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Understanding Values: A Comparative Study of Values in Environmental Policy Making in China, India, Japan, and the United States

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Methodology

Methodology Development

The Carnegie Council, the initiating institution of this project, and the four country teams developed the methodology for this study over a period of two and a half years through consultations with leading U.S. researchers who work at the intersection of values, culture, and the environment, among them, Roger Kasperson, Steve Rayner, Sheila Jasanoff, William C. Clark, Edith Brown Weiss, Robert Socolow, and Gene Rochlin.

Research Protocol for Comparative Analysis

In designing the project, the Carnegie Council determined that answering the central research questions – what environmental values do people hold, how are those values shaped by and do they shape both local and international environmental policy discourses, and how does this differ across political, economical and cultural contexts? – would require fresh empirical material that can be compared cross-nationally using a research protocol that would address the problems that usually bedevil social science researchers: questions of representation, of translation of value-laden terminology both between interviewer and respondent and among the four countries, and of comparability, particularly in terms of understanding and interpreting causal mechanisms.

Survey instruments are one way to tackle the problem, but they have been critiqued as having a number of limitations, including an emphasis only on short-term preferences, a failure to capture the “density” of feelings attached to a particular place, an oversimplification of the model of a human subject, where views on the environment are treated as separate from other social practices in which a person is engaged (Macnaghtan and Urry, 1998), and the problem of categories that do not translate across cultures. On the other hand, post-modern (or interpretivist methods) are criticized for a lack of replicability, attributable to vague concepts, nonoperationalizable measures, and the failure to specify causal relationships, as well as for

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confounding factual and evaluational propositions and for treating multiple cases in non-comparable ways.

This project tries to steer a course between the two approaches. We reasoned that indigenous teams using the qualitative methods appropriate to the sites and research tradition of each country could most effectively carry out this research. To make this work comparative, the project incorporates a two-fold strategy of standardization and continuous interaction. Standardization can provide the structure needed to keep all country studies moving in the same direction; but we believe it is also necessary to draw the project together as a series of successive approximations by having the teams interact on a continual basis. Dialogue is necessary, for example, on terminology, on defending research plans and approaches, and on the interpretation of insights. Thus, in addition to a standard protocol, we saw the need to also place emphasis on the *process* of research.

The following represents the several strategies encompassed in the standardized research protocol, all designed to assure comparability while demonstrating sensitivity to local variation.

1) Common research questions

Following intensive discussions, the research teams decided upon the following four questions that would guide each team's field research.

1. How do the interested and affected parties in the case perceive the problem?

This question is designed to gain a better understanding of how science and other “authorities,” as defined by the local culture, influence local perceptions and values towards the environment, and in turn how individuals make sense of the science story. In other words, in what ways do various actors invoke science, engineering, and technological knowledge? What are the local standards for what constitutes an “environmental problem?” What does “environment” mean to people? In addition, this question should lead us to a clearer understanding of whether or not there is a distinctive sphere of environmental values, how “environmental values” relate to other values people hold, and how those values affect their positions on issues.

2. How have values changed and how are they changing?

For more sustainable policies to be instituted, policy makers and analysts need to know more about the values that can support those policies and the factors that can lead to value change. For example, in China there have been a number of competing values, but the dominant set has been pro-development values. However, today we are beginning to see a change, at least among policy makers, which could represent the future, not just for China, but for other societies as well. Therefore it is extremely important to understand how that value change occurs.

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3. How and to what extent do outside ideas, money, and standards have an impact on environmental values?

This question is designed to capture the way in which globalizing forces are affecting value change. It emphasizes the relationship between local and international discourses and the effect of international discourses both on value formation and policy developments. It acknowledges that those impacts can be both positive (in terms of regulatory standards, technology transfer, transfer of best practices by multinational corporations) as well as negative, in terms of the imposition of legal norms and practices that do not take into account local norms and conditions. The question allows for the possibility that “outsider” is not necessarily defined by state boundaries, but by community or tribe or region. For example, in China, the people of Benxi or Wuxi consider the central authorities in Beijing as much an “outsider” as any foreign entity. The same is true to differing degrees of all four of our studies. Thus we are also interested in knowing who is considered “insider,” who is considered “outsider,” and what impact this categorization and social dynamic has on values and value change.

