Value and Ethical Analysis in Vulnerability to Climate Change: Establishing an Analytic Framework for Identifying, Classifying and Evaluating Vulnerability Issues

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(Working Paper)

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Please Note:

The initial draft of this paper has been revised in light of Barry Smit et al., "Vulnerability of Communities to Environmental Change" (Jan 12, 2005). I have not been able to incorporate materials from other submissions. This, then, is to be seen as a preliminary draft.

Smit et al. describe the various perspectives from which vulnerability is analyzed, identifying elements and formulating the issues in ways especially important for this paper, but in ways that conceptually and linguistically sometimes do not quite fit the concepts and styles of expression to which I am accustomed. I have tried to bring my language more into line with Smit et al., but have not always been successful. The tensions that might be found between the two papers might, then, be taken as indicators of cross-disciplinary challenge and perhaps fertility. For the most part, the values analysis contribution I can offer maps well onto the framework Smit et al. offer.

I have used appendices to place discussions that are important to values analysis, but their place in this paper remains unclear to me. In order to facilitate the easiest reading of the paper and because of time pressures, I have decided place what are more qualifying and supporting

discussions in appendices. A version of this paper will be presented at the Environmental

Studies Association Canada, University of Western Ontario, June, 2005.

Prefatory Remarks

What I am calling "values analysis" is a response to the domination by certain sectors,

particularly economics (see Appendix 2) in policy and public decision-making. This dominance

has resulted in a suppression or distortion of modes of valuing, including ethical, spiritual and

social. One indication of the gradual recognition of this distorting influence has been the

movement from pure shareholder to stakeholder analysis/evaluations. The shift from shareholder

to stakeholder analysis in the arena of sustainable development has given rise to measures for

full cost accounting, the distinction between sustainable development and sustainability, strong

and weak sustainable development. These ideas and distinctions have helped raise the issue of

how values are to be identified and evaluated. Shifting purview in this way has helped raise

other than economically formulated values to the attention of decision and policy-makers, in

part, to help ensure that a plurality of legitimate perspectives are taken into account. When Smit

et al. identify perspective, such as political economy and ecology, as potential perspectives for

identifying "stakeholder risk," they indicate how the purview of research and decision/policy-

making can be and, to some extent, has expanded to help ensure adequate and appropriate

recognition of various stakeholders' senses of harm or vulnerability. Values analysis, as

conceived here, is an extension of this process, involving an analytical procedure to help ensure

that the values articulated from these perspectives are appropriately identified, categorized and

evaluated. Value analysis involves subjecting data gathered through empirical investigation to

examination from a philosophical cum ethical point of view. Such questions as: "What is meant

by value claim 'v'?" ; "Are value claims or ascriptions consistent and coherent?"; "If value claims are inconsistent or incoherent, what should be made of it?" "What type of value is at stake when respondent 'p' makes value claim 'v'?" "Does value claim 'v' have normative implications; of what sort?" "Where there are conflicts between value claims, how are those conflicts to be understood?" "Do institutional arrangements and practices correspond to stakeholder value claims; at what level?"

This sampling of questions is meant to suggest that values analysis is a response to what has been seen by some (e.g., Cragg, 1997; Coward) as under-representation or inappropriate ways of identifying categorizing and evaluating people's values, stakes or interests. (Fuller elaboration will be given below.) At this point, a brief illustration will suffice. Resource managers have often encountered resistance from Aboriginal communities when developing dam projects, a resistance related to the flooding of burial grounds. Despite offering what managers may believe to be more than fair monetary compensation for the loss, they have continued to encounter resistance. Some managers, once they understand that burial grounds have a value akin to family and identity values, which are associated with social and spiritual identity, begin to see that offering monetary compensation is inappropriate, insulting or even in violation of a community's normative commitments. Categorizing values associated with burial grounds, as if they could be evaluated according to people's "willingness-to-pay," has been heavily criticized as wrong-headed and perhaps in violation of ethical norms that managers themselves hold, were they to view the issue from a different perspective. With shifts in perspective and understanding, many managers have "discovered" problems of resource management that did not exist, given their previously held narrow purview. Movement toward co-management and adaptive

management schemes are, in part, the results of the resource management sector recognizing the need for fuller and deeper appreciation of perspective and its concomitant shift in values analysis.

The need for values analysis also partly stems from recognizing that people, stakeholder groups, communities and larger collectives are not single-valued but represent a plurality of values. Some of these values are consistent with one another, while others are inconsistent. In one way or another, these values are connected and affect each other to form a motivational complex, according to which people make decisions and behave. Insofar as values are related in a complex manner, identification and evaluation needs to take this fact into account. For example, social and political values cannot be fully understood without understanding the ecological and psychological aspects of value formation and influence. Appreciating and grasping this complexity requires a wholistic grasping of stakeholder value profiles, at some point. I suggest that a narrative approach is useful for this task. In order to structure the relationship between the analytic and wholistic (synthetic) aspects of value analysis, I introduce the idea of dialectic.

Another important influence of the Smit et al. paper for values analysis is the recognition that "vulnerability" is a *notion* (inchoately formulated concept). Its parameters (e.g., physical geography, social conditions, psychological conditions, political realities, time) and variables (e.g., income, social status, location, economic stability) form a complex of intuitions, ideas, and normative expectations which shape and characterize stakeholders' lived experience of vulnerability. The complexity of the relationship between these factors cannot be captured by one perspective alone, but seems to require the richness of incorporating a plurality of

perspectives and parameters. Since adaptability and exposure (sensitivity) also need to be taken into account in attempts to understand and evaluate vulnerability, an understanding of the relationship between these factors and vulnerability needs to be formed to give some order to how thought about vulnerability is to proceed. Now, if "vulnerability" is a concept like those of health, freedom, happiness, it belongs to that set of concepts whose function it is to capture the richness of the field of experience. Assuming that it is such a concept, we could say that to formulate "vulnerability" as a *notion* is quite appropriate. Rather than trying to give a strict definition to it, the concept can be used as a rich descriptor. Other terms (such as exposure or adaptability) might be given stricter and operational definitions, leaving "vulnerability" the function of stimulating more wholistic ways of understanding and appreciating the system of stakeholder values. The richness of the field of experience it represents also helps maintain appreciation for the complexity of the web of conditions that need to be identified and then synthesized.[1] This operation might be called "complexification," or, recapturing the complexity of meaning, once analysis has taken place. The relationship between analysis and complexification then forms a dialectic, in which thought needs to allow each aspect (or movement) of thought to inform the other.

Complexification can further be associated with depth of analysis, where depth can be considered an additional research parameter. Smit et al. seem principally guided by a principle of inclusion, or, the parameter of breadth. They emphasize the many perspectives (economic, political etc.) that can be taken when conducting research on vulnerability. They also identify dynamics (by including changeability over time). To illustrate why I think this additional parameter is needed, I will again briefly discuss research conducted by Wes Cragg on Values Mapping. In his research on stakeholder values vis-à-vis natural resource development, Cragg

discovered that the values held by different stakeholder groups could vary greatly with respect to negotiability. Cragg found that some values, those of a more utilitarian/economic character, were highly negotiable and people were, therefore, prepared to trade these values off against other values. For instance, while people might be initially angry that a fishing river would be damaged by a dam, the perception of potentially new opportunities for recreational boating and a different fishery (e.g., trout replaced by pike and walleye) made the loss of their traditional fishing activity more a matter of a trade-off against potential gains. Loss, in this instance, became relatively easy to accept.

A First Nation, however, when faced with the prospects of a gold mine from which they would reap considerable economic benefit, on the site of a sacred mountain, could not readily see themselves in a trade-off situation. To agree to the gold mine would be to undermine and violate what they identified as spiritual values and, perhaps more deeply, identity values. The sacredness of the mountain and their sense of duty to protect it had implications for how they understood who they were and why they existed. But not to accept the partnership with the company meant that their people would continue in abject poverty. There had also been considerable resistance in the community toward the mine. After several years of talks, the case had not yet been settled. Spiritual and identity values were treated as relatively non-negotiable and, from some people's perspective, absolutely non-negotiable. The commitment to spiritual values can be more resistant/intolerant to change than commitment to economic values. Sometimes, it is difficult to identify such values without extended periods of discourse about what a change in the community or a person's lived context would mean, since spiritual and identity values are more implicit in how we understand ourselves. Like confidence in belonging to a community, which is often not identified until it is threatened, spiritual and identity values

often go unrecognized until their elimination becomes evident. People often have difficulty formulating what these values are and what they imply. They tend not to think about and articulate such values as they would economic values. In part, the dominance of economic values in people's purview has to do with the fact that there are explicit and sophisticated systems (financial institutions, trade organizations etc.) in place that constantly remind people of their economic identities, while systems that used to remind people of spiritual or familial values are in decline. One could then say that it requires more "digging" and special circumstances to make explicit the fact that people hold other than economic values and that these values are important to them.

