land in indigenous exchange systems. As an alternative to the largely controversial methods currently in use, Burton suggests Incorporated Land Groups as "a step in the right direction, or perhaps inventing, ways of coping with individual rights within a group framework" (Burton 1997:132-133). Burton's greatest contribution to anthropological attempts to understand resource valuation and culture loss is that he goes beyond identifying the structural holes in the New Guinea legal system that allow corporations to take advantage of indigenous resources and suggests ways to fix the problems.

IV. Toward A Preliminary Synthesis

A number of substantial reasons have been presented that unpack why both economic and anthropological approaches to indigenous resource valuation have fallen short of a solution that is equitable to all parties. Current economic models for valuing resource and culture loss draw criticism because accepted domains of

monetary valuation i.e. personal value, market value, and value by institutional fiat, often do not equate. The possibility of an equitable environmental resource damage assessment such as the Contingent Valuation model described above is further complicated by the high technology and implementation costs that accompany research into alternative remedies.

Anthropological approaches to resource valuation are equally problematic. Descriptive statistics constructed from ethnographic investigations can lead to the production of information that merely reconstructs what the investigators set out to find. More recently, the deconstruction of key concepts in natural resource valuation and culture loss discourse such as compensation, cultural loss, and the conception of culture (i.e., material vs. ideological) have done much to take apart what western institutions assume about the meaning systems employed by indigenous people. However, little effort has been made to amalgamate what anthropologists learn into a reasonable solution to the problem of resource damage valuation in contexts of culture loss.

Despite the disciplinary shortcomings outlined above, a synthesis of both economic and anthropological approaches could be of great utility for understanding more of the total sense of place endowment that makes natural resources a significant part of indigenous peoples' lives. Ideally, an understanding of economics equates with an understanding of the many western liberal capitalist assumptions that influence the questions we ask of people during the process of valuation research. Likewise, the ethnographic method employed by many anthropologists can help westerners interpret the system of meaning that makes up the "others" perspective on valuation of natural resources, and equally important, help indigenous peoples understand the assumptions built into the western legal and economic systems. When brought together, these disciplines recognize the crucial fact that resource management and resource damage assessment are currently embedded in western legal, political and economic institutions.

In the case of the Exxon-Valdez oil spill there is much evidence to suggest that the destruction of indigenous social fabric was the most serious outcome. In this situation, building community programs before the spill could effectively prepare both indigenous and western negotiators for the challenges of valuing culture loss in the context of resource destruction. Taking the concept of place as a starting point, we should begin to learn more about the ways that different attributes of social and natural endowments overlap in specific places. Furthermore, we should be asking what kinds of rights are required to secure indigenous peoples' relationships to places (Kirsch 2001). What arrangements of these endowments make people most resilient to property loss and culture loss? Can indigenous peoples and western economists negotiate resource valuation methods that include an appreciation for the culture loss that accompanies resource destruction? A dialogue across disciplines and between various interest groups may be the most productive starting point.

Identifying Actors, Interests and Ideologies: The Exxon-Valdez oil spill provides a particularly complex and telling tale of how different cultures' legal and political resolution mechanisms come together producing unexpected outcomes, bad and good, for many indigenous and western actors. The influences on each of these actors are multiple and contextual. Nevertheless, there are certain influences that guide legal and political institutions that may be generalizable. For western institutions these constraints might be time, overhead costs, and accounting methods. For indigenous peoples the influences that structure resource values and negotiation may be part of a formalized barter systems or laws built into belief systems and kinship structures. Each has their way of dealing with resource valuation and culture loss and when considered together could make cross-cultural attempts at assessing value more equitable. Identifying the actors and the influences or limitations on them will allow for a more precise understanding of what can be expected at the negotiation table. Such an inquiry would better educate social scientists about the power struggles and hierarchies that exist in established institutions, concurrently illuminating where and how various aspects of institutions either encourage the successful resolution of resource damage assessment or perpetuate miscommunications and conflict.

Learning the Right Questions to Ask: With the actors in the valuation process established, the next step towards better understanding culture loss in the context of resource damage is to identify the types of questions that each institution asks of itself and its members when attempting to resolve resource damage conflicts internally, and when actors from outside the community are involved. In brief this means a narrow institutional analysis of the decision-making processes that lead to resource damage resolution decisions. For instance, what influences shape a government agency's choice to ask a community a question about the value of their resources in a particular way? What assumptions and influences are buried in the choice to ask a question? One economist asked what the cost might be to relocate a community to an unspoiled piece of land. While this sounds out of line to many people there are a number of assumptions embedded in asking the question that need to be revealed so that better questions are asked in the future, questions that promote discussion rather than silence and frustration.

From the discussion of contributions to the discourse of resource valuation outlined above, it would seem that anthropologists are well equipped to identify the appropriate questions to be asking. The ethnographic method can provide nuanced interpretations of the decision-making processes that work best when resolving problems of resource valuation within a community. In turn, this information could be transformed into a set of questions that might help eco-

nomic methodologists and legal theorists take a more centered position within the cultural divide, resulting in more culturally acceptable and productive questions during the valuation process.

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