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The Devils Lake, North Dakota – Manitoba Water Trouble Case: A Transnational Environmental Problem

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Abstract

The Devils Lake—Manitoba water trouble case clearly shows the characteristics of a transnational environmental problem. This class of problem is difficult to negotiate because little innovative organizational structure has been created to manage contemporary multi-definitional problems. Furthermore, two major social forces, global interdependence and ethnocultural independence, act as mechanisms within an ecosystem management context to complicate attempts by parties to influence each others' behavior. Unilateral action rules the day but is under increasing pressure by social and cultural forces to give way to negotiated changes in transboundary cost-sharing and resource control situations.

Introduction: Transnational Environmental Problems

At the scale of nation-state society, three general classes of problems categorize environmental trouble cases in the world today: 1) societal, 2) international, and 3) transnational. The first, societal, are environmental problems and management scenarios that originate and remain located within the boundaries of a nation (e.g., a focus on the Mississippi river). The second class of problems, international, have core definitions that authenticate the

environmental system or resource problem as possessing a legitimate property relationship with two or more nation-states (e.g., Lake Superior, Rio Grande River). The third class of problems—and the focus of this article—is the transnational problem.

Transnational problems are trouble cases in which the original problem was defined as societal, but, through outsider-initiated contest and conflict, the problem has been redefined by others as crossing international borders in one way or another. Construction of an alternative problem definition by others most commonly occurs in direct response to solutions to the original problem as proposed by the original societal group (itself a turbulent matrix of different stakeholders representing much of the diversity of local culture). Hence, this third general class of environmental trouble cases, the transnational, also belongs to a class of events known as “the problems that solutions cause.”

A processual understanding of a transnational trouble case involves delineating processes and structures by which the trouble case changes from the societal to transnational problem class. Once elucidated, discussion focuses on how the two major social forces of global interdependence and ethnolocal independence are used to accomplish this change in problem definition, and how this affects the organization of cooperative arrangements between two separate societies to manage environments and resources.

A Brief Sketch of the Devils Lake, North Dakota Transnational Trouble Case

Devils Lake, North Dakota, is a large, shallow, primarily recreational lake. Devils Lake water levels are cyclic. When there is continuous drought, the lake can disappear. When there is continuous excessive water, the lake rises and spreads for miles. At the end of the 1980s, the lake was in drought stage. By the end of the 1990s, the lake had been in a long wet cycle that more than doubled the surface area of the lake, severely affecting the people, animals, and lands of the region. Dramatic changes have occurred for local people. Homes are submerged, town sites are abandoned, environmental contamination increases, and many homes and towns depend for safety on dikes built up around and across the lake. Many of these dikes are roads.

Devils Lake is a dirty lake. Long used for recreation as well as the local watershed for surrounding agricultural lands, the lake has varying levels of pollutants and trash in it. To deal with the flood problems, a solution was negotiated among the competing interests of local peoples and jurisdictions, local, state, and national agencies, and environmental NGOs. Negotiation of the solution took years. In 1999, this group (the problem's official stakeholders) produced a plan of resolution. They would build an outlet for the flood. Waters from the least polluted part of the lake would be sent to Stump Lake. Stump Lake, in turn, empties into the Sheyenne

River. The Sheyenne River is a tributary of the Red River of the North. The Red River is a boundary river between North Dakota and Minnesota. It travels north through the city of Winnipeg in Manitoba, and, continuing north, it eventually empties into Lake Winnipeg in the Hudson Bay watershed.

The Devils Lake stakeholders began (and continue) to implement the necessary steps of the solution. Both Minnesota and Manitoba have taken exception to the solution plan. In this article, I delineate the North Dakota–Manitoba connection.

In North Dakota, the Devils Lake problem is defined principally as that of water *level*. But Manitoba defines the problem as that of water *quality*, and hence, argues that Manitoba, retroactively, is a legitimate stakeholder in the Devils Lake problem and should have legitimate authority to negotiate a solution to the problem. The movement from societal problem (Devils Lake) to transnational (ND-Manitoba) problem results from a management solution that is reinterpreted by others based on different ecosystem parameters.