4. How and why do certain values penetrate the policy process?

This question is designed both to shed light on how value conflicts are resolved in the policy process and how that process, ultimately leading to the inclusion or non-inclusion of certain values in policy, affects values and values change. It involves an understanding of which values enter into debates, policies, and legal decisions, which values are screened out, and which remain silences. It also involves gauging the level of public trust in the government institutions and policies and the science those policies depend upon, which in turn shed light on values and value formation. Finally, the question is intended to help us understand how different values affect the way in which scientific information is incorporated into decision-making. These questions were selected with an eye also toward helping researchers gauge respondents’ moral judgments, including their ideas of fairness and distributive justice. Each question involves balancing the science story of the case, obtainable through secondary research, with the perceptual and value dimensions, derived through interviews, document analysis, media analysis and other means.

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In operationalizing these questions, country teams are free to employ fieldwork tools in a manner that will best elicit values in their cultural context as well as to devise additional research questions appropriate to that context. The following are some of the additional research questions that the teams are pursuing:

- Japan** How does the cohesiveness of a community (typed by the team as either “diffuse” or “close-knit”) affect values, value change, and policy responses to environmental problems?
- India** How does policy failure affect environmental values?
- China** What is the influence of value changes occurring within funding agencies, such as the World Bank and the Asian Development Bank, on both values and policy in China? To the extent that these institutions influence changes in Chinese policy, are they also a force for values change within China?
- United States** How does misleading information about an environmental problem affect environmental values and value change?

2) A provisional set of definitions for “values” and related terms

The purpose of these definitions is to provide a common starting point for data collection and analysis. The appropriateness and cross-cultural validity of this typology of values is itself subject to reevaluation in the light of fieldwork findings. It also makes clear that values may be expressed explicitly or revealed through behavior. Broadly, our definition of values includes:

- Attitudes – expressed dispositions for or against something or someone
- Preferences – ranked attitudes, both those expressed and those revealed
- Values (in the narrow sense) – justifications that people invoke to support behavior, attitudes, or preferences
- Behavior – actions that may or may not be consistent with or expressive of preferences, attitudes, or values (in the narrow sense)

“Environmental values” are values related to the environment, which might include social and cultural values as well as political and economic values, and which tell us something about the standards (criteria) for evaluating issues related to the environment. We do not claim that environmental values are easily discoverable or observable. Rather, we are inferring these values through interviews, focus groups, workshops, and other fora with the interested and affected parties of the case studies.

3) A provisional set of data to be collected

The collection of data is organized around three streams: a science stream, a values/perception stream, and a policy stream:

The science stream:

- The flows and distribution of scientific and local knowledge in the community and how that information is interpreted in a larger context (e.g., environmental assessments, media access, local folklore, etc.)
- The local standards for defining and recognizing the severity of an environmental problem and the role of science in this process (e.g., socially, scientifically, or media-induced expectations for air or water quality)

The values stream:

- The repositories of values over time (e.g., artifacts, institutions, individuals, texts, etc.)
- The different ways in which these values are communicated (e.g., through families, schools, media, festivals, literature, arts, scientific information, and policy decisions)
- The degree to which social actors explicitly invoke history, culture, and values in debates over the environment
- The social constructions of nature (e.g., as fragile or resilient, etc.)
- Local patterns of interaction with the environment and how they change over time (e.g., changing technologies, land uses, etc.)
- Processes of value change, particularly what determines their change at various speeds and depths (e.g., crisis, policy failures, scientific findings, etc.)

The policy stream:

- Discourses used to justify environmental policies (e.g., notions of community and their relationship to values as manifested in decisions to privatize or make common property)
- The values that are incorporated into environmental policy (e.g., ideas of fairness, concepts of nature, etc.)
- The impact that styles of governance and conflict resolution have on whose values dominate the policy process and how values and patterns of dominance change (e.g., relative power of government bureaucracies, courts, NGOs, etc.)

4) A provisional typology of constituencies

There is wide variation in the ways in which societies organize themselves. The terms that we use to describe institutional arrangements may be very specific to a particular setting or culture. For example, non-governmental organizations may be more or less governmental depending on where they are operating. The popular U.S. term “stakeholder” may not carry the same meaning elsewhere and thus we have chosen to avoid it. It should also be noted that we do not presume that any one respondent wears a single hat; rather, in their interviews teams are exploring the self-defined as well as objective sense of who the informant is, as well as how he or she deals with his or her multiple allegiances.

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However, all of the research teams agreed to describe in their research the following broad categories of institutions in sufficient detail to reveal important differences and similarities: families, schools, industry/business, communities, scientists, nongovernmental (voluntary) organizations, religious groups, governmental agencies (local, regional, national), and international organizations.

As part of the comparative analysis, teams will conduct an anatomy of these nine constituencies across countries with particular attention to:

- The dominant values of each group;
- The sources of values;
- The sense of whether the group perceives its values to be reflected in policy;
- Changes in the values of each group over time.