The idea of being hidden and implicit suggests what it means for values analysis to address depth. Implicit values can be more fundamental, in the sense that without them, other values lose their significance. They can ground other sorts of values, including economic ones. For instance, certain moral or spiritual values will determine the way in which economic values are understood and economic relations formed and practised. Indeed, there is no reason to think any one of these categories represents an uniform type. Economic values between rich and poor countries or sectors may be radically different (see Polo for more). Where such values or different perspectives are held, their identification may require different levels and types of analysis so that investigators may have to be innovative, in order to identify these values. Disclosure may require a type of discourse in which people get to know and trust one another to an extent not required for daily business transactions. In this way, depth may be required of analysis to understand what it means for stakeholders to be vulnerable.

Depth can also matter in relation to adaptability to change, since, if research fails to identify stakeholder commitment to fundamental values, it will fail to identify the degree to

which people are willing to change or adapt. Communities and individuals with strong senses of place, or heritage (natural and physical/cultural), for instance, all else being equal, will be less adaptable than a neighbouring community of a more opportunistic character.

To some extent, depth has been addressed by the research protocol. Revisiting communities with initial results of vulnerability profiles will go some way toward addressing depth. Later, when considering values analysis method, I will address how the protocol can further foster depth analysis.

Before proceeding much further, my axiological (value theory) commitments should be mentioned. In *Thinking Ecologically* and "Intrinsic Value: A Modern Albatross for the Ecological Approach," I attempt to develop a value theoretical framework that departs from that of the dominant Western intellectual tradition. The one adopted here is, nevertheless, useful. In brief, I hold that there are in fact no such "things" as values, but that value claims or value ascriptions represent activities of valuers. The more primitive formulation is "p values v" not "p has value v." The use of the noun form in the latter formulation is typically seen as primary in the Western tradition. The former verb form is more characteristic of Eastern and Aboriginal traditions. Without going into detail, suffice it to say that most scholarly and Western languages reify or treat values as if they are static things whose identity can be defined in terms of essences. Axiological theories more compatible with Eastern and Aboriginal cultures would take the noun form to be derivative (nominalized action verbs - see Goulet, *Ways of Knowing*). In the Western tradition, Heraclitus, A.N. Whitehead and David Bohm are key proponents of the verb orientation; they understand the world to be a flux or process, not a collection of static and independently existing parts. To make the analysis of values completely consistent with this

value theoretical commitment, coming to a philosophical agreement on world view would be needed. So, for present pragmatic purposes, the noun-orientation can serve as a useful device, but will be treated as a heuristic device. At some point, then, it can be expected to be insufficient to capture all that needs to be captured to describe and explain stakeholder vulnerability. Holmes Rolston III (1983, 1985, 1988, 1997) is seminal in developing a value taxonomy, critique of economic valuations and the idea of levels of value analysis. The development of the heuristic will be based largely on his value theory.

Response to the Trends in Literature Related to Values Analysis and Ethics

Much of the literature on ethics and vulnerabilities to climate change can be called values analysis, as it seeks to address what is at stake for various peoples in relation to climate change. The literature in this field, for the most part, assumes that certain values need to be respected and that applying certain principles can best protect stakeholders (e.g., right to life, right to fulfilment of basic needs (security). Bohle, H.G. et al. (1994), for instance, adopt a view of vulnerability along the same lines as modern utilitarians (Bentham and Mill etc.). They analyze the vulnerabilities of stakeholders in terms of their rights, using Zimbabwe as a case study. This approach appeals to certain moral sensibilities, which capture the repulsion people committed to democratic values feel toward imposed suffering and brutalization. Bohle et al. set out to prescribe a reduction in the three areas of vulnerability they identify. The argument presupposes a victim-orientation of vulnerable groups, who, although capable of adapting in many ways, are, nevertheless, assumed to be victims as compared to the wealthy, who are seen to be, by implication, members of the victimizing sector.   Further, since their focus is on food resources,

it is clear from the start that their orientation is prescriptive for action. They are not interested in understanding vulnerability from a plurality of perspectives.

Their framework of analysis, political economy, may disclose certain vulnerabilities but may at the same time hide or suppress others (e.g., those of the wealthy). Since the prescriptions are formulated in terms of action against the dynamics of wealth, the realm of possibilities for analysis is limited and important factors may be overlooked. If the poor, for instance, have set up informal economies in response to the activities of the rich (as in Brazil, see Jutta Gutberlet, "Cities, Consumption, and the Generation of Waste" 2003) through ingenuity and their own initiative, introducing external measures for equalizing wealth in order to decrease vulnerability may in fact undermine an adaptive capacity and exercise of autonomy of the poor. It may even ignore the adaptability of these groups and sub-economies or devalue them by refusing to recognize their legitimacy.

Brown et al. (2003) argue that an ethical basis for analyzing vulnerabilities needs to be articulated up front. Their reason for arguing the place of ethics in research agendas is this: without an explicit ethical analysis, implicit values and commitments of the research agenda will be carried through uncritically. While I have much sympathy with this motive, their subsequent point leaves me uncomfortable. The ethical perspective counts so heavily, according to them, because the impact of global warming on the poor and their quality of life will be severe (229-30). They begin on the assumption similar to that of Bohle et al., namely, that the victim-perpetrator model is the one that should be used to conduct analysis of vulnerability and adaptability. Further, without ethical analysis, they say, dubious decisions will be made (230). In what sense will a non-ethically driven decision be dubious? Will an explicitly ethical analysis avoid dubiousness? If the above critique of Bohle et al. is correct, an explicitly stated ethical

commitment might, in fact, increase the dubiousness of decisions, if it suppresses important factors, perspectives and values.

As a research principle, a values analysis aimed at prescribing action predisposes researchers to overlook certain perspectives and values. It is more likely to frustrate than facilitate understanding. In contrast, Rayner and Malone (1998) adopt a much more open approach to values analysis, accepting the agency of the vulnerable populations (ix). They accept that all investigation is directed by value assumptions (ix) and that the choice of problem to investigate is likewise influenced (xvi). This poses a central problem for research, since choice of problem, population to be studied, methodology etc. are all biased by value choices, creating a further problem of legitimacy. This is true of all research, not just that which is directly guided by moral commitment. In attempting to address this problem of legitimacy, a discussion of typical prescriptive approaches will be of aid. In turn it can help shape a more open-ended approach to values analysis.

Brown et al. employ the classical philosophical analytical approach that separates descriptive and prescriptive functions and draws on standard western analytical tools (such as the is-ought distinction and the syllogism) to structure the way in which ethical analysis is to be carried out. Adoption of these tools tells us ahead of time what needs to be investigated, and consequently, what can be ignored. In this case, it tells us that we need to examine the relationship between rich and poor, differential power relations, access to resources etc., but not that we need to examine other stakeholder perspectives, or hidden and informal adaptive responses. Once the victim/perpetrator model is assumed, there is little reason to open one's purview to the possibility that vulnerable populations have agency. Brown et al. further employ a fairly standard philosophical ethical view of science as providing the analysis of the means

necessary to accomplish certain ends and the facts that need to be taken into account when making decisions. But the work of determining what counts as risk, acceptable risk, or, in general, what is to be valued and what principles are to be used to determine decision-making and policy, belong to the domain of ethical prescriptions. Citing himself repeatedly, Brown rehearses many of the reasons why a mode of policy development or decision-making that does not explicitly address ethical concerns will implicitly carry ethical and value commitments forward. He then proceeds to carve out a space for philosophical analysis. That space is reserved for examining the justifications (3 in all) that the U.S. has given for not responding to global climate change initiatives (e.g., uncertainties, unfair distribution of costs to U.S.). He concludes that the U.S. cannot justify its lack of action. His analysis is straightforwardly a call to action in response to commitments to distributive justice.

As an analysis of stakeholder risk, this form of ethical analysis assumes that values analysis is to be limited to two possible research functions: 1) to drive research agendas by prescribing what should be investigated ahead of time, according to pre-established moral values (e.g., justice); 2) to evaluate decisions, actions or policies after the fact. Such an approach does not have to seek understanding of the full range of values, relevant perspectives or depth of stakeholder values. It is in effect, an attempt to avoid evaluating the appropriateness of prescriptions in light of the full range of perspectives and value ascriptions. Because of the separation of fact from values (i.e., separating description and prescription functions), these approaches ignore data-gathering as a proper philosophical/ethical function.