North Dakota has officially acknowledged Manitoba's concern about water quality in the solution for the water level problems, but defends its solution by stating that it has dealt with the potential water quality issue. Manitoba contests these arguments and solutions, and has taken the debate to the level of treaty authority based on precedents set by Great Lakes

management and the Canada-USA International Joint Commission. Currently, the principal Ministry dealing with the Devils Lake trouble case, Manitoba Conservation (2001), states the problem as:

Devils Lake, a closed sub-basin nominally within the Hudson Bay drainage basin, has not naturally overflowed to the Sheyenne River for over 1800 years... A number of approaches to deal with the flood situation have been implemented... [But outcomes have] not been significant. As part of the solution to deal with the flooding, consideration is being given to several outlet proposals. An outlet which would divert water from Devils Lake to the Sheyenne River flows into the Red River. Manitoba and Canada have expressed their opposition to an outlet as it could lead to irreversible environmental impacts to Manitoba's ecosystem."

Both Manitoba and North Dakota are taking an ecosystem approach, yet the approaches do not easily mesh across borders and boundaries. There are questions and concerns about costs of resource management, control of resource data, and legitimacy of resource studies. There is no standing organizational structure that allows for a multi-definitional form of the problem to be interwoven into a major study and plan for action. Unlike the Great Lakes, the Red River is not a boundary water in the sense of a long expanse of boundary line; it runs south to north. Hence, the management models for the Great Lakes, created for an international class problem, do not fit well the transnational class problem that the ND-Manitoba debate effects.

In brief, the transnational aspects of this trouble case can be summarized as expanding from a water level definition problem to

a water quality definitional problem. This occurs through a contest of social forces that pits the ethnocentric (Devils Lake level) with the interdependent (the Red River ecosystem). Dilemma resolves into isolated positions and an inability to affect each other's actions. The change from level focus to quality focus occasions the change from societal to transnational problem. The societal problem does not disappear, however, because North Dakotans refuse to redefine the problem in transnational terms.

Discussion

To further knowledge about the processes and pressures involved in transnational environmental trouble cases as a class of problems, the important question is not whether North Dakotans practice ecosystem management fully and completely. Rather, we need to ask under what conditions is the ecosystem management approach developing.

Ecosystem Management

Manitoba contests the North Dakota solution at the ecosystem level. Ecosystems can be defined in many different ways. In the case of the Devils Lake controversy, who defines the ecosystem and how is it defined? North Dakotans define the problem in societal terms, involving levels of local, tribal, state, and national jurisdictions and authority. Manitobans define the

problem as transboundary in nature because the North Dakota societal solution will affect Manitoban waters within the Red River ecosystem. Political power is intrinsic to the struggle for defining ecosystems in terms of measurement unit (e.g., local lake or river or watershed, political and jurisdictional boundaries) and perforce there are political power struggles over who controls what is measured.

The North Dakotans say that Manitoba's concerns have been handled, and Manitoba says that it is being ignored. The result is a stalemate in power relations, and unilateral action rules the day. This is typical status quo environmental management action since the 1960s. Presently, North Dakota continues with its planned solution stages, and Manitoba continues its contest of those plans and associated activities. Is there no common ground? The ecosystem management approach implies that there is common ground, and that environmental dilemmas can be negotiated and problems resolved.

Since the late 1980s in the United States (and the early-to-mid 1980s in Canada), ecosystem management has developed into the prevailing design approach for managing natural resources (Taylor, Brandt, and Blinn 1995). This approach is a cross-disciplinary effort at holistic environmental management. A holistic approach includes humans as part of the ecosystem. Hence, a holistic approach means an increase in complexity of

management behavior. The demands placed upon ecosystem management go far beyond environmental, economic, or utilitarian problems. When people participate in public discourse about the environment, they routinely add new stakes and new uncertainties to the matrix of decision-making (Gerlach, Brandt, and Morgan 1991, Brandt 1999). This expansion of issues ultimately converts most ecosystem-based management efforts into ones that deal with sociocultural tasks, that is, into major projects of sociocultural system change (Gerlach 1992).