This analysis will reveal how the findings in our four countries measure up against those of the 1995 study of American environmental values by Kempton, et. al., in which three bases of values were discovered:

- 1) Religious/spiritual;
- 2) Anthropocentric/utilitarian; and
- 3) Biocentric/rights of nature

Spanning both industrialized and developing societies, our research will contribute to the ongoing debates over the validity of the post-materialist thesis of environmentalism (Inglehardt 1997; Brechin and Kempton 1997, and Kidd and Lee 1997), which suggests that people in wealthier countries, having satisfied basic material needs, are experiencing a general shift in values towards a “new environmental paradigm” (Steger et. al., 1989).

Case Selection

Research teams of senior scientists and graduate students from each country commenced fieldwork in August 1998 on two to four cases. The selection of cases was designed to enable project researchers to make comparisons within national contexts and thereby, by including different demographics, climates, and ethnic groups, attempt to capture a wider range of variability and depth of understanding. The fieldwork is now well underway for most cases.

In their selection of cases, each team included at least one resource use case and one industrial pollution case. This distinction between problems of resource use and pollution is widely encountered in the environmental policy literature (e.g., Yearley 1998). While some of the team members have suggested that the distinction may be political rather than analytic, it is intended to capture different human-nature interactions and the values and perceptions of both rural and urban areas. By examining this distinction within popular, academic, and policy discourses in each of the countries, this study will be a further test of its validity.

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In addition, research teams adopted the following common case selection criteria:

- 1) Cases should engage policy making at several levels – local/sub-national, national and international;
- 2) Cases should be current, yet offer a longitudinal dimension to demonstrate how the problem developed into a policy issue that has caught the attention of the local community;
- 3) Cases should involve a range of actors and perspectives, and entail several policy options;
- 4) Research needs to be feasible through a variety of methods (including document analysis and quantitative and qualitative data collection methods) and not excessively bound by political constraints on the research process.

Application of these criteria led to the following case sites being selected. It is also noteworthy that each site is also one with which the researchers has strong familiarity either through past or currently on-going work in that area:

Country	Industrial Pollution	Resource Use
China	<p>Benxi City – Where the local government is striving to maintain a balance of environmental protection and the survival of its state-owned enterprises in a transitional market economy. Because of its severe air pollution, Benxi is stigmatized as “the city that can’t be seen from a satellite.”</p> <p>Wuxi City/Tai Lake – Representative of what may be to come in other parts of China, this is a case of attempts at pollution control of a lake affects the water supply of one of China’s most industrialized and modernized cities.</p>	<p>Sanjiang Plain Wetlands – In the extreme northeastern corner of China, where agricultural development is at odds with wetlands conservation efforts. One of the few pieces of pristine land left in China, the pending development of which could bring far-reaching effects on China’s “eco-protection” practices.</p>

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Country	Industrial Pollution	Resource Use
India	<p>Delhi – A story of policy failure where solutions to industrial pollution are impacting the livelihoods of residents, from industrialists to casual workers, without much reduction in air pollution. This study is also looking at the implementation of the same policy in Agra/Firozabad, the site of the Taj Mahal, and whether there is a significant difference in the means of implementation that has a different affect on environmental values and value change.</p>	<p>Fisheries in Kerala – The Indian state with the highest rate of literacy, where traditional and modern fish workers face the choice of development versus limiting the depletion of marine resources.</p> <p>Shifting Cultivation in Bastar – An area where forest dwellers who have practiced shifting cultivation for generations are being forced to stop this practice that officials say hinders sustainable development in the region.</p>
Japan	<p>Minamata – Where factory effluent caused severe mercury poisoning, leading to intense social and political conflict. The crisis has also resulted in deep value and policy change and innovative community rebuilding efforts.</p> <p>Niigata – A second case where factory effluent caused severe poisoning and intense social and political conflict; however, value and policy changes do not appear to be pronounced.</p>	<p>Nagara River – Where fishermen and nature enthusiasts opposed dam construction; conflict between government officials and diverse, non-unified social movement.</p> <p>Lake Biwa - Japan’s largest lake, where comprehensive development of water supply (including dam construction) has conflicted with resource preservation concerns for four decades.</p>
United States	<p>Southern Louisiana – Representative of resource-dependent rural areas in the US, a case where the growth of the offshore oil and gas industry and a rise in tourism have contributed to environmental degradation.</p>	<p>Desert Conservation in Southern Arizona – Where the values of people who do not live in a region or depend on it become central to the discussion of resource use and pollution.</p> <p>Fisheries along the Gulf of Mexico – Where diverse local values concerning maritime resources get incorporated into a contradictory federal policy, which almost guarantee local-level conflict.</p>

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Fieldwork tools

Teams of researchers and graduate students supervised by a senior researcher rely primarily upon open-ended interviews with a cross-section of policy actors and publics. In addition, research teams are attending, documenting, and analyzing proceedings of public hearings, parliamentary debates, and community meetings, and, when appropriate, organizing focus groups and workshops. Finally, they are analyzing existing survey data about the environment in order to provide a context for interpreting the interview results.