This typical approach to applied ethics emphasizes justification (not local understanding) and universality (universal application, not local application). What it seeks to understand (at the level of what we call metaethics) are, e.g., the universal values or conditions of moral

considerability and moral worth. Understanding particular values or what particular communities consider morally significant is suppressed if not taken to be irrelevant. One reason for ignoring the local and particular is that attending to them and making decisions based on them subjects moral decision-making to bias and limits decisions to that particular situation. By far, the dominant tendency in applied ethics is to define the role of philosophy as supplier of universal prescriptions and to limit its descriptive function to what is universally true. Accordingly, stakeholders and their values have to be identified in ways that enable researchers to categorize them according to some universally valid description of human values.

For the most part, this system works to enable decisions to be made in an orderly manner. But, there are incompatibilities with this view of ethics/value analysis and the IACC project, whose orientation to grounded theory (based principally on Corbin & Strauss 1990 & Annells 1996) does not fit well with pre-established moral commitments. If theory is to emerge from the data, including moral and value theories, the pre-established moral position approach is inappropriate and the after-the-fact analysis, based on some externally related moral theory is only marginally useful. Moreover, this approach has come under considerable criticism by philosophers adopting feminist and more phenomenological and hermeneutic approaches (see Annette Baier and Nancy Davis, Benhabib). Failure to understand before prescribing, it has been argued, is inescapably ethnocentric. Even certain views of universality and subscribing to rationality is taken to be an androcentric bias (by many feminist philosophers). Without going into a detailed explanation, suffice it to say that there are theoretical as well as practical reasons for seeing the dominant approach to ethics and value analysis as inappropriate for an open-ended approach as the IACC-MCRI project.

The upshot of much of this criticism is that ethical responses need to come from a perspective that is embedded in the process of data-gathering. The other European philosophical traditions of phenomenology and hermeneutics are far more attuned to this approach to ethics. Of those who attempt to couple the traditions, Jürgen Habermas (1990) is among the most rigorous. He attempts to unite the universalist cum rational commitments with those that demand understanding of particularity. He wants to avoid the relativism of attending to particularity, while respecting the particularity of perspective, location, culture etc. He calls his theory "discourse ethics," the full explanation of which is not suited to this paper. Its influence will, however, be felt throughout the discussion. The key feature of discourse ethics most suited to this research project is that morally significant decisions are to be seen as valid only on condition that all who have a stake in a decision or policy are given an unconstrained voice in the decision-making process and agree to the decision-making principle(s) to be used. In other words, not only the decisions, but the principles and concepts to be used in making decisions are allowed to emerge in the process of conducting discourse.

In this way, those performing an ethical or values analysis function need to be engaged in the collecting of data on vulnerability, rather than prescribing what should be looked for ahead of time, or, simply evaluating decisions after the fact. How and from what perspective value claims emerge in discourse can be as important as the explicitly formulated values in interpreting what a value claim means and, therefore, what sorts of actions are expected. Adopting discourse ethics principles can contribute to the identification of values and to the formulation of the perspective from which vulnerabilities need to be interpreted. By critically assessing how vulnerability (value) claims are or are expected to be treated, a value profile can be formulated to help determine whether institutional arrangements are suited to stakeholder expectations. Much of

this function can be accomplished passively, that is, by listening to respondents, examining transcripts etc.

Active participation, however, typically becomes necessary at some point to fill in lacunae in understanding. Investigators are likely to have to participate in discussion about vulnerabilities and use techniques of active inquiry (e.g., offering interpretations of stakeholder responses, requesting them to resolve apparent contradictions etc.) in order to gather information not gained through other procedures. This function, active analysis (e.g., inquiring about apparent contradictions, offering possible interpretations), is obviously problematic, since investigators inevitably bias what and how stakeholders respond. But employing these techniques after (and only after) stakeholders have exhausted the open-ended procedure, can be an act of following the lead of the open-ended process, thus reducing investigator bias possibly to a minimum. Insofar as it stimulates respondents to expand on previously made points or related new points to them in an unconstrained manner, active participation can foster more than bias stakeholder responses.

Thus far, I have encountered nothing in the climate change literature that suggests such a role for values analysis, let alone philosophical investigation. Other than Cragg's work and to some extent Coward's work in the fisheries, little in the ethics oriented literature on climate change even hints at this function as a possibility. Consequently, I will be relying heavily on the ability of the team to work in a mutually informing and guiding manner to allow the details of the methodology and theoretical perspective to emerge in the course of the project. *[Katherine to examine UBC site for possible linkages and information on qualititative methods]*

One final distinction is in order to frame the values analysis approach. The research project is, by its very nature, cross-cultural, multi-dimensional and cross-sectoral. It is pluralistic

in many ways and in many senses: with regard to levels of analysis, types of analysis, reasons or purposes for analysis, frameworks of analyses etc. Engineers will have a different perspective and work at a different level (more technical and microscopic) than will sociologists. Values analysis needs to incorporate this plurality. For this reason, recognizing disciplinary perspective also needs to be taken into account in the profiling exercise. At the same time, profiling needs to be cognizant across disciplinary perspectives, if the research results are to be cognizant to all team members, not to mention useful for policy and decision-makers.

To some extent, research in Crown-First Nation relations conducted over the past four years provides a basis for some confidence that a values analysis offers a description of vulnerability at sufficiently basic levels to enable cross-cultural, cross-disciplinary understanding to emerge in the process of communication. I am reluctant to claim that there is an *a priori* way to formulate how understanding can occur, except in very general ways. Actual understanding requires dialogue, hence, the need for participation. In my Crown-First Nation research, it has become evident that the historical relationship was heavily dependent on a mode of communication associated with a set of moral expectations. The expectation of honesty, sincerity, clarity of self-understanding and the like, even though rarely genuinely exercised, formed a context for communication. Even faking moral motivations presupposed an understanding of what was expected and what was implied in terms of personal integrity by the terms of reference. At some level of moral life (almost certainly not at the level of explicit rules and norms), people experience and hold common moral values. In this light, by pressing value analysis more deeply, elements of cross-cultural, cross-disciplinary understanding is likely to emerge. At least, given the methodological commitments of the team, as certain degree of confidence needs to be placed in this process.

But prior to this understanding emerging, it is still possible to formulate a tool for facilitating cross-cultural etc. understanding. Vulnerability, as related to suffering, is readily understood by people at physical levels, but also, in a general sense, at psychological and social levels. While we may not understand how a person from a different culture experiences suffering as one who belongs to that culture would, we can appreciate and recognize when a person's suffering is the consequence of broken relationships, senses of being violated, etc. The precise quality of the experience may not be accessible to us, but a general understanding grounded in empathetic recognition and shaped to become more accurate through dialogue is. The deeper the suffering and the closer to core values that violations affect, the more readily we tend to identify with other's sufferings and their related values. Depending, then, on how deeply we take analysis of vulnerability, we can more or less expect cross-cultural understanding or increasing universality of understanding.

Indicators of Values Analysis Procedure from Literature Review (Smit et al.)

Drawing on Smit et al. for a review of the vulnerability to climate change literature, several research principles already alluded to can be suggested. Their emphasis on multiple perspectives and the inclination to embed adaptability in the definition of vulnerability have already been reflected in the previous discussion. The connection between vulnerability and harm will be discussed later in a dedicated section on the Harm Principle. I take my lead in this section from the following : "The empirical research task is to identify, document and describe the combinations of occupancy characteristics and physical stimuli that matter in the system of interest."

Three general characteristics of empirical research that appear to be themes most pertinent to values analysis in the social science literature will form my focus.

1) There have been changes in social science research approaches from mining communities for information to participatory research.

2) Increasingly, researchers are identifying agency as a factor in explanations. (See Rayner)

3) Developments of qualitative research methods from ethnology to grounded theory to phenomenology suggest a growing need and awareness of giving voice to the people on whom research is being conducted.

Values analysis methodology so far described meets the expectations suggested by these trends and Smit et al.'s suggestions. By mapping values onto vulnerabilities and using these maps to offer interpretations of stakeholder narratives, the values mapping process can be both participatory and open-ended. Vulnerability, adaptability, exposure and stressors can be mapped onto values or value systems to aid in deepening how stakeholders identify their vulnerabilities. The literature suggests that some communities, for instance, place greater importance on the support of family and social relations, than on formal governmental institutions, when it comes to evaluating their ability to adapt. By identifying and then mapping pertinent familial and social values onto these variables, it may be possible to help stakeholders expand on initial and possibly obscure references to family and social values, thereby expanding both their and investigator understanding of what family and social cohesion mean. Such mapping can, in turn, help understand where people will turn when attempting to adapt to climate change and thereby

provide information on likely adaptive responses and what sorts of institutions stakeholders will likely identify as key to their adaptability.