Gerlach has provided a way for us to think about this. He has assembled together the litany of tenets ("challenges" or "tasks") that appear over and over, with minor variation, in western public discourses on human-environment relations. He depicts the contents and contexts of these tenets as an immediate (compelling, albeit often contested) and axiomatic set of contemporarily shared criteria for behavior organized to control human-environment relations. Specifically, people argue that ecosystem management should (Gerlach and Bengston 1994):

1. coordinate across jurisdictions, cultures, and other borders/boundaries.
2. coordinate across long time horizons.
3. coordinate holistically, across solutions.
4. make decisions with assessment information often ambiguous or uncertain.
5. overcome any tragedy of the commons.

6. make changes in resource rights and duties, hence, in social relationships.
7. be equitable and fair in making these changes.
8. promote and protect cultural diversity.
9. develop sustainably.
10. institutionalize ecological and economic interdependence democratically.
11. resolve the conflicts associated with accomplishing these tasks.

All these tasks are difficult and none occur singly in any resource or environmental management problem scenario. For delineation of processes in the ND-Manitoba transnational trouble case, the crossing of borders/boundaries (task 1), the costs of management (task 7), the organization of stakeholder power (task 10), and the handling of resulting problems (task 11) become the primary elements of the trouble case at its transnational classification level. To do all these tasks is to negotiate transnational management dilemmas.

A solution to one problem leads to another problem

Problems that solutions cause are difficult to forecast because they originate outside the bounds of the primary problem's definition. They are difficult to resolve because they were not included as elements in the primary problem's definition and risk analysis. According to current management imperatives, the environmental problems that solutions have caused or might cause

must be handled by the ecosystem approach. Hotly contested is what this means in terms of social duties (e.g., the coordination of behavior across regions or nations), political autonomy (e.g., international impacts), and social cost (i.e., who pays the bill?).

Manitoba argues that the social duty of North Dakota is to abide with Manitoba's rejection of the Stump Lake Outlet solution because, otherwise, North Dakota is violating treaty obligations with respect to international waterways. North Dakota says that Manitoba's fears are unfounded. North Dakota argues that it cannot possibly afford to do an Environmental Impact Statement (EIS) from Devils Lake to Lake Winnipeg. North Dakota argues that, even if such an EIS were undertaken, the EIS results would show that no significant impact on the overall water quality of the Red River by the time the river reaches Manitoba occurs from the waters released from Devils Lake. Manitoba says North Dakota is wrong. And on it goes, the cycle of contest continues.

Social Forces

The ability of the North Dakotan-Manitoban disagreement to remain consistent over a long length of time is a result of two major conditions present in ecosystem management arenas today. These are the major social forces of global interdependence and ethnocultural independence.

Global interdependence is a systemic view of all the Earth, a perspective that reveals the world as a system of interdependent environmental, economic, and social relationships. While most easily seen in human-environment relations (“human dimensions of global environmental change” (USNRC 1992)), global interdependence is salient in a variety of ideas and behavior focused on human health, peace and security, world poverty, technologies, and other topics (Gerlach 1991). Some define this interdependence as a stage of modernization, where modernization is the primordial process of improving human lifeways. Hence, recent examples of modernization affecting Western social life would be the Enlightenment, industrialization, and economic globalization (Antonopoulou 2000).

Interdependence is global in the sense of trans-boundary. Ecosystem management has as one of its tenets the goal to manage environments systemically, even across borders and boundaries. Institutionalization of ecosystem management has brought interdependence as a social force to be reckoned with in environmental planning. The effect of interdependence has been to enable changes in schemas for human-environment strategies.