Teams have the latitude to employ the fieldwork tools appropriate to the site and fieldwork tradition of their country. The following are methods all teams are using:

1) Demographic analysis

Age, gender, ethnicity, profession, income level, years of residency, etc.

2) Socioeconomic analysis

Class structure, social networks, professional or occupational affiliation and training, religious affiliations, community membership, etc.

3) Document review and analysis

Relevant scientific and scholarly books and periodicals, local newspapers and other national and local media sources, court and legislative ruling, laws, and other relevant local and national policy documents, etc.

4) Participant observation

Local community events such as town, church, and/or other community group meetings, scientific conferences, legislative sessions, etc., paying particular attention to human-environment interaction.

5) Open-ended and semi-structured interviews

One-on-one and small-group interviews with scientists, policy actors, and other citizens to elicit responses to the project's common set of research questions.

6) Focus group discussions

Groups of 6-12 individuals at a particular field site to both learn more about the environmental issues in the area and elicit answers to the common research questions.

7) Community history

Oral histories elicited from elders combined with local historical documents to assemble histories of the communities at each field site.

8) Identification of environmental indicators

Working with scientific organizations, local environmental groups and government officials, to identify polluting agents and levels of pollution for each field site.

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This research project significantly enlarges the opportunities for the interaction of researchers who are leaders of environmental values research in their own countries and their exposure to different methods and styles of research. As part of the process, researchers share, discuss, and evaluate these methods for the kind of insights they yield and their transferability to other research contexts.

Some of the distinctive tools teams have adopted and shared are as follows:

Japan *Photo-aided interviews:* Use of 'Now and Then' photographs -- showing the same place in pre- and post-rapid growth Japan -- to catalyze candid discussion of environmental values among interviewees otherwise reticent to speak.
Interactive interviewing: Cultivating peer relationships in interviews through a candid sharing of interview purpose and treatment, to enlist support and overcome a culturally based reluctance to divulge inside information.

India *Ethnomethodologies.* These techniques are being used in the study of shifting cultivation and include a formalization of local knowledge through:
a) Ethnobotany, or the classification of animals, plants and soils;
b) Notions of cosmology relating to times and seasons; and
c) An analysis of native terms.

Through the use of these tools, the India team aims to capture the relationships between modern science and traditional knowledge.

United States *Community mapping at different points of time.* This is a technique by which local residents help identify who lives in every household in the community, how long they or members of their family have lived there, and the occupations of the heads of households.

Calibration meetings

As stated above, communication among the teams is fundamental to ensuring comparability and research integration. The project structure includes a total of seven project meetings: New York (April 1998) where the protocol was agreed upon and the project launched, Kusatsu, Japan (July 1999), New York (October 1999), Wuxi, China (January 2000), Beijing City, China (July 2000), Delhi, India (January 2001) and New York (July 2001). The purpose of these meetings is for teams to update each other on their progress, to compare and analyze their results, and to make any necessary adjustments to the research design. Between meetings, a dedicated project listserv created by the Carnegie Council for the project facilitates communication.

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Meta-analysis of the research choices made by the teams

In their internal country reports teams will include, along with their analysis:

- A statement of the biases and assumptions they hold about the case;
- A statement about the significance and typicality of cases for that country;
- An analysis of the cultural, political, and historical contexts for above positions; and
- An explanation of how all of this influenced the choice of methodology pursued in each case.

In addition, senior researchers advising the project and participating in the international meetings will observe and synthesize the debates on project theories and methods to assess the role of institutional, disciplinary, and national values on the conduct of research within the project itself. In this way, and as part of this study, we will examine comparatively the research choices made by the teams. We expect to include a chapter or appendix of this analysis in the book.

Writing up integrative chapters

A significant part of the project book will be devoted to comparative analysis. For these chapters, project researchers will team up across teams to write chapters that will appear in an “Integrative Findings” section. The themes, specific content, and lead authors of each chapter will be finalized at the project meeting scheduled for January 2001 in India.