Regarding agency, values analysis is predicated on the belief that it is people, principally and, secondarily, institutions, that hold values. In other words, values analysis does not proceed on the assumption that impersonal forces are all that shape human behaviour and world events. "Agency" refers to the deliberative activity of decision-makers through which they integrate information, norms and beliefs into judgments that lead to action. There is room in this definition for institutional agency, but the paradigm case would be that of the individual. The reason for this emphasis is owing to Rayner et al., *Human Choice and Climate Change*. They seem to share my concern that agency, as I define it, is marginalized in climate change research, thereby, creating an under-representation of factors that lead to vulnerability. My other concern is that by not ensuring that agency of individuals is an important factor in adaptive responses, stakeholders will seen more as victims. This would also incline us to overlook informal adaptation strategies, à la Gutberlet. Values are the sorts of things on which people make decisions, whether as individuals or as representatives of institutions. Values analysis acknowledges agency by making explicit what might only have been implicit in decision-making. By indicating what values are morally significant and how they characterize what is a stake, a values analysis makes explicit the fact that decision-makers, as individuals and representatives of institutions, affect and shape people's lives. Hence, while it does not attribute responsibility for adaptation ahead of time, the ethical aspects of value analysis are open so attributions of responsibility.

Hopefully, the overall design and intent of values analysis can be seen as useful for vulnerability and institutional capacity research and distinguished from what is typically be seen

as ethical/values analysis in the literature. How vulnerability is to be defined and its relation to adaptability, however, is a possible point of tension. "Does the degree of adaptability reduce vulnerability?" seems a more complex question than it at first appears. Depending on how vulnerability is defined, perceptions of institutional responsibilities could be affected. According to Adger (1999), if economic conditions and social status are conceived as mitigating vulnerability, then they will be seen as empowering conditions in the adaptation to vulnerability; but, if they are identified as causes or precursors to vulnerability, then they will be seen as more or less debilitating conditions. In the first, we will tend to see the issues more as ones of equity re access to power. Value analysis will then revolve around concepts of justice, rights to power, or, more prescriptive analyses. In the second, we will tend to see issues more in terms of social relations. Value analysis will then revolve around social values, resilience, robustness of institutions, or, more descriptive analyses.

Part of the reason for raising this issue, as Adger addresses it, is to flag the IACC team's approach to defining the vulnerability-adaptation relationship: that adaptability is a mitigating factor of vulnerability. If Adger's warnings have merit, it might be argued that, if economic conditions are causes of vulnerability, then the wealthy could be seen as more vulnerable, because they have more to lose. They would then need greater adaptive capacity than the poor, who may have developed relatively robust informal economies, to mitigate their vulnerability. Few publishing in the area today would say this, but it is a possible way to formulate the relationship. More would say that there is an inverse relation, such that the greater economic power one has, the greater is one's adaptability and so the lesser the vulnerability.

Another related issue could arise. Accepting that vulnerability is a function of economic and political adaptability could be to devalue and marginalize those who prefer to remain poor

(as opposed to impoverished), since they may value the lifestyle of simplicity and freedom from attachment to wealth and all it brings. Those of a more Buddhist leaning would count wealth as a burden, making them more vulnerable to suffering. By being attached to commodities and consumption is, to them, to become vulnerable to suffering. As Shiva has noted (cited above) being poor, for some people is not to be impoverished, but to live according to a principle of simplicity. From this perspective, it is possible that vulnerability/adaptability relationship could be inverted. That is, choosing to live in accordance with the principle of simplicity could reduce people's vulnerability, thereby making them more adaptable.

It may not be appropriate to settle the vulnerability/adaptability relationship ahead of time, since the meaning of both vulnerability and adaptability seem subject to perspective. Granted, the alternative perspective offered by Shiva and proponents of simplicity is in the minority. But the issue is worth raising, because it suggests how a value analysis could affect the very definitions we use to conduct research. Depending on how and what people value, it could turn out that what counts as a vulnerability for one group or to the research team will not be so identified by another group. What counts as an adaptive capacity (e.g., mobility) may, from a different perspective, be seen as a detriment to coping ability, particularly where a sense of community is strong and leaving the community is seen as a sign of weakness. Someone who is seen to "run" at the first sign of external stress is often seen as a coward or as uncommitted and therefore less capable of contributing to the community's adaptability.

Observation:

Much of the literature in the social sciences on climate change has to do with the framing of climate change issues. Some see the primary issue as one of enabling people to adapt to

climate change through reducing hazards and identifying opportunities for economic growth (e.g., opening of new land for agricultural or other forms of land use). Others focus on impacts on the most vulnerable individuals, communities and countries. Often these research projects discuss the issues of distributive justice with respect to economic vulnerability, resource availability, mobility and institutional capacity to respond to stakeholder situations. Different physical foci (water, temperature, soils, forests, fisheries) direct attention to somewhat different social issues, but in general, emphasis is placed on issues of security and its related concerns of health, economic well-being and political stability. The majority so far surveyed identify value and ethical issues from the perspective of justice (particularly distributive justice). This identification and related typing (categorizing) of vulnerabilities systematizes analyses in ways which may or may not support the more open-ended IACC approach to analysis.

Although these observations are indirect, in the sense that they had to be abstracted from the social sciences literature on climate change, the occasional article addresses the value and ethical issues directly and systematically (see Jekwu Ikeme, 2003; Donald Brown, 2003), but as noted, these tend to propagate an approach that is at odds with the IACC commitment to openness.

With this literature in mind, it seems to me that we need to be especially aware of the potential for analytic failure by rushing to identify values in accordance with a pre-established framework or normative commitments. Care to identify and perhaps avoid prescriptions aimed at action ahead of time may be required to avoid marginalization of some stakeholders. Ikeme (2003) ("Equity, environmental justice and sustainability: incomplete approaches in climate change politics") observes that concepts of justice used in discussing the normative aspects of climate change are too varied and conflated with fairness to be very useful. While I disagree

over the analysis of the conflation – sometimes justice and fairness do belong to different realms of discourse, but sometimes they are clearly connected, as in "justice as fairness" formulations – Ikeme's observation is important, insofar as it indicates how varied and, therefore, normatively biased much climate change research has been. The IACC project's approach, in light of this issue, can be seen as a means for examining vulnerabilities to climate change at a more primitive level of understanding both of the facts and the normative expectations of stakeholders and institutions.

The Harm Principle

The other central concept in vulnerability studies about which some comment needs to be made is "harm." Situating vulnerability studies and values analysis in this literature cannot be comprehensive, since the amount is vast. A general literature review will not be attempted, either; rather, a general review of the philosophical discussion on harm and their applications will serve to orient us to how perceptions and conceptions of harm and how they have shaped Western ethical sensibilities. One thing needs to be kept in mind. The greater balance of discussion on the harm principle has taken place in the field of medical ethics. Just as medicine captures the greater balance of research funding, medically oriented discussion of the harm principle captures the greater balance of scholarly energy in applied ethics.

This dominance has influenced the purview of "harm" studies. We tend to think of harm first in terms of harms to individuals (patients) in ways which are coherent with therapeutic functions. When applied to ecological, cultural contexts or systems, this purview is problematic. The medical model is not always suited to describing harms done to systems, since harm to individuals is principally conceived as a denial of happiness or infliction of pain. It is also not

always suitable to talk about harms, as if they can be alleviated therapeutically, as in cases of ecosystem relations. Harms done to prey species by predators do not belong to the same therapeutic model as do paradigmatic medical harms. Setting one's research purview to accord with paradigm cases, then, can be misleading.

Historically the ethical focus on harm can be traced to Jeremy Bentham and utilitarianism. His primary concern for developing ethical theory was the suffering of people and, to some extent, non-humans. The core concept was happiness, the satisfaction of the desire for pleasure and the avoidance of pain. We can further trace the ethical focus on happiness to ancient times and eudaemonistic ethics and hedonism; but the modern and formal articulation of the utilitarian principle, especially pertinent to legislation, comes with Bentham in the early 1800s. Bentham sought to undermine "the principle of sympathy and antipathy," which justified legislators making decisions based on "gut-reactions" or personal intuitions, which, at the time, was the predominant legislative approach. His formulating and lobbying for the "principle of utility" needs to be understood within this context, namely, to bring greater systematic order and accountability to legislative practice. This principle and the calculus accompanying it would simplify and order the legislative process, universalizing justification procedures by requiring that legislators consider the consequences of a law in terms of the happiness it would promote and the suffering it would avoid. Utilitarianism, in light of its motivations to remove capricious and arbitrary decision making, and replacing it with a hedonic calculus, has aided western political systems in coming a long way toward diminishing the rule by fiat and privilege. Taken up and refined by subsequent thinkers, such as James and John Stuart Mill and Peter Singer, it has been re-shaped to address the need to guarantee optimal liberty (J.S. Mill) and minimal suffering (Singer).