Today this interdependence is regarded as a “given,” and for the past twenty years, attention has been given to interweaving ecosystemic interdependence into the fabric of decision making (Clark 1986). What have occurred are better knowledge of

ecosystems in international trouble cases and broader and more formalized international discussion of environmental, economic, and security actions. However, the impact of organizational change on transnational trouble cases has been negligible. Nonetheless, one power of global interdependence is its ability to cause sociocultural fusion. It brings people together who cut across societal stratifications and statuses. It brings a variety of political power and public persuasion to the contest for changing sociocultural life.

Global interdependence often appears in dilemmas with ethnocultural independence. Ethnocultural independence is a social force that resists fusion, and may cultivate fission (Gerlach 1991). Ethnocultural independence in environment projects is expressed in the emic explications of local knowledge, local rights, local autonomy. *Ethno* refers to the shared meanings and experiences of the group. It is the sense of the group through articulation of *other* and *we*. *Local* refers to cultural systemic bindings of the groups. Local people often are communities, but other variations exist.

The ethnocultural force is based on embedded institutions for property rights, sovereignty, material adaptive strategies, and other fundamental societal ties. In the ND-Manitoba trouble case, the ethnocultural is represented by two nations, by a province and a state, by two water-using communities, in other words, by identifiers for *us* and *them*. Ethnocultural groups do not want to be told how to

behave and think by outsiders. They do not want to relinquish their control. On the other hand, they do not like it when others outside their group cause changes, or the appearance of change, to happen to their livelihoods. Additionally, the politics of resource extraction in Manitoba and North Dakota strongly influence the transnational political conditions.

The social forces of interdependence and independence are harnessed to accomplish goals for the various parties to the trouble case; of utmost importance is problem definition. These social forces are pressures on national control of territory. These forces drive the creation of and contesting of cooperative arrangements to manage environments and resources. They directly affect attempts at transnational social organization.

Social Organization

Evans-Pritchard (Fortes and Evans-Pritchard 1940) explained that while centralized systems achieve stable rule by balancing differing parts of their formal administrative organization, non-centralized systems gain stability by establishing equilibrium among competing segments. If we apply this idea to the field, we find that within a centralized system, such as that found in the United States, there co-exist non-centralized systems organized as segmentary, polycentric, ideologically-integrated networks (SPINS) (Gerlach 1987). These networks are the

organizational pattern of social movements, and social movements work to establish (although perhaps never achieve) equilibrium within themselves. They do so through lateral and vertical interaction of their constituent groups while simultaneously impacting and pressuring the larger centralized system in an asymmetrical fashion.

In the early 1990s, there was very little multi-national institutional organization for dealing with environmental problems (Reilly 1989). Ten years later nations have not seen much change in international organization. Nations still struggle with the rudiments of transnational problems. The United States finds it extremely difficult to agree to international accords for environmental behavior. A large part of the reason for this has to do with uncertainty and risk perceptions of the future and an unwillingness to endure the social change and cost that is required to change embedded environmental industries and use practices. Neither Canada nor the USA has formally developed any new organizational structure between themselves to handle transnational environmental trouble cases. Instead, they have elaborated upon treaty accords while social movements at the same time elaborated upon public input opportunities in all environmental trouble cases. The result is not innovation but incremental (developmental) changes to basic 1930s-1970s treaty frameworks and unilateral management approaches.

For water trouble cases between the two nations, behavior invariably references treaty and treaty-related agreements and amendments via protocols. The 1909 Boundary Waters Treaty between Canada and the United States originally chartered the International Joint Commission. The U.S.-Canada International Joint Commission (IJC) is an advisory body of the two national governments. The IJC is the only direct binational interaction specific to water problems that is available to Manitoba for a formal petition to stop the North Dakota plans. The International Joint Commission Mission Statement summarizes the IJC:

The International Joint Commission prevents and resolves disputes between the United States of America and Canada under the 1909 Boundary Waters Treaty and pursues the common good of both countries as an independent and objective advisor to the two governments. In particular, the Commission rules upon applications for approval of projects affecting boundary or transboundary waters and may regulate the operation of these projects; it assists the two countries in the protection of the transboundary environment, including the implementation of the Great Lakes Water Quality Agreement and the improvement of transboundary air quality; and it alerts the governments to emerging issues along the boundary that may give rise to bilateral disputes.