The Harm Principle, "the state may coerce a person only if it can thereby prevent harm to others," (Holtug 2002) or simply "Do no harm," has developed in this context. J.S. Mill's concern over harm to individual liberty motivated him to advance the political idea of non-interference in the private realms of individuals. Peter Singer advances the harm principle in terms of animal welfare, obliging us to acknowledge the ability to suffer as the principal moral consideration. Coupled with the principle of non-discrimination, he has argued that no member of the moral community should be made to suffer undue harm (unjustified harm), relative to its ability to suffer. John Rawls asks us to ground moral and political theory on the thought experiment: if we imagine being born into a situation where we could not know our status, abilities, class, that is, our capacities and opportunities were hidden behind a veil of ignorance, what principles would we adopt for ordering social relations? What would rational people accept as the founding principles for social organization? They would, Rawls argues, agree to some sort of principle of freedom, which might be generally characterized as a freedom from oppression and of opportunity. The second would be principle of difference, according to which inequalities between people would be organized, such that the worst off would benefit with whatever principles were agreed upon. Both are attempts to recognize the need to protect and the second is to recognize the vulnerabilities of groups less capable of taking advantage of opportunities and more susceptible to hazards. The ideas related to "harm," then, are deeply influenced by considerations of freedom, albeit more in Mill and Rawls than in Bentham.

The history of the harm principle revolves around the concern to protect those who are vulnerable, particularly to capricious decision-making and rule. It has been shaped by what liberal thinkers perceive as maldistributions of power and wealth, which accounts for the way most vulnerability studies are formulated. The women's, civil liberties and animal rights/welfare

movements have appealed to the harm principle in ways that have expanded the democratic purview of the notions of harm and vulnerability. These movements and corresponding ethics have shown how harm can still be inflicted, even when the noblest of intentions and commitments to freedom are what motivate decision-making. If a particular vulnerable stakeholder group's perspective is not taken into account, unwitting harm can be inflicted on it, when a dominant group's conceptions of freedom and power are used to define intervention policies. In a manner, the feminist ethics of care can be seen as a response to inappropriate conceptualization. Since the dominant utilitarian approach has been so heavily focused on political power and avoidance of physical harm, it has ignored the kinds of harms that result from lack of care. Hence, the dominant definition and formulation of "harm" can, through its effect on people's purview, produce harm. As in the move from shareholder to stakeholder analysis, the demand for recognizing a greater number and sorts of harms has spawned the demand for a wider conception of harm. Expanding the conditions for which decision and policy makers are accountable result. As Supreme Court Justice Bertha Wilson argued in Mortgentaller vs. R., the conditions of self-esteem and dignity for women need to be recognized in terms suited to the perspective of women. Since the then (1988) laws controlling access to abortion did not recognize women's perspectives, they were to be considered unconstitutional.

Widening of purview has had its costs as well. The initial indication of this cost can be seen in the distinction between Mill and Singer, where Mill's line of reasoning has led to a focus on rights, Singer's focus has been on moral considerability. Tom Regan leads thought in the animal rights movement, while Singer leads the animal welfare movement. For Singer, non-human animals do not have a right to life, as they do according to Regan. Rather, we have an obligation not to cause unjustified suffering. Non-human animals do not have the same rights as

humans under a welfare ethic. Further, when a feminist ethic of care is recognized, it becomes even more difficult to articulate concern about harm in terms of rights, since it is difficult to see how caring can be legislated and enforced. Genuine care, unlike genuine enforcement of law, involves absence of external constraint. In this way, moral obligation cannot be mapped onto legal obligation in the same way as Regan's or Mill's can. By expanding purview, we run the risk of developing divergent normative expectations which do not collectively admit of clear systematic ordering.

Another indication of this difficulty the difference between Wes Cragg's research into value mapping and Harold Coward's work on values pertinent to the West Coast fisheries. Both are natural resource projects intended to address the shortfall in harm/value analysis. While Cragg attempted an open-ended identification and categorization of values, Coward focused on justice as the lead concept for identifying what was at stake for various West Coast fisheries stakeholders. Where Coward's approach readily leads to prescriptions and relatively clear lines of justification, or, at least procedures for justification, Cragg's does not. It is not just the incomplete status of Cragg's that work leaves us without an example of how prescriptive results could arise from a values analysis; its openness to a plurality of perspectives does as well.

In my estimation, the best IACC team response to the harm principle, coupled with the commitment to an open-ended data-gathering process as articulated by Smit et al., is to accept the challenge of Cragg's approach as guided by Habermasian discourse ethics. One reason adopting a degree of confidence in this approach is that, after gathering information on people's values in an open-ended manner, similar to that proposed by Smit et al., Cragg proposed various categories under which these values could be organized and analyzed. Proposed categories were "economic," "recreational," "heritage," "aesthetic" and "spiritual," among others. Since these

value categorizations could admit sub-categorization and refinement, depending on stakeholder responses to them, Cragg further analyzed the categories into relative negotiability and non-negotiability. As noted earlier, Cragg found that in the relationship between the company (Placer Dome) and the ... First Nation, mutual understanding developed, as the various values and their categories were made explicit; the process both clarified what was at stake and made the decision-making process more complex. When First Nation stakeholders came explicitly to see how the resulting destruction of trap lines and water pollution from the mining activity in addition to the destruction of the sacred mountain would have implications for identity, moral responsibility and their sense of place, they could more clearly identify the breadth and depth of implications of the project. The clarity of a projected influx of much needed capital and, in turn, industry to an impoverished community could then be more equitably compared against the social and spiritual costs. From a discourse ethics perspective, this is a much needed precursor to developing genuine agreement over policy and decision-making. It also appears to fit grounded theory methodology.

Cragg's further analysis of these categories into core and peripheral values to correspond to the non-negotiable/negotiable value distinction helps to bring attention to the context of meaning or meaning structure, according to which value ascriptions or claims are made and interpreted. Similar sensibilities, though not explicitly formulated, are evident in work by Vandana Shiva, Wolfgang Sachs [references in *Thinking Ecologically*] and others with respect to international development initiatives. The upshot of their work for this project is that cultural perspective needs to be appreciated prior to any value ascription made by foreign aid countries. Without such appreciation, unforeseeable harms are likely to be inflicted on the aided countries. Respecting this concern, the distinction between poverty and impoverishment can be noted.

Expanding on the previous reference to Shiva's work, the harm of foreign aid and economic development are often overlooked, when assumptions about cultural values are not reflectively examined. Shiva's example: Local Indian economies of mixed agriculture and low external energy inputs had existed prior to the green revolution and were replaced by monocultural industrial farming, which was dependent on high external energy inputs. Conceived (or justified) as a means to improve the impoverishment of Indians, the assumption guiding the green revolution was that, because Indians living in this subsistence economy were minimally productive and consumptive, they were impoverished. Foreign aid was then to be targeted at altering the economy to make Indian communities more productive and competitive in the trade economy. The result, however, was that social systems broke down, women lost their roles and functions as producers; and a great many people were displaced, being forced to seek work in cities, where manufacturing industries had developed. Although the people were poor prior to the green revolution, Shiva states, they were not impoverished, because they had a stable economy in which almost everyone had a role, a sense of belonging, and, therefore, an order (institutional arrangement) which enabled them to organize their lives in ways that integrated economics with spiritual belief, family relations etc. In effect, "northern" development agencies brought impoverishment to these communities, by undermining the social and economic structures and practices.

As much as possible, then, it appears incumbent on the research team to identify and make public assumptions about harm, vulnerability and adaptability as clearly as possible.

Values Analysis Within a Vulnerability to Climate Change Context

Thus far, it is clear that the context in which vulnerability to climate change is to be analyzed is complex. As Fraser, et al. (2003) say about complex social/ecological relations, analyzing morally relevant values will require "creative analysis," in the sense that developing an understanding and ethical response to vulnerabilities requires a reflective approach. Conceptual frameworks for analyzing vulnerability can be proposed (treated like experimental hypotheses) that best satisfy the array of stakeholder responses concerns, but these frameworks need to be examined for their inherent biases. The iterative character of research protocol recommended by Smit et al. allows for a process model of values analysis to be developed, so that value profiles can be modified in light of stakeholder and institutional feedback.

Primary Functions of Value Analysis

Given this framing of the context for values analysis, its functions can be suggested. I propose three distinct but inter-related functions.

1) identification
2) categorization
3) evaluation

Identification

The initial stage of value profiling can begin with a general literature review to identify patterns of value ascriptions. Much of this process involves drawing inferences about values from what are identified by stakeholders and researchers as risks, harms, vulnerabilities. A literature review can then serve as background information about what might have been omitted

in this initial stage in preparation for a return visit (part of a second or third stage). While

proposing ways to characterize people's senses of vulnerability, additional possibilities, taken

from what other stakeholder groups have articulated, can be suggested. For purposes of this

research project, this will not be considered a distinct stage. In a more directed and prompted

research agenda, this would constitute a distinct preliminary stage. In the IACC case, where the

initial stage is open-ended, it is not a distinct stage.

For the IACC project, the first stage, is to gather information on targeted stakeholder

values, using various methods, e.g., interviews, discussion fora., questionnaires. If possible,

having people from within the community to be studied, those who "hang around" community

gathering spots where discussions typifying people's views on things, can be an invaluable

resource for directing inquiries. One of my former students called this type of data-gathering,

"research by hanging around." The point is to gather as widely representative information on

people's immediate responses to climate change as possible. The gaining of trust, respect and a

degree of intimacy is often needed to get this kind of information (see Smit et al. 20-22). So,

while other fora are critical, "insider" information can be equally critical for developing more

comprehensive value profiles, since public fora can affect respondent contributions through

creating pressures and limits. For instance, a respondent may feel embarrassed to voice certain

concerns, depending on who is present, or feel the pressure to give responses known to be

preferred by the community. Other key informants may refuse to participate and remain

unidentified by the research team. Even private interview contexts can be similarly shaped by the

respondent's preconceived views of what the interviewer is seeking. Sometimes, then,

information gained by hanging around can serve as a check against respondent biases, if the two

are inconsistent or the more formal approaches yield too narrow sets of responses.

People, however, do not normally talk about their values in explicit ways. Values, as underlying conditions that shape perceptions of vulnerability, are implicit in vulnerability claims and statements. Hence, the procedure is not to ask about values directly, but to gain as wide a set of responses on vulnerability as possible. The initial identification of values is a process of analyzing what vulnerability claims/statements imply about stakeholder value ascriptions. Using qualitative research methods (e.g., grounded theory) can aid in this process. This stage of identification can be considered a first level analysis for identifying particular values.

Here, the protocol discussed by Smit et al. can be followed. To be optimally useful for values analysis, however, the following remarks seem in order: interview sessions need to be sufficiently long to establish response patterns. Some indications of pattern development are: 1) repetition of the same point; 2) respondents attempting to re-phrase or elaborate on points; 3) respondents attempting to defend their points in response to perceived or actual criticism by other respondents in group situations. Preferably session are recorded and video taped in order to gather non-verbal information (people glaring at certain responses). Note taking is usually distracting and can arouse distracting curiosities in respondents about what the researcher chooses to record.
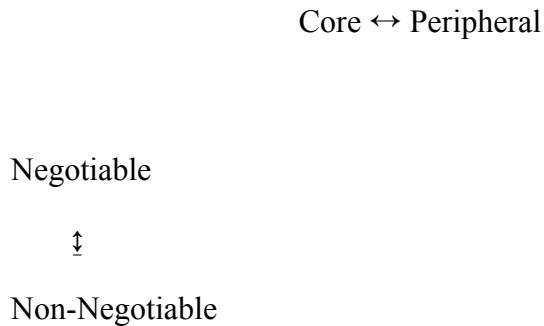
Categorization

This step is also linked to identification, but can be seen as a second stage of identification. It is a second level or order (L2) of abstraction. At this level, values identified at the L1(or, first order value ascriptions) are arranged according to more general categories and their possible inter-relationships noted. This is done by the investigator after the initial data-gathering stage. Categories, for the most part, announce themselves, particularly where the

investigator generally holds the cultural expectations and perspective. Where this is not the case, more care needs to be exercised in categorization, as the foregoing discussion on perspective indicates. It is important, however, not to presuppose what the categories will be (e.g., as if all values can be categorized as economic, spiritual etc.). Further, it is important not to assume that categories are strict in the sense that they do not allow for cross-categorization or modification according to perspective. In some cultures spiritual and economic values may be linked, while in others, they are distinct and oppositional. Nevertheless, certain categories are applicable across cultures, it is likely that economic values (which can admit of incommensurable sub-categories), survival, heritage, family, community, spiritual, etc. values will be identified in the process.

While first order (L1) values have need to be identified in whatever way stakeholders identify them, L2 categorizations begin the process of interpretation and profiling. Once first order values are categorized, patterns become evident. What people's and communities' expectations, behavioural influences (motivations for action), even social arrangements usually become apparent soon after or even during interview processes. It is helpful to take initial categorizations back to the community or respondents to gather feedback about their appropriateness. The categories and profile should then be modified accordingly. This would serve to deepen the giving of voice to stakeholders. Depending on how fine-grained a profile is desired and on the availability of time/resources, it may be preferable to move to a third level of abstraction. As in Cragg's work, analyzing for possible types and relationships between categories may prove useful. The distinction between core and peripheral, negotiable and non-negotiable could prove to be helpful in gaining further and deeper feedback from respondents. Hints about willingness to trade off certain values during the initial data gathering may suggest third order (L3) categorization into negotiable and non-negotiable, for instance. Taken to

follow-up sessions, such categorizations can stimulate deeper reflective responses and provide information on how respondents see the relationship between different values.

Using a matrix for third order value representation can help investigators and respondents sort out their values. The matrix below is one possible device.

Core ↔ Peripheral

Negotiable

↕

Non-Negotiable

(adapted from Cragg, 1997)

Categorization is, in this sense, a way to help identify values in ways that are appropriate to the perspective or world view of the respondents. It helps avoid treating values as if they were atomic units, rather than interrelated. As such, it helps to address the complexity of value relations. It needs to be emphasized that using a matrix is just a heuristic device, whose limits soon become obvious. It is crude and gives us minimal information about actual relationships between values. For more complete information, a more discursive, narrative approach will likely be needed. But the matrix can also stimulate discussion about relative weighting. Respondents may struggle and debate over where to place a given value, which is itself informative. If we allow the matrix to be scalar so that respondents can place value descriptions

alongside and above or below one another, we gain information about willingness to trade off, importance, meaning and the like.

But it might also be revealing for respondents, which would give reason for modifying value profiles. As in the case of Placer Dome and the ... First Nation, struggles concerning where to place the values of sacredness vis-à-vis economics, can create an awareness of just how important or unimportant initial value ascriptions are. It may also reveal suppressed or actual conflicts at deeper levels. Or, it might enable respondents better to formulate what is at stake for them.

By providing an initial set of terms and concepts, the categorization stage allows for an initial organization of value ascriptions that can facilitate the identification of stakeholder values in terms of its adequacy, appropriateness and meaning. It provides a sense of order around which values can be described and their implications for action imagined.

Evaluation

Stage three is typically where philosophers enter the analytic process. Once the profiling is completed, the next step is to evaluate the profile in accordance with normative standards (e.g., principles of right and wrong, good and bad, just and unjust). The first standard built into the process is formulable as follows: "Has the profiling accurately described stakeholder values?" A second is: "Does the profile enable stakeholders effectively to represent what is at stake for them?" Or, "Does it enable stakeholders adequately to represent and communicate their vulnerability to climate change?" Later, the same questions, differently formulated, can be used to assess its adequacy for analyzing institutional capacities to adapt to climate change. "Does the

profile enable institutions effectively to understand what is at stake for stakeholders?" "Do institutions follow mandates, mission statements and policies, or do they implement practices that are in line with stakeholder value profiles?"

It may also turn out that stakeholders expect prescriptions aimed at action, as evidenced from the data, especially where the stakeholder community is relatively homogenous. But in keeping with the express purpose of values analysis, the prescriptive approach will be restricted to understanding. But even with this limitation, certain action oriented prescriptions may become evident. Insofar as understanding is involved and communication is necessary for understanding, an evaluation of the procedures that institutions implement for understanding stakeholder values is possible.

It is also possible to evaluate stakeholder profiles against various ethical norms or situate them in various theoretical frameworks. This may be useful in the event that stakeholders may want to use the profile to articulate in what ways and for what reasons stakeholders hold institutions responsible. Or, it may help to distinguish between institutional and personal responsibility. It may also help stakeholders identify more clearly the types of actions they need to take to adapt to their vulnerability. If they are principally concerned about rights, they would be better off identifying formal institutions mandated to respond to rights violations. If communities are more concerned about cohesion, heritage and the like, they may be better off focusing on informal institutions and grass-roots community building. It may be that stakeholders become aware of the inappropriateness of initial litigious attitudes towards harm inflicted by climate change, if what really matters to them are familial and social relationships. Rather than placing energy toward suing governments for breach of responsibility to ensure

access to water, they may see that striving to develop an informal cooperative community for resource sharing is far more appropriate.

At some point in the evaluative process, the difficult issue of balancing the concerns for universal applicability of evaluative standards and the particular valuational framework of individuals and communities must be faced. Universality of application is always an evaluative criterion once research results face peer and institutional review. The evaluative stage, although distinct from this process of peer evaluation, is, nevertheless, influenced by its expectations. Not only do the results need to be useful, but owing to their normative character, they also need to be legitimate. If it turns out that the normative direction of our research results support fascism, we will need to address this issue.

Clearly, the values analysis component is biased toward more liberal and democratic moral sensibilities and arguments for legitimacy could be made accordingly. The entire concern over vulnerability and, by implication, harm, belongs to the liberal and democratic traditions. But can or should this method be applied to non-democratic and non-liberal communities or societies? Could the profiles so developed in this project be considered legitimate in different regimes? Does it matter? I consider this question subject matter for another discussion paper. In the interest of avoiding this question, I offer a few excusing remarks. Since much of the approach is taken from Habermas, feminist critique of traditional ethics an ethics of attunement, citing the following principle is intended to appeal to general moral sensibilities, which in turn, serves as a promissory note that the work of legitimation can be done: "Norms and normative institutional arrangements can be deemed valid only if all who would be affected by their consequences can be participants in a [rule-governed] practical discourse" (Benhabib, 2002, 11).

Appendix 1

Prima Facie Identification of Pertinent Values From the Literature

The following sources help supplement the list of values and categories of values identified by Cragg. Canada, Agriculture and Agri-Food, "Agriculture in Harmony with Nature"; Agriculture and Agri-Food Canada's "Sustainable Development Strategy"; *Federal Framework for Action in Rural Canada* ; Canadian Council of Forestry Ministers; Environment Canada "Canada and Fresh Water" (1998); Federal Water Policy (1987)

1) Security - physical and financial

2) Health

3) Political Stability

4) Identity

5) Heritage

6) Intrinsic

7) Cultural

Appendix 2   **Willingness-to-pay strategies**

In response to the dominance of economics in the area of values analysis (or valuations), Mark Sagoff has noted that most people, when asked to say how much they would be willing to pay to save an old growth forest, will assign a number (e.g., so many dollars per year in additional taxes). But a small number will respond with either a zero or an infinite amount. These two responses are meant to indicate either that the question is out of order because the forests already belong to them as public lands, or, that the forest is of a different sort of value than can be captured in an economic valuation. Once people recognize that an issue involves moral or other non-economic sorts of values, once they are made explicit, they will often alter their response or strategy for responding (e.g., may ask about what is meant by willingness-to-pay). This was evidenced by workshops conducted by Cragg in 1997. So, when people are informed about what kinds of values are at risk or could be harmed, a tendency to re-frame questions or to exercise more caution when responding becomes apparent. When stakeholders identify such values pertaining to heritage, sense of security, family, sense of well-being, responses and response strategies often change. Once ethical values are identified, people can more readily infer that principles of justice are also pertinent and shift their responses to accord more with such expectations (e.g., rejecting the formulation of the question). One could argue that the dominant economic valuational approaches is the "natural" bias and should be assumed in a vulnerability studies. But it is equally likely, as Smit et al. point out, that this value orientation is socially constructed. Other cultures and communities might in fact take ethical values as primary even as some religious communities would take religious values as primary, subordinating economic values to a religious value scheme.

What I am most concerned to extract from Sagoff's discussion is not so much an ethical perspective. Rather, it is the hiddenness of many non-economic values to which I think attention needs to be drawn. Those who are economically empowered generally do not recognize hidden values, because they are generally empowered to exercise them, being the most dominant determinants of cultural norms. Those not economically empowered tend more readily to identify the fact that there are hidden values, even though they might not be able to make them explicit. Typically, they are aware that certain practices and ways of thinking are seen as odd and unacceptable to the dominant sector, and so are aware of a discomfort stemming from their having to suppress these practices and ways of thinking.

A values analysis protocol, then, needs to develop on the assumption that a taxonomic representation of values is a useful tool for identifying both explicitly avowed values and those that are hidden and implicit. Research into values by design, as a result, needs to allow for progressively more complex conceptualizations, categorizations, descriptions, explanations and discourse between stakeholders and researchers.

Legitimacy, Rationality

Procedural principles for identification, categorization and evaluation (relative weighting) can be made to conform first to general expectations of rationality. That is, one of the first functions of reasoning is to ensure as great an ordering and coherence in description and explanation as the data admits. But, where incommensurabilities arise, they must be analyzed as completely as possible in order to ensure that coherence and ordering expectations do not mask real differences. Hence, a dialectic arises in the process where the researcher/analyst needs to keep opposites in tension. One result of holding opposites in tension is that initial iterations of value descriptions and categorizations may have to be revised in light of new meanings that arise. Like those who experience new perspectives and resulting insights through open debate and exposure to new ideas, the dialectical context is likely to give rise to new insights both as to how we need to identify and how to categorize values. For instance, sometimes stakeholders will entrench their views in an adversarial context. A resource manager might, as a result, not be able to see the reasonableness in a First Nation community's refusal to negotiate compensation for the flooding of a burial grounds. But in casual conversation, he might come to see that his insistence of a willingness-to-pay strategy for weighing and ordering values is wrong, because he might himself not be willing to sell his daughter into slavery for any amount of money. He may then come to see how the types of value are in fact incommensurable and that the cost to his own sense of moral worth and integrity would be too great to even entertain the idea that his daughter's worth can be monetarily defined. Upon reflection, he may come to find that the First Nation community's relation to their ancestors' burial ground is of the same sort. If free to do so, he is then compelled to find another way to address the issue. Similarly, researchers may find that the initial assumptions they made to identify and categorize values were somehow

inappropriate in light of the dialectic or conflict that such identifications evoke. When a parent

thinks that identifying the function of her daughter's doll is to keep her calm and entertained, she

might judge it acceptable to give the doll away to a charity, thinking that she can replace it with a

functional equivalent, which might even be more financially valuable. But in light of her

daughter's horror at having her doll taken from her, the mother discovers that the uniqueness of

the doll figured essentially into its value for the daughter, such that the value of the doll was

singular. That is, it depended on that particular combination of doll and child which was likely

not to be replicated anywhere else. In a like manner, for some people or communities, their

vulnerabilities might revolve around a particular and unique place. Hence, assumptions that a

value can be functionally defined and assumed to have acceptable substitutes may have to be

abandoned or modified in subsequent iterations of descriptive value profiles.

So, not only is it likely that stakeholder values will be altered with reflection, but

researcher assumptions will need to be altered in a process of deepening understanding. The

concept of depth needs then to be acknowledged as a significant operator in the thinking about

what research is producing. Depth is not equivalent to accuracy, getting reports on values

increasingly precise or more consistent with the data, although that is involved. Indeed, without

the commitment to get descriptions accurate and exhaustive, there is not point to seeking depth,

since a scattered and incoherent description leads to nothing useful – we can't figure out non-

arbitrarily what to do with incoherent reports of data. But once attempts at precision and

accuracy are exhausted and problems such as anomalies, incommensurabilities and the like

remain, the further task of examining assumptions and perspectives needs to take place in the

hope of finding more fundamental terms of reference that would enable us to resolve the

problems. Now, it might be the case that a theory is available that enables us to resolve these problems, but we must also operate under the assumption that no such theory exists.

If we can assume that most powerful theories are themselves ethnocentric, as some feminists have argued, then we might have to say that even those most attractive theories (e.g., of Rawls or Nozick, virtue theories, Habermas or others) will have to be treated as initial theoretical iterations to be informed and revised by reflection on the data. So, for instance, we might find that adopting a Habermasian "dialogical" theory to be very attractive, since it makes concrete dialogue between affected parties in moral deliberation an essential legitimizing factor in determining moral and political decisions. This coupled with his assertion that this basic principle is universal (because it is that which makes any meaningful dialogue possible) makes his approach one of the most attractive to a grounded theorist. However, there is no a priori guarantee that Habermas' theory is in fact universal. If not, then it is itself ethnocentric (likely Eurocentric) and the claim of universality will turn out to be an imposition of universality. This reluctance to accept any given proposals of universal grounding for legitimating moral decision-making is not to give way to relativism, such that the results of a research project will turn out to be relevant only for that particular project.

Part of being rational is to attempt to universalize basic principles and concepts. Without this, coherence cannot be achieved and cross-cultural communication and understanding would not be possible. To the extent that we can falsify the claim that cultures and perspectives are atomic units, entirely incommensurate with one another, we make room for universalizing functions of reason. That is, since we know that we can translate between divergent linguistic traditions to some degree of accuracy and reliability, since we can negotiate trade agreements between different linguistic and cultural communities and since we can identify common moral

expectations across a large number, if not all, cultural communities (e.g., values of honesty, courage, sincerity) we can identify certain universalizing interests and loci between different communities. Hence, despite the difficulty of determining genuine universal concepts or principles (perhaps we need yet a more fundamental term to do the work), the universalizing function of research needs to be kept in tension with the sensitivity to particularity or singularity.

Precautions

Social scientists reading this paper might not find it all that peculiar, since the approach I take is closely aligned with commitments to grounded theory of qualitative research methods. Philosophers, on the other hand, are likely to find it alien and even methodologically suspect. A typical philosophical approach to issues in applied ethics can be found in Brown ("The importance of expressly examining global warming policy issues through an ethical prism", 2003). In his paper, Brown sets out a standard set of alternative analytical frameworks (utilitarian and deontological), warns against the naturalistic fallacy (deriving statements of what ought to be done from statements of fact) and describes the syllogistic reasoning approach to justification that a philosopher would typically use. In a number of places (Morito, 2002 & 2003), I criticise this approach and adopt what I call an ethic of attunement. It is not necessary to explain the theory, at this point, since many of the qualitative research methods employed in the IACC research effort reflect the commitment to awareness and recognize the importance of listening and understanding before prescribing. But the difference between how I employ philosophical tools to conducting research and how other professional philosophers typically apply philosophical tools should be briefly addressed, in order to anticipate criticisms from the discipline of philosophy. First, I do not adopt an ethical theory (e.g, a utilitarian or deontological position) in order to interpret and evaluate vulnerabilities, but treat various theories as possible means for shedding light on how people experience their vulnerability. Second, philosophers are generally not trained to conduct empirical research, and see themselves as principally evaluating value judgments for legitimacy according to some rule or principle. They evaluate and make prescriptions, once the facts are given. There is also a general tendency to devalue fact-gathering. As such, professional philosophers would tend not accept responsibility for engaging

in the process vulnerability identification and perhaps even categorization. Their role is generally understood to be at the evaluation stage.

But if the parameter of depth is accepted, or the possibility of incoherent and inconsistent responses needs to be addressed during fact-gathering, then there is a role for the philosopher from the start of an empirical research project. Since fact-gathering can involve sorting out conceptual confusion, inconsistency and relating parts to wholes, philosophical analysis can be a critical aspect of coming understand vulnerability. I take it, then, that the typical division of labour between philosophers and empirical investigators is largely a false and misleading division.

A third, but closely related distinction, has to do with the function of discourse. Ethical philosophers tend to define their roles in discourse in terms of a prescriptive function. Focus is paced on determining what ought to matter to people (e.g., duty, utility, virtue) without first understanding what actually matters to people. As will become clear later, I do not reject the prescriptive function, but do not accept any *a priori* commitment to an ethical theory and, therefore, do not accept any particular mode of discourse as the special domain of philosophy. Discourse aimed at prescription is often incompatible with discourse aimed at communication or understanding, but need not be. If the typical philosophical bias is inverted by taking understanding to be the primary function of ethical-philosophical discourse and prescription the secondary, the philosophical function in this research project can be seen as intrinsic to the project, rather than as an add-on, once the data is gathered. This requires subordinating the function of argument to that of disclosure for purposes of understanding, such that discourse is intended to free participants to express what they want to express and what they mean, rather than to force them into having to defend their positions.

On the Prescriptive Function

From the granting institution (SSHRC) through to what appears to be the entire research team's motivation for engaging this project, there is a concern over the suffering and (and possibly benefits) that climate change is likely to bring. We are not indifferent to whether people and systems live or die. The very notion of vulnerability implies normative concern; otherwise we would be using a different formulation to describe the research interest (e.g., "Likely impacts on various subjects in light of changes in climate"). In fact and by definition, then, the research is intended to enable the team to move the research results into the arena of policy and decision-making, an arena of prescription by its very nature. But the idea of prescription is not as clear as it might be. Prescriptions can occur at the level of action, where decisions, regulations and policy are made. They can also be made at more abstract levels of thought and deliberation, where principles determine what rules governing decisions etc. are made. More abstract still, they can be made at the level of reflection, where we determine what sorts of perspective, basic concepts and first principles should be employed. I assume that the team is not in the business of prescribing at the first level, but is concerned to advise at the second level and perhaps even at the third. We are concerned to get thinking about vulnerability and institutional capacity right with respect to what stakeholders actually experience and expect of their institutions. We are concerned to think about stakeholder vulnerability in ways that will best enable people and institutions to adapt to climate change. While we may not be mandated to prescribe regulations, policy etc., we are mandated to help policy and decision-makers think through issues surrounding stakeholder vulnerability in the best way possible to facilitate adaption strategizing.

Now, with this in mind, it should be noted that professional philosophers will immediately suspect the team, and more especially me, of committing the naturalistic fallacy.

This fallacy is as follows: One cannot go from statements of fact (empirical research) to statements of prescription (what policy ought to take into account). Description and prescription are two fundamentally different cognitive operations. For this reason, most philosophers detach from empirical investigation and see the function of prescription as entirely separate from that of description. It might be argued, then, that the research design is flawed from the start. The very use of the term "vulnerability" could be criticized, on the basis that it is a value laden term which does not admit of a purely factual description. The research team, since committed to the scientific principle of unbiased data collection, should have re-formulated its research goal in strictly definable terms, i.e., observable, measurable and quantifiable predicates. The term "vulnerability" is ineluctably value-laden and implies that something ought to be done about it. Hence, the very choice of concepts perversely conflates the descriptive and prescriptive functions, thereby committing the naturalistic fallacy.

As a philosopher trained in the culture of western thought, I am not only aware of but respect this concern. However, unless we are to deny legitimacy to all areas of research that are value-driven and reject the use of all terms that have normative implications (e.g., health, freedom, well-being) for guiding research, we need to find some way to understand research design, when it addresses subject matter that seems describable only with the use of such value-laden terms (rich descriptors). On this matter, I will largely be following the lead of Jürgen Habermas (1990), who argues that entering into communicative discourse for the purpose of reaching decision is intrinsically normative. The upshot of my appeal to Habermas is this: since normative in nature, any discourse into which we enter for purposes of gathering data will be governed by an implicit nomos (or ordering principle), according to which we are committed to a certain logic of action. Without prejudging what that nomos is, we will be engaged in

determining what are the appropriate ways of understanding, formulating and evaluating stakeholder vulnerabilities and institutions adaptive capacities. Since the point is not to prescribe action, but to remain neutral with respect to action guiding rules, a counterpart to 'objectivity' and 'unbiased description' in the physical sciences, according to Habermas, is fairness. With respect to identifiable prescriptive schemes (e.g., deontology, utilitarianism, virtue ethics; capitalism, Marxism etc.) we can be neutral and reflectively critical in ensuring that whatever biases we do have are made explicit and open to challenge.

With these provisos in mind, we can proceed along the narrow path of data gathering without undue bias. Owing to the discourse orientation and iterative nature of the general research design, there are checks and balances incorporated into the process that will help ensure that fairness is respected. If any prescriptions for action are to be results of this research, they are dependent on what is actually discovered through the research. Moving from the descriptive to prescriptive functions, then, is defensible and, indeed, necessary in order to address the subject matter.

While this is not the place to discuss the matter, it should be noted that Habermas and my work in *Thinking Ecologically* can be used to defend this move and to help formulate more precisely the way in which the research is prescriptive. This is not knowledge gathering for the sake of gathering knowledge. As knowledge designed for action, the research results have an inherent prescriptive force by virtue of the kinds of problems it is designed to solve, problems concerning what we ought to be doing.

1.Identifying component parts without re-integrating them into a mode which produces an understanding of their inter-relationships results in a dissatisfaction with the responses we make to such experiences. When our concern over health, for instance, is treated merely as an absence of disease (ignoring social, psychological dimensions), a dissatisfaction over the purview of health professionals and policy makers often arises. Or, when freedom is treated merely as the

absence of physical restraint (ignoring the importance of opportunity), similar dissatisfaction can arise.   So, recognizing complexity is a form of dialectic, a process of analyzing wholes into simpler parts without losing the ability to understand how and why simplification never captures the reality of the experience (object of investigation). Since this operation of understanding (simplification while retaining the whole) implies that research into vulnerabilities (or harms) must hold this tension at its core, there is a need for an additional research function that goes beyond analysis.