The IJC has six members: three are appointed by the President of the United States, with the advice and approval of the Senate, and three are appointed by the Governor in Council of Canada, on the advice of the Prime Minister of Canada. Since the

late 1980s, Native American Tribal peoples (USA) and First Nation peoples (Canada) having been petitioning the Commission, unsuccessfully, to add a third member to the IJC for the representation of aboriginal nations. The key word here is nation. The IJC is a *binational* group. The aboriginal nations argue that the IJC should be, at least, a *trinational* Commission. The U.S. and Canada are not willing to change the Commission membership. They do nothing, including defending their position, thereby avoiding the issue as much as possible. Nonetheless, the argument is a public expression of difference and a pressure for flexibility in rigid transnational organizational structures.

The International Joint Commission only in the past decade or so has gained any real power of persuasion in its advisory positions, and this power is based on social mood and not authority attached to office. In the United States, a weakening of this power is to be expected under the G.W. Bush presidency. The IJC historically has principally been focused on conflicts and cooperation between the two nations centered on the Great Lakes and Saint Lawrence Seaway. Nonetheless, it does encompass all transboundary water systems.

Manitoba was forced to turn to the IJC because it is the binational structure to contest the Devils Lake solution as a problem of transboundary waters. The most the IJC could do for Manitoba was to advise a course of action for the two national governments

to take with respect to the issue. Although the IJC has not backed Manitoba on this, they have said they understand Manitoba's concerns, and it is possible that in the future a new presentation of Manitoba's concerns could change the IJC's decision. Whatever the future may contain, from today's standpoint the IJC could not have done much for Manitoba in terms of action because the IJC has neither legal authority nor political power to stop North Dakotan activity. Again, behavior is structured by a single society only and we are returned to rigid unilateral action on transnational environmental trouble cases.

Summary and Conclusions

The long-contested transnational troubles that involve USA-border states with Canada or Mexico will not go away but are ripe for attempting new forms of ecosystem control. The existing preference for treaty-based organization to deal with transboundary problems can be complemented with SPIN-structured organizations to manage ecosystemically. First steps have been taken in this direction, such as the management of wetlands across the North American Wildfowl Flyway. But there remain many hurdles, and it is possible for long-standing contests, such as this Devils Lake trouble case, or the North Dakota Garrison Water Diversion project, or the competition for Rio Grande River and Colorado River water between the USA and Mexico, to take on

the characteristics of international feuds, thus severely hampering change in decision-making.

This article has dealt only with the bare bones of transnational trouble cases. Important issues remain to be studied. One issue is the question of who bears the costs of ecosystem management study and practice in transnational situations. This question must be dealt with; costs can change the way management is done. For instance, if cost was not a factor, would it be easier for Manitoba to prove its point or for North Dakota to choose an alternative solution?

Other issues include the pressure on sovereignty and control of territory, the need for both quick and long-term action, and the preference to have one's own scientists studying the problem. Dilemmas of all sorts characterize transnational problems. Dilemmas are not solved but negotiated, piloted, navigated: the objective is to direct our course with purpose and intent, to be aware of conditions and to be flexible in our behavior. Social forces are not to be avoided, but engaged. Manitoba and North Dakota must resist the ease of entrenchment and keep talking with each other about their problems. There are positive outcomes to their communication, whether or not each party can achieve their immediate goals. Each should try to wear the others' proverbial shoes for a while. Appreciation is important to

negotiation, and negotiation is critical to innovative change in transnational environmental management.